

1947
016.5532 A51c2 53-41563

Kansas City
Public Library



This Volume is for
REFERENCE USE ONLY

KANSAS CITY MO PUBLIC LIBRARY

0 0001 0258088 3

COMPREHENSIVE INDEX

COPYRIGHT, 1947, BY
THE AMERICAN ASSOCIATION OF
PETROLEUM GEOLOGISTS

All Rights Reserved

Published, September, 1947

Composed and Printed by
George Banta Publishing Company
Menasha, Wisconsin, U.S.A.

EDITORIAL NOTE

This volume is the second Comprehensive Index to be published by the American Association of Petroleum Geologists during the thirty years of its existence. It embodies the material of the first, published in 1937, as well as complete listings of the vast quantities of geological subject matter published since that date in the *Bulletin* and in the special publications of the Association. The Association may congratulate itself that Miss Daisy Winifred Heath, who edited the first index has, also, compiled the second. The Index may be taken as a measure of the well-nigh incredible accomplishments of the Association in the fields of pure geology, petroleum geology, and technology.

Among all the scientific organizations none has had a more vigorous growth than the American Association of Petroleum Geologists, and none has, we believe, greater reason for pride in achievement. Large as the Association is when compared with other geological organizations, it is small to have had so large a share in the development of one of the world's principal sources of wealth. It is young in that many of its charter members are still active in its affairs to-day; and yet it is old enough to have perfected one of the most closely knit of all scientific organizations; to have developed a financial strength, and a maturity of thought in its members of which all may be justly proud. In its thirty years the Association has covered the earth with its members, and their ingenuity and imagination have figured largely in developing a great world economy for peace as well as resources essential to winning two world wars.

Few subjects in the field of geology and few areas of the earth's crust have escaped the scrutiny of Association members, and their observations and interpretations are faithfully recorded in Association publications. The scope, therefore, of these publications is much broader than their specialized application would suggest; and the growth of their circulation has been phenomenal.

In 1917 the printing of the *Bulletin* consisted of four or five hundred copies of a single number. The Executive Committee recently authorized a monthly edition of 7,000 for 1947. Some of the special publications have gone through several printings, and scarcely any volumes have remained on storage shelves long enough to meet the rapidly growing demand.

It is hoped that the present Index will be adequate without being cumbersome; and that it will make more readily available, and therefore, more deeply appreciated, the informative and stimulating work of the past.

GAYLE SCOTT, *editor*

FORT WORTH, TEXAS
January, 1947

PREFACE

This comprehensive topical Index includes the items which appeared in the earlier Index published in 1937, and additional items selected from the volumes of the *Bulletin* and the books published from that time to the end of 1945. These later publications contain about three-fourths as much matter as all that preceded.

Another considerable addition has been made by the inclusion of a large number of names of men and women. Only a few names appeared in the earlier index. In this new Index are included the names of all men and women whose importance in connection with petroleum geological work has been definitely recognized by authors, as indicated by the mention of their names in the text of books and of major articles in the *Bulletin* from its beginning in 1917.

The interweaving, reorganizing, and revision of the various sets of items have involved much more than double the work on the earlier Index. If time had permitted, the revision and weeding-out or re-wording and combining of partial duplicates might well have been carried much further. The result of the work done, as it stands, is an Index of more than double the size of the earlier one, by the use of which I think it should be possible to locate any subject desired.

References are indicated by letters listing books in alphabetical order of titles, followed by volume and page numbers of the *Bulletin*. Items based on titles of major articles in the *Bulletin* or of chapters of books are shown in bold-face type.

Grateful acknowledgment is due to J. P. D. Hull for valuable suggestions; to Mrs. Florence E. Bates for able coöperation throughout the entire course of the work; to Mrs. Clyde G. Strachan for extensive work in typing and alphabeting and helpful suggestions, and to Miss Laurabelle Brown for assistance during the later stages of the work on the manuscript.

I sincerely hope that this Comprehensive Index will prove of value to the Association.

DAISY WINIFRED HEATH

TULSA, OKLAHOMA
October 30, 1946

INDEX, 1917-1945

A

- Aagard pool, Kansas, syncline, STR II, 157
- Abasand Oils Ltd., XXIX, 663
- Abbau der G6brge*, XXI, 1355
- Abbe, Cleveland, Jr., XI, 582
- Abb6 refractometer, XXI, 1466
- Abbeville, Louisiana, XXII, 742
- Abbot and Humphreys, XIV, 876; XXIII, 1200, 1214
- Abbott anticline, XXI, 1259
- Abeel, George H., Jr., XI, 1287
- Abel, O., *Lebensbilder aus der Tierwelt der Vorzeit*, review, XIX, 566
- Abell field, Pecos County, Texas, XXVI, 1023, 1028, 1398; XXVII, 763
- gravity of oil in, XXV, 1056
- Aberdeen, Esther, RMS, 179, 188; XXIII, 582; XXV, 1244
- Aberdeen, E., and Krumbein, W. C., XXIX, 1255
- Aberdeen area, GAS, 223, 231
- Abernathy, George E., XXII, 923
- migration of oil from Arbuckle limestone into Chattanooga shale in Chetopa oil pool, Labette County, Kansas, XXV, 1934
- Abich, H., XVIII, 603, 605, 606, 607
- Abilene, Texas, fossil footprints near, XI, 633
- Abilene anticline, GAS, 461, 471; XII, 179
- Abilene arch, FOP, 85; XXV, 1517
- Abilene conglomerate, II, 75; XXIII, 1759
- Abingdon cyclothem, XXVI, 1589
- Abnormal temperature with structure, PROB, 146
- Abo formation, New Mexico, PTNM, 687; XIII, 960, 965; XXIII, 1677; XXIV, 22; XXVI, 687
- Abo sandstone, XXI, 846
- base of, boundary between Carboniferous and Permian systems in New Mexico, XXIV, 308
- New Mexico, X, 833; XXI, 848
- Abo-Yeso formation, New Mexico, V, 164, 166, 606; VI, 224
- Abra alba*, faecal pellets of, RMS, 517, 520
- Abra nitida*, faecal pellets of, RMS, 517, 520
- Abra-Tanchipa range, XIV, 76
- stratigraphic section of, XIV, 80
- Abraham, Herbert, XVI, 740
- Abramovitch, M. W., XXIX, 1748, 1749, 1751
- Abrams, Leroy, CAL, 300
- Abrams formation, CAL, 63
- Abrasion, by wind, RMS, 42, 44
- definition of, RMS, 38
- during transport, RMS, 45
- effect of, RMS, 35
- effect on mineral composition, RMS, 44
- effect on rounding, RMS, 39
- effect on size of particles, RMS, 38
- effect on sorting, RMS, 35, 36
- glacial, RMS, 44
- of minerals in provenance studies, RMS, 610
- of pebbles, RMS, 269
- of shells, RMS, 288
- Abrasion curves of limestone fragments, XXIX, 1241
- Abrasion platform, RMS, 238
- Abrasive action, RMS, 40
- Abreu, Alvaro de Paiva, XX, 1210
- Abreu, S. Fr6es, *rochas olegenas do Brasil e seu aproveitamento*, review, XXI, 120
- Abreu, S. Fr6es, de Paiva, Glycon, and Amaral, Irnack do, *contribu6es para a geologia do petroleo no Recôncavo (Bahia)*, review, XXI, 273
- Abrohlos Bank, foraminifera from, MSC, 11
- Absaroka overthrust, XXVII, 428
- Absaroka range, STR II, 580
- Absaroka thrust fault, X, 106; XIII, 1277
- Absaroka volcanic field, XXV, 2030
- Absarokee structure, XXV, 1153
- "Abschnitt," RMS, 325
- Absolute coefficients, RMS, 73
- Absolute-ownership a law of state of Texas, XXII, 1082
- Absorption, RMS, 419
- as aid in X-ray studies, RMS, 621
- of ions by sediments, RMS, 144
- of light by sea, RMS, 81, 84, 85
- Absorption and permeability of oil and gas sands, apparatus for determining, IX, 442
- Abstracts, American Association of Petroleum Geologists mid-year meeting, El Paso, September-October, 1938, XXII, 1701
- Pacific section fifteenth annual meeting, Los Angeles, November, 1938, XXII, 1714
- Pacific section eighteenth annual meeting, Los Angeles, October, 1941, XXV, 2093
- Second Venezuelan Geological Congress, XXII, 1102
- Trinidad Geological Conference, 1939, XXIII, 1242
- Abyssal deeps, RMS, 401
- Abyssal deposits, XXIV, 1168
- of East Indian Archipelago, age of, XXV, 320
- Abyssal fossils, MSC, Fig. 5 (in pocket)
- Abyssal theory, difficulties in normal, XXVI, 782
- Abyssal zone, MSC, 82
- Abyssinian Plateau, possibilities for accumulation of petroleum, XXI, 293
- Abyssinian Rift, oil indications, XXI, 295
- Academy of Natural Sciences of Philadelphia, XXIX, 885
- Acadia Parish, Louisiana, PROB, 667
- geology of Tepetate oil field, XXII, 285
- geology and geophysics of southeast flank of Jennings dome, with special reference to overhang, GC, 961
- Jennings oil field, SD, 398
- subsurface study of Jennings field, XXVII, 1102
- vertical variation of properties in, SBP, 348, 349
- vertical variation of properties of sediments in Bosco oil field, SBP, 348
- (well 407), SBP, 335-349, 410
- Acanthoceratids, XXIV, 1186
- Acceleration, gravitational, in mechanical analyses, RMS, 542
- of currents, RMS, 108
- Accessory minerals, RMS, 593
- Accident anticline, Maryland, drilling on, XXIV, 972
- Accumulation, XXVI, 1763
- a process of concentration, XXII, 842
- at Southeast Braman pool controlled by stratigraphic trap and a low fold, XXIII, 831
- conditions and environments of, XXIX, 1743
- continuing long after date of formation of structure in some fields, XXIX, 1190
- criteria for determining time of, under special circumstances, XXII, 834
- due to stratigraphic closure, XXI, 983
- flank overlap, on complex faulted structures of diapiric type, problem of, XXIII, 955
- former conditions of, not now exhibited, XXI, 1106
- having Paleozoic characteristics, XXII, 846
- historical development of structural theory of, PROB, 1
- hydraulic theory of, XIII, 145
- in limestone, PROB, 365
- in oil pools, problem of time of, XXIX, 1194
- in Padre Canyon field caused by fault trap, XXI, 981
- in Rocky Mountain district, structural history and its relation to, PROB, 679
- of free oil, observations on, discussion, XXVI, 285
- Accumulation of gas, GAS, 19, 33, 228, 235, 301, 320, 339, 357, 370, 379, 397, 491, 591, 593, 597, 639, 835
- Austin field, STRAT, 246
- Hugoton field, STRAT, 96
- Michigan shoestring sands, STRAT, 244
- Scenery Hill gas field, Pennsylvania, STR II, 450
- Six Lakes field, STRAT, 258
- Vernon field, STRAT, 265
- Accumulation of oil, STRAT, 318, 618
- age of, at Raccoon Bend field, GC, 703; XVII, 1486
- Amelia field, XXIII, 1637
- Amelia field, limited to downthrown side of fault plane, XXIII, 1637
- Anse la Butte dome, controlled by radial faulting, XXVII, 1151
- anticlinal theory of, vindicated at Lance Creek field, Wyoming, STR II, 609
- before and after faulting, sections, XXVIII, 1309
- Bellevue field, Louisiana, STR II, 245
- Big Lake field, Texas, STR II, 525
- Big Sinking field, STRAT, 194
- Border-Red Coulee field, STRAT, 305, 310
- Bradford field, Pennsylvania and New York, STR II, 431
- Breckenridge pool, Stephens County, Texas, STR II, 478

(Accumulation)

- Bryson field, STRAT, 547
 Bush City field, STRAT, 49
 California, STR II, 699
 California fields, factors governing, PROB, 735, 759
 Clay Creek dome, GC, 776; XX, 87
 criteria necessary for, STR II, 669
 Cromwell field, Oklahoma, STR II, 308
 Cross Cut-Blake district, STRAT, 562-563
 Cut Bank field, STRAT, 349, 369
 due to lenticularity of producing formation in Arkansas, STR II, 699
 due to local lenticularity in Ohio and Pennsylvania, STR II, 697
 East Texas, STRAT, 618
 Edison field, STRAT, 5
 Eldorado field, Kansas, STR II, 166
 Elk Hills field, California, STR II, 55
 Emba area, XXIII, 506
 Florence field, Colorado, STR II, 82, 709
 Franciscan pool, Indiana, STR II, 141
 Gay - Spencer - Richardson trend, STRAT, 821, 823, 824, 827
 Greasewood field, STRAT, 41
 Hardin field, STRAT, 598
 Hitchcock field, STRAT, 651
 Homer field, Louisiana, STR II, 221
 Hull-Silk field, STRAT, 673
 Illinois, STR II, 120, 700
 in fissures in Florence field, Colorado, STR II, 87
 in Granite wash, XXIII, 1003
 in Mississippian limestone determined by structure in Martinsville field, Illinois, STR II, 137
 in Pennsylvanian, Martinsville field, Illinois, porosity of sand an important factor in causing, STR II, 137
 in sands, experiments on, abstract, V, 103
 in shoestring pools, Greenwood County, Kansas, STR II, 159
 in stratigraphic traps in Laredo district, XXI, 1437
 in Strawn, relation to structure, Stephens County, Texas, STR II, 476
 in Venango sands, STRAT, 538
 Jennings dome, XXVII, 1121
 K.M.A. field of Wichita County, XXIV, 118
 Kentucky, STR II, 698
 Kevin-Sunburst field, Montana, STR II, 263
 Lance Creek field, Wyoming, STR II, 609
 Little Lost Soldier dome, Wyoming, STR II, 648
 Long Beach field, California, STR II, 72
 Lopez field, STRAT, 689
 Music Mountain, STRAT, 497
 New York, STR II, 283, 700
 Noodle Creek pool, STRAT, 706
 Northwestern Colorado, STR II, 93
 O'Hern field, STRAT, 730, 746
 Oklahoma, STR II, 699
 Olympic pool, STRAT, 463
 Osage field, Oklahoma, STRAT, 849-850; STR II, 388, 389
 Petrolia field, Texas, STR II, 542, 553
 phenomena influencing, STR II, 668

(Accumulation)

- Red Fork shoestring sand pool, STRAT, 485-488
 relation to periods of folding, VII, 58
 relation to structure, STR II, 667, XIII, 140
 relation to structure in Archer County fields, Texas, STR I, 421-439
 relation to structure in Artesia field, New Mexico, STR I, 119
 relation to structure in Burbank field, Oklahoma, STR I, 229
 relation to structure in Cabin Creek field, West Virginia, STR I, 471
 relation to structure in Charco-Redondo field, Texas, STR I, 407
 relation to structure in Coffeyville field, Kansas, STR I, 49
 relation to structure in Cole field, Texas, STR I, 402
 relation to structure in Copley pool, West Virginia, STR I, 440
 relation to structure in Crinerville field, Oklahoma, STR I, 206
 relation to structure in Currie field, Texas, STR I, 312
 relation to structure in Fairport field, Kansas, STR I, 39
 relation to structure in Garber field, Oklahoma, STR I, 186
 relation to structure in Glenn pool, Oklahoma, STR I, 237
 relation to structure in Henne-Winch-Farris field, Texas, STR I, 403
 relation to structure in Irma field, Arkansas, STR I, 7
 relation to structure in Kay County fields, Oklahoma, STR I, 158, 161
 relation to structure in Kentucky eastern coal field, STR I, 73, 79, 81, 87, 88
 relation to structure in Laredo district, STR I, 396
 relation to structure in Luling field, Texas, STR I, 275
 relation to structure in McKittrick field, California, STR I, 18-22
 relation to structure in Megargel field, Texas, STR I, 432
 relation to structure in Mexia and Tehuacana fault zones, Texas, STR I, 309, 337, 361, 366, 380, 384
 relation to structure in Michigan, STR I, 109, 111
 relation to structure in Morrison field, Oklahoma, STR I, 152, 156
 relation to structure in Nemaha Mountains region, Kansas, STR I, 68, 69
 relation to structure in Nigger Creek field, Texas, STR I, 417
 relation to structure in North Currie field, Texas, STR I, 358
 relation to structure in Ohio oil fields, STR I, 124, 135, 137, 142, 147
 relation to structure in Raccoon Bend field, GC, 694; XVII, 1477
 relation to structure in Rainbow Bend field, Kansas, STR I, 56
 relation to structure in Randado field, Texas, STR I, 396
 relation to structure in Richland field, Texas, STR I, 361
 relation to structure in Schott-Avia-tor field, Texas, STR I, 406
 relation to structure in Tennessee oil fields, STR I, 243, 247, 248, 250-253

(Accumulation)

- relation to structure in Tri-County field, Indiana, STR I, 30
 relation to structure in Turkey Mountain lime pools, Oklahoma, STR I, 217-219
 relation to structure in Urania field, Louisiana, STR I, 99
 relation to structure in Westbrook field, Texas, STR I, 287
 relation to structure in western Kentucky, XVI, 245
 relation to structure in Wilbarger County fields, Texas, STR I, 293
 relation to structure in Worthen field, Texas, STR I, 361, 366
 Sand Belt area, STRAT, 758, 759
 Santa Maria district, California, STR II, 18
 Seminole district, Oklahoma, STR II, 331
 Seymour pool, STRAT, 762, 763
 Shinnston pool, STRAT, 841, 843
 Smith-Ellis field, Texas, STR II, 567
 source and date of, in Granite Ridge pools of Kansas and Oklahoma, XV, 1431
 Stephens County, Texas, STR II, 470
 Stephens field, Arkansas, STR II, 9
 Tennessee, significance of structure in, XI, 905
 Texas, STR II, 698
 Ventura Avenue field, California, STR II, 33
 Virgil pool, Kansas, STR II, 145, 146
 Walnut Bend pool, STRAT, 798
 West Columbia field, Texas, STR II, 466
 west-central Texas, XXIV, 113
 Wherry pool, STRAT, 127
 Yates field, Texas, STR II, 496
 Zenith pool, STRAT, 161
 Accumulation of oil and gas, PROB, 463
 anticlinal hypothesis of, GAS, 593
 distribution of underground salt water and its relation to, II, 170
 Elk Basin field, Wyoming and Montana, STR II, 583, 585
 Esperson dome, relation to structure, GC, 875; XVIII, 1650
 factors governing, in Mirando and Pettus districts, Gulf Coastal Texas, and their application to other areas, XV, 755
 in anticlinal folds on Rio Grande border, XXI, 1438
 in domes, XXVIII, 1308
 in Rocky Mountain region, United States, structural conditions of, XXVII, 417
 in silica sands in Central basin of Appalachian geosyncline, XXV, 825
 mechanical readjustments, XXII, 842
 northwestern Colorado, STR II, 106, 114
 not influenced by structure at Delaware Extension pool, Oklahoma, STR II, 362
 Osage County field, Oklahoma, STR II, 395
 relation to carbon ratio of coals, PROB, 483
 relation to structure in Boggy Creek salt dome, XVI, 593
 relation to structure in Bradford field, Pennsylvania and New York, STR II, 420

- (Accumulation)
 retreat and advance of connate water as theory of, XXI, 951
 Rock River field, Wyoming, STR II, 618
 rôle of limestone reefs in, XXVIII, 906
 time factor in, V, 475
 Accumulation of oil and origin of uplift, at Amelia field, XXIII, 1650
 Accumulation of organic material, PROB, 28, 362
 effect of salt domes on, XV, 61
 in limestone reservoirs in western United States and Canada, PROB, 347
 relations to structure, PROB, 429
 Accumulation of petroleum, stratigraphic, XXI, 768
 Accumulation of petroleum and natural gas in Pennsylvania, PROB, 447
 Accumulation of source material, PROB, 55
 origin of oil and gas reservoirs of interior coal basin in relation to, PROB, 557
 origin and migration of oil, problems of, PROB, 337
 petroleum, northern Cordilleran geosyncline and its relation to, XI, 19
 related to unconformities, PROB, 510
 relation of oil and gas to geologic structure in Mid-Continent region, PROB, 571
 relationship of, to structure and porosity in Lima-Indiana field, PROB, 521
 stratigraphic versus structural, XX, 521
 up the dip against a shore line at Tatums pool, XIX, 409
 Accumulation, opposition to anticlinal theory of, XXII, 851
 pool, oil and gas fields: definition of terms, XXIX, 1749
 relation of, to stratigraphy and structure in Goldsmith field, XXIII, 1537
 Accumulation and discharge of oil, some physical and chemical properties of reservoir rocks bearing on, PROB, 825
 Accumulation and migration of oil, further notes on hydraulic theory of, VII, 213
 Accumulation and migration of oil and gas, cementing materials in sandstones and their probable influence on, XXV, 1839
 influence of cementing minerals on, XXV, 1872
 Accumulation and migration of petroleum, PROB, 247
 present interpretations of structural theory for oil and gas, PROB, 253
 structural theory, PROB, 287
 Accumulation and migration of petroleum and natural gas, XXIX, 460
 Accumulation and occurrence of oil in Laredo district, Texas, XXI, 1422
 Accumulation and origin of oil, PROB, 309
 Accumulation and origin of petroleum, theory of, XXVIII, 1510
 Accumulation and retention of oil and gas, vigorous artesian circulation of water unfavorable for, STR II, 679
 Accumulation and structure, degree of relationship between, STR II, 709
 (Accumulation)
 in Michigan basin and its relation to Cincinnati arch, PROB, 531
 Accumulation criteria, importance of structure among, STR II, 669
 Accumulation-distillation curve of Bradford crude oil in Bradford field, Pennsylvania and New York, STR II, 432
 Accumulations associated with faulting in Jurassic at Dossor, XXIII, 506
 in Jurassic, Comanche, and Cretaceous beds at Koschagyl dome, XXIII, 506
 Accumulations, basic types of oil and gas, XXIX, 1752
 bedded, XXIX, 1752
 having Cenozoic characteristics, XXII, 846
 massive, XXIX, 1753
 oil and gas, development of ideas on, XXIX, 1745
 oil and gas, references on classification of, XXIX, 1754
 peculiar structural locations for, XXII, 850
 principles of classification of, XXIX, 1752
 zonal, XXIX, 1753
 Ace area, Texas, GAS, 727; XXIII, 877; XXV, 2015
 Ace field, Polk County, Texas, Wilcox sand productive at, XXIV, 1089
 Acetabulum, RMS, 286
 Acetic acid, RMS, 422
 Acetone for determining oil content of well cuttings, XXVIII, 124
 Acetylene-tetra-bromide, use of, in mineral analysis, RMS, 595-598
 Acetylene tetrachloride, use in determining porosity, X, 934
 Acicular forms of clay minerals, RMS, 468
 Acid, acetic, PROB, 39
 aliphatic, PROB, 265
 amino, PROB, 31, 35, 39
 digest in mineral studies, RMS, 530, 594, 600
 effect of, on dolomitic limestone in Hugoton field, XXIV, 1803
 Acid-bottle method of well surveying, XIV, 596
 Acid ions in sea water, RMS, 143
 Acid solubility, XXVI, 1719
 of different oil-producing sandstones, XXV, 852, 864
 Acid solution, formation of kaolinite by, RMS, 485
 Acid treatment at Buckeye field, XXIV, 1981
 at Cunningham field, Kansas, XXI, 519
 at Wasson field, XXVII, 520
 of Caddo and Marble Falls producing zones, XXVI, 216
 of cores, apparatus for, XXV, 858
 of limestone reservoir rock, XX, 1408
 of limestone reservoir rock of wells, Zwolle oil field, Sabine Parish, Louisiana, engineering studies and results of, review, XIX, 127
 of wells in north and west-central Texas, XXV, 1080
 Acidity of waters, RMS, 369
 Acidization in Falls City pool, XXVI, 1084
 in Greenwich pool, XXIII, 657
 increase of production by, Viola limestone, Greenwich pool, XXIII, 660, 661
 (Acidization)
 of crude-oil wells in Turner Valley field, XXIV, 1637
 Acidizing at North Cowden field, XXV, 627
 chemical composition of a formation, effect on results of, XXI, 623
 effect of stratigraphy on results of, XXI, 621
 effect on production of increase of porosity by, XXV, 866
 influence of structure on, XXI, 621
 of cores from Wyoming, results of, XXV, 861
 of gas wells in Kansas fields, XXIV, 1785
 of oil reservoirs composed of sands, laboratory and field observations of effect of, XXV, 850
 of wells, XXIV, 1362
 of wells, importance of geological data in, XXI, 616
 of wells in Michigan fields, XXVII, 833
 useful in wells in West Texas, XXV, 1048
 Acidizing and shooting at Goldsmith pool, XXIII, 1544
 Acidizing techniques, XXI, 623
 Acidizing tests, preparation of cores for, XXV, 853
 Acids, action of organic, upon limestone, XXI, 619
 organic, and carbonic acid, chief agents in leaching of limestone, XXI, 619
Acila, nuculid bivalves of genus, MSC, 152
Acila gettysburgensis zone, MSC, 153
Acila shumardi zone, MSC, 152, 153
 Ackerman formation, XXIV, 1892
 in Alabama, XVII, 192
 Ackers, A. L., DeChiclis, R., and Smith, R. H., GAS, 451, 452, 454; PROB, 372, 373, 413, 414
 Hendrick field, Winkler County, Texas, XIV, 923
 Ackley, K. A., and Rau, H. L., geology and development of Keokuk pool, Seminole and Pottawatomie counties, Oklahoma, XXIII, 220
 Acosta, J. J., Survey, Texas (well 394), SBP, 292-335, 410
 Acre, Territory of, Brazil, XXIX, 539
 petroleum occurrence possible in anticlinal structures of the Serra do Mòia in, XXI, 99
 Actinolite, XXVII, 170
 in Franciscan rocks, XXVII, 180
 Actinolite and pargasite, analyses of, XXVII, 174
 Activities in South Texas, 1937-1938, XXII, 750
 of ions in base exchange, RMS, 455
 Acts of Congress appropriating funds for geological work, XXII, 1250
 Ada formation, Dora pool, STRAT, 411
 Adair County, Missouri, Des Moines series in, section, XXV, 51
 Missouri series in, section, XXV, 51
 Adair, County, Oklahoma, Mississippian in, XXIV, 412
 Morrow group of, XXIV, 409
 Pennsylvanian in, XXIV, 418
 Adam, Neil K., XXVIII, 1513, 1516
 Adams, I, 33; XIII, 884; XXIII, 1817
 Adams, Bradford C., MSC, 87; SC, 17; XX, 1563; XXIV, 1770; XXIX, 956

- (Adams)
foraminifera in zonal paleontology, review, XXIV, 2049
- Adams, Bradford C., and Cushman, Joseph A., MSC, 72, Fig. 14 (in pocket)
- Adams, Clifford, review, XXIX, 846
- Adams, Elmo W., XXVII, 2, 1364; XXVIII, 953
- Adams, Frank Dawson, SD, 23; IX, 853; XIV, 1041
- birth and development of the geological sciences, review, XXIII, 1099
- Adams, Frank Dawson, and Bancroft, J. A., IX, 158; XIII, 308, 332, 334, 338, 340; XVI, 1031
- Adams, George Irving, SD, 12; I, 31; II, 71; V, 147; VII, 620; IX, 842; XVII, 192
- memorial of, XVII, 103
- Adams, George Irving, and Taff, J. A., XVIII, 1051
- Adams, George Irving, Butts, Charles, Stephenson, L. W., and Cooke, Wythe, PROB, 666
- Adams, George Irving, Girty, G. H., and White, D., XXIV, 305
- Adams, George Irving, Purdue, A. H., and Ulrich, E. O., XXVIII, 1626
- Adams, George Whitney, memorial of, XIV, 1373
- Adams, Homer Hastings, GAS, 634; XXVII, 772
- geological structure of Eastland and Stephens counties, Texas, IV, 159
- Adams, John Emery, PROB, 248, 351, 362, 369, 413, 414, 606, 607; PTNM, 539, 608, 663, 695, 703, 705, 706, 707, 711, 740, 749; STRAT, 752; XIV, 926, 973, 974; XV, 1088; XVI, 59; XIX, 1544; XX, 619, 795, 796; XXI, 880, 1139; XXIII, 1550, 1551; XXIV, 5, 257, 312, 328, 337; XXV, 75, 318, 1682, 1684; XXVI, 39, 45, 49, 55, 62, 217, 243, 254, 383, 539, 608, 663, 695, 703, 705, 706, 707, 711, 740, 749; XXVII, 488; XXIX, 733, 1163
- highest structural point in Texas, XXVIII, 562
- island in Permian sea, XVII, 1391
- oil pool of open reservoir type, XX, 780
- origin, migration, and accumulation of petroleum in limestone reservoirs in western United States and Canada, PROB, 347
- origin of oil and its reservoir in Yates pool, Pecos County, Texas, XIV, 705
- structural development, Yates area, Texas, XXIV, 134
- Triassic of West Texas, XIII, 1045
- Upper Permian Ochoa series of Delaware, West Texas and southeastern New Mexico, XXVIII, 1596
- Upper Permian stratigraphy of West Texas Permian basin, XIX, 1010, 1544
- Adams, John Emery, and Cartwright, Lon D., Jr., STR II, 484-492
- Adams, John Emery, and Page, Lincoln R., PTNM, 608, 612, 704; XXIV, 7, 13, 14, 36; XXVI, 253, 384, 608, 612, 704
- stratigraphy, eastern Midland basin, Texas, XXIV, 52
- Adams, John Emery, et al., XXV, 80, 97
- standard Permian section of North America, XXIII, 1673
- Adams, J. S., X, 802
- Adams, J. V., X, 459
- Adams, L. A., CD, 22
- Adams, L. H., XVIII, 14, XXIII, 1322, 1324
- Adams, L. N., SD, 23
- Adams, L. N., and Johnston, John, VIII, 731; IX, 853; XIV, 1345
- Adams, Noah C., memorial of, XI, 779
- Adams, T. C., XXII, 1307, 1316, 1317
- Adams Branch formation, XXIV, 88
- Adams Branch limestone, III, 142
- Cross Cut-Blake district, STRAT, 549, 551
- Walnut Bend pool, STRAT, 785
- Adams Canyon, Ventura County, California, CAL, 307; MSC, 79
- foraminiferal section along, XII, 753
- Pliocene in, CAL, 208, 229, 236
- Adams field, Michigan, XXV, 1131; XXIX, 695, 698
- Adams Louisiana Oil Company, XXI, 785
- Adams Oil and Dev. Co., SD, 612
- Adams Oil and Gas Company, XXV, 1365
- Adams Oil Association, SD, 623
- Adams Oil Company, XXIII, 851
- Adamson pool, PROB, 763
- Adassievich, A., XI, 494
- Adaville and Almy formations, relation of faults to, XXV, 1740
- Adaville formation, XXV, 1734
- Adaville sandstones, XXV, 1737
- Addicks scarp, GC, 264; XVII, 1207
- Addington and Rush Springs quadrangles, Oklahoma, United States Geological Survey topographic map of part of, showing oil and gas fields, XXV, 14
- Addison, Carl B., GAS, 9
- Addison, Carl C., XXVIII, 178, 182, 183, 184, 188, 189, 196
- Buckeye oil field, Gladwin County, Michigan, XXIV, 1950
- Addison, Carl C., and Hake, B. F., sediments of Montana age in Milk River Ridge region, Alberta, ALTA, 87; XV, 1215
- Addition of peptizers, RMS, 538
- Additions to oil reserves in California during 1938, XXIII, 932
- Adel, Arthur, and Slipper, V. M., XIX, 900, 902
- Adelaida, Bradley, Bryson, and San Simeon quadrangles, map showing relations between Cretaceous units, XXVIII, 476
- Adelaida Quadrangle, MSC, 49, 75, 116, 199, 202, 203, 207, 212, 224, 231, 244, 249, 252, 254, 258, 262, 265, 268, 269, 272, 276, 277, 285, 288, 290, 292, 301, 304, 306, 310, 311, 316, 322, 325, 326, 330, 334, 339, 344, 348, 353, 354
- check list of foraminifera from, MSC, 48
- Lepidocyclina locality, MSC, Fig. 14 (in pocket)
- Miocene shale faunules from, MSC, Fig. 14 (in pocket)
- Monterey shale faunules from, MSC, Fig. 14 (in pocket)
- Adell pool, XXIX, 702
- Lansing-Kansas City oil in, XXIX, 703
- Aden field, XXIII, 651
- Adhesion, PROB, 259, 279, 282, 283
- Adiabatic effect in sea, RMS, 68, 70
- Adirondack Mountains, GAS, 950; XXII, 563
- Adkins, W. S., GAS, 653, 654, 655; GC, 743; MEX, ix, x, 13, 15, 17, 27, 32, 33, 38-40, 47, 53, 59, 67, 72-74, 95, 117, 137-139; PROB, 393, SBP, 297; XIV, 81; XV, 750; XVIII, 1703, 1704; XIX, 222, 241, 387, 1529, 1531, 1536; XX, 700; XXI, 1208; XXII, 537; XXIII, 195; XXIV, 142, 1186; XXV, 1627, 1632, 1693; XXVII, 1061, 1230, 1485, 1492; XXVIII, 327, 1079, 1099, 1100, 1133, 1144, 1145, 1183, 1184; XXIX, 1450, 1462, 1463, 1464, 1466
- review, XXV, 329
- Adkins, W. S., and Arick, M. B., XVIII, 1520
- Adkins, W. S., Bailey, Thomas L., and Evans, Frank G., revision of stratigraphy of part of Cretaceous in Tyler basin, northeast Texas, XXIX, 170
- Adkins, W. S., Baker, C. L., Böse, Emil, and Sellards, E. H., PROB, 378
- Adkins, W. S., Lowman, S. W., and Lozo, F. E., XXIX, 179
- Adkins, W. S., Sellards, E. H., and Plummer, F. B., GAS, 653
- geology of Texas, volume I, stratigraphy, review, XVIII, 554
- Adler, Joseph L., XXIV, 1441
- Adler, Joseph L., and Rosaire, E. E., applications and limitations of dip shooting, XVIII, 119
- Administrative work versus geological exploration, XXVII, 914
- Admiral formation, PTNM, 681, 682; XXVI, 681, 682
- Admire group, XXIV, 314
- Admire shale in El Dorado field, Kansas, STR II, 166
- Adrian, H., MEX, ix, 35, opp. 143
- Adriatic Sea, RMS, 366
- Adsorbed bitumen in Mississippian limestone, XXIX, 1163
- Adsorbed cations, hydration of, RMS, 535
- Adsorbed hydrogen, RMS, 538
- Adsorbed ions, RMS, 454, 535, 538
- Adsorbed water, effect of, on clay particles, RMS, 543
- Adsorption, PROB, 315, 807, 830, 832
- Bay's idea of, XXIV, 1467
- of metals by organisms in sea, RMS, 148
- Adsorption gasoline, XXV, 1322
- Adsorption phenomena, XXIV, 1877
- Advanced students, and men of the petroleum industry, cooperation between, XXIV, 604
- Advective processes in sea, RMS, 56, 58, 92
- Advisory Committee, American Petroleum Institute, SBP, 7
- Aeckerlein, G., XXIV, 1533
- Aeolian cross-lamination, XXVI, 41
- Aerated waters, RMS, 357
- Aerial photographs, XXV, 1796; XXVI, 1849
- interpreters of, and intelligence officers in Air Corps, change in applications for, XXVI, 1695
- measurement of dip angles on, XXVII, 1534
- preliminary observations on geological use of, XXIX, 1756
- their use and interpretation, XXVII, 95

- Aerial photographs and their applications, XXVII, 1160
- Aerial photo-mosaic of Barbers Hill area, Chambers County, Texas, GC, xvii
- Aerial survey operations in Australia during 1932, report on, review, XVIII, 380
- Aerobic bacteria in sediments, RMS, 418
- Aerobic decomposition of organic materials, PROB, 29, 39, 45, 262, 266
- Aerogeology in mineral exploration, XXIX, 106
- Aeromap of Elk Hills, California, STR II, 47
- Äfja, XXV, 839
- Africa, MSC, 181; RMS, 126, 146, 382, 446, 501, 518, 519; V, 397
- coast of, RMS, 379, 383, 386, 401
- dust falls off coast of, RMS, 498
- East, rift valleys of, discussion, XXI, 113
- eastward migration of, CD, 167
- geology of, CD, 127
- Italian East, oil possibilities in, XXI, 293
- natural gas in, GAS, 1091
- northern, petroleum research in, XVI, 443
- northern, structural features of, XVI, 445
- upwelling off, RMS, 126
- Africa and Brazil, striking similarity of Atlantic coast lines, CD, 113
- Africa and South America, similarity of form of coasts an argument against drift theory, CD, 80
- African and South American geology, similarities and dissimilarities of, CD, 120
- African Cape Mountains compared with Argentinian Sierras, CD, 118, 122
- African geology, CD, 127
- African rift, an indication of westward drift, CD, 208
- African rift valleys, oil seepages in, XVIII, 1172
- African yield-tract, XXVIII, 1508
- Afrika-Heft*, XXI, 1497
- Aftonian interglacial stage, CAL, 268
- Agasoma gravidia* zone, MSC, 153
- Agassiz, XX, 687
- Agassiz, Alexander, RMS, 231; XIV, 713
- Agassiz, Louis, RMS, 283; I, 29
- Agassiz series, CAL, 76
- Agate in Dockum conglomerates, XXVII, 629
- Agate anticline, northwestern Nebraska, test on, XXIII, 101
- Agate structure, Sioux County, Nebraska, XXIII, 923
- structural contour map of, XXIII, 924
- Age of abyssal deposits of East Indian Archipelago, XXV, 320
- of Bend series, III, 418
- of boulders in Oklahoma, XVIII, 996
- of diatom-bearing shales at Malaga cove, Los Angeles County, California, discussion, XII, 1109
- of diatomaceous shales from Puente Hills, XIV, 1447
- of faulting and doming in south Louisiana, XXVIII, 1305
- of folding, importance of, STR II, 675
- of formations of Arkansas-Oklahoma coal basin, XX, 1356
- (Age)
- of Gulf Border salt deposits, XVIII, 1227
- of Gulf Coast salt deposits, XXIII, 193
- of Jackfork and Stanley formations of Ouachita geosyncline, Arkansas and Oklahoma, as indicated by plants, XVIII, 1010
- of Llanoria geosyncline, XXIX, 1346
- of Mississippian Ridgetop shale of central Tennessee, XX, 805
- of oil in Miocene shales of Ventura district, California, XI, 88
- of oil and gas zones in Rocky Mountain region, XXVII, 465
- of Ouachita orogeny and its tectonic effects, XIV, 57
- of producing horizons in Kansas fields, XXI, 1003
- of Reef Ridge shale, SC, 63, XX, 1609; XXIII, 36
- of saline series of Salt Range of Punjab, symposium, XXIX, 1232
- of salt in Carpathians, SD, 118
- of salt in Emba salt-dome region, XXIII, 497
- of salt domes, SD, 116
- of salt domes, south Texas, SD, 742
- of sediments of inlier of Sabine uplift, XXIX, 53
- of Spavinaw granite, Oklahoma, new evidence concerning, XXVII, 1626
- of volcanism, Pinnacles national monument, California, further evidence for, XXI, 1341
- of Welch chert, STRAT, 127
- of Wyoming Jurassic rocks compared to European type section, XXI, 754
- relation of radioactivity to, XXIX, 1486
- Age and correlation of Pennsylvanian surface formations, and of oil and gas sands of Muskogee County, Oklahoma, XIX, 503
- Age and depth, variation of content of carbon and sulphur in crude oil with, XXI, 927
- Age and nomenclature of Trinity and older deposits of East Texas, Louisiana, and Arkansas, XXVII, 1231
- Age and stratigraphy of Seguin formation of central Texas, XXVII, 608
- Age distribution of productive fields in Rocky Mountain region, XXVII, 467
- Age equivalents of members of Redding Cretaceous section, XXVII, 312
- Age relations of Reynosa, GC, 578; XVII, 516
- Aggrading streams, RMS, 38
- effect of, on sorting, RMS, 34
- fundamental patterns of, XXIII, 1199
- Aggregates, RMS, 533, 536, 539
- disruption of, in mechanical analyses, RMS, 537
- in eolian detritus, RMS, 499
- Agba Jiri area, XXIII, 960
- Agitation of sediments by waves, RMS, 336
- Agra field, XXI, 1013
- Agricola, XXIII, 1101; XXV, 1209
- Agricola, George, XII, 472
- Agua Blanca overturn, XXI, 230
- Agua Caliente anticline, Department of Loreto, Peru, oil on, XXIII, 688
- Agua Caliente dome, XXIX, bet. 508 and 509, 519
- Agua Caliente field, XXIII, 963
- Agua Caliente formation, XXIII, 689
- Agua Dulce field, XXIII, 869
- Agua Dulce pool, XXVI, 1004, 1006
- Agua Media Creek, MSC, 39
- Agua Nueva formation, MEX, 26, 31, 33, 35, 44-47, 53, 167, 176, 190, 202, 203, 223, 224, 231, 233, 234, PROB, 383-386, 390, 391, 396-398; XXVIII, 1103, 1129, 1144, 1149
- Aguada, Barcodón, and Naranjo, MEX, 235
- basal, upper Cenomanian age of, MEX, 53
- Borrega Cañon, MEX, 44
- in front ranges west of Tampico, XXVIII, 1133
- Northern fields, MEX, 21, 49, 51, 165, 167, 169, 172, 175, 176, 179, 182, 186, 188-190, 192, 195-197, 202, 203
- regional thinning of, from north to south, MEX, 52, 172
- Sierra de Tamaulipas, XXVIII, 1146
- type locality of, MEX, opp. 44
- Agua Nueva limestone, MEX, 171, 175, 192, 195, Figs. 9, 10, 12 (in pocket)
- Agua Nueva-San Felipe contact, MEX, 66
- Agua Nueva section in Tempuche wells, MEX, 179
- Agua Nueva type section, MEX, 53
- Agua Verde shale member, XXVI, 269
- Agua Nueva overlap, MEX, 162
- Aguada, MEX, 23, 43, 94, 97, 149, 235
- Aguerrevere, Pedro Ignacio, XXIX, 528
- Aguerrevere, S. E., XXII, 1102, XXIV, 1562, 1568
- Aguerrevere, S. E., and Lopez, V. M., XXII, 1105; XXIV, 1570
- Aguilares oil pool, V, 625
- Aguilera, XI, 1181
- Aguilera, J. G., XXVIII, 1078, 1125, 1126
- Agulhas Basin, XXIII, 1667
- Ahlfeld, Friedrich, XXIX, 513, 517
- Ahlfeld, Friedrich, and Reyes, Jorge Muñoz, XXIX, 512
- die Bodenschätze Boliviens*, review, XXV, 333
- Aid, Harry, memorial of, XI, 439
- Aid, Kenneth, and Bauernschmidt, A. J., Jr., geology of southwestern Mendoza Province, Argentina, XII, 693
- Ainsworth, William L., V, 64; X, 212, 213, 214; XI, 1329; XXIII, 1753, 1777
- Air blowers, craters formed by, XVIII, 813
- Air Corps, change in applications for commissions in, XXVI, 1695
- change in applications for interpreters of aerial photographs and intelligence officers in, XXVI, 1695
- Air-flooding method of extraction of oil at Bradford field, Pennsylvania and New York, STR II, 439
- Air lift, Chantute pool, STRAT, 62
- Air photography and geology, XXVIII, 1652
- Airplane photographs, use by petroleum geologist, XIX, 502
- use of, in geologic mapping, XIV, 1049
- Airplanes for geologic explorations in inaccessible regions, IX, 947
- Airy, G. B., XII, 896; XXIX, 1633
- theory of isostasy, CD, 12

- Aiyer, P. A. S., XXVII, 1179
 Ajax oil field, XXVI, 1265
 Ajo Oil Company, XXIII, 894
 Akaba Guli, RMS, 362
 Akard pool, XXIII, 855
 Akron or Wisner field, Tuscola County, Michigan, XXIV, 983
 Alabama, MSC, 177; V, 242, 490, 550; VI, 385, 387
 Ackerman formation in, XVII, 192
 Buckner formation in, section, XXVII, 1455
 columnar section of Eagle Mills-Smackover-Buckner sequence in, XXVII, 1424
 Cotton Valley formation in, section, XVII, 1463
 developments in 1943, XXVIII, 801
 facies changes in Upper Cretaceous toward east in, XXII, 1648
 Fayette gas field, GAS, 856, 858, 870-872
 Florida and Mississippi, subsurface Tertiary zones of correlation through, XXII, 984
 gas seepages, IV, 267
 geology of, abstracts, XI, 1239
 Georgia, and Florida, Lower Eocene in, XXVIII, 1698
 Huntsville gas field, GAS, 872, 873, 874
 leasing in 1942, XXVII, 991
 log samples from well in, XXVIII, 1741
 Lower Peachtree area, Wilcox County, XVI, 492
 magnetic vectors in, XVI, 1196
 Mississippi, Louisiana, and Texas, correlation chart for lower Claiborne, Wilcox, and Midway groups of, XXIX, 47
 northwest, FOP, 149; XXV, 1581
 oil production, XXIX, 817
 Oktibbeha tongue of Selma chalk in, XXI, 807
 Pliocene age of Citronelle formation, XXIII, 1553
 references on oil prospects in, FOP, 149; XXV, 1581
 Smackover formation, section, XXVII, 1445
 south, FOP, 148; XXV, 1580
 Texas, Mississippi, and Arkansas, sections of Upper Jurassic formations in, XXVII, 1421
 Tuscaloosa formation in, section, XVII, 605
 type locality of Citronelle formation, Citronelle, XXIII, 1553
 Vicksburg group in, GC, 358; XIX, 1162
 west, and Mississippi, development in 1944, XXIX, 816
 west-east cross section through wells from Escambia County, to Nassau County, Florida, XXVIII, 1736
 western, and eastern Mississippi, correlation of Cockfield and Gosport formations, XXII, 309
 wildcat drilling in 1942, XXVII, 994
 wildcats drilled in 1943, XXVIII, 805
 work in, by Timothy Abbott Conrad, one hundred years ago, XX, 321
 Alabama and Georgia, parts of, and Florida, map showing Cretaceous beds of Austin age, XXVIII, 1716
 map showing Cretaceous beds of Navarro age, XXVIII, 1710
 map showing Cretaceous beds of (Alabama)
 Taylor age, XXVIII, 1712, 1714
 map showing Cretaceous beds of Tuscaloosa formation, XXVIII, 1720
 map showing Eocene Avon Park limestone, XXVIII, 1686
 map showing Eocene beds of Cook Mountain age, XXVIII, 1696
 map showing Eocene beds of Wilcox age, XXVIII, 1700
 map showing Eocene Ocala limestone, XXVIII, 1684
 map showing Eocene Tallahassee limestone and equivalent non-fossiliferous limestone, XXVIII, 1690
 map showing Lower Cretaceous and older rocks, XXVIII, 1724
 map showing Oligocene beds, XXVIII, 1682
 map showing Paleocene beds of Midway age, XXVIII, 1706
 map showing structure on top of beds of Taylor age, XXVIII, 1728
 map showing structure on top of early Middle Eocene beds, XXVIII, 1727
 map showing structure on top of Ocala limestone, XXVIII, 1726
 map showing variations in interval between top of early Middle Eocene beds and top of beds of Taylor age, XXVIII, 1731
 map showing variations in interval between top of Ocala limestone and top of early Middle Eocene beds, XXVIII, 1730
 map showing variations in interval between top of Upper Cretaceous and base of beds of Austin age, XXVIII, 1732
 map showing variations in thickness of Ocala limestone, XXVIII, 1729
 Alabama and Mississippi, geologic map of Upper Cretaceous formations of, XXII, 1640
 Selma chalk in, XXI, 806
 stratigraphic and age relations of Upper Cretaceous formations of, XXII, 1642
 stratigraphy of Upper Cretaceous series in, XXII, 1639
 Alabama maps and sections, list of, XXII, 431
 Alabama oil reserves, VI, 44
 Alabama subsurface stratigraphy, XXIX, 927
 Alabama wildcats, XXIX, 818
 Alagôas, Brazil, geology of, XXI, 301
 geology of coast of state of, XXI, 299
 physiography of state of, XXI, 301
 Alagôas region, Brazil, XXIX, 551
 Alagôas series, Brazil, bituminous shales in, XXIX, 552
 map, XXI, 300
 tectonics of, XXI, 300, 304
 Alamitos and Seal Beach areas, California, geology and status of development of, XI, 870
 Alamitos Heights, GAS, 186; XII, 646
 Alamitos Heights field, XII, 655
 Alamitos Heights pool, PROB, 750
 Alamitos sands in Long Beach field, California, STR II, 65, 68
 Alamitos zone, PROB, 218; GAS, 185
 Alamo, MEX, 43, 53, 67, 105, 117, 118, 131
 Alamo-El Barco syndline, MEX, 175, 178, 179, 203
 Alamo field, MEX, 4, 164, 178, 208, 221
 Fig. 32 (in pocket)
 Alamo oil pool, Mexico, V, 506
 Alamo sandstone, GC, 605, XIX, 1374
 Alamogordo member, of Lake Valley formation, XXV, 2109, 2112, 2115, 2125
 fauna of, XXV, 2132, 2134
 in Deadman Canyon, type section of lower portion of, XXV, 2118
 Åland Sea, RMS, 309, 312
 Alanreed nose, XXIII, 995
 Alaquines, Tamasopo limestone in, MEX, 60
 Tamasopo-Méndez transition near, MEX, 73
 Alaska, PROB, 30; RMS, 214; VI, 293, 295
 Cretaceous in, FOP, 12, XXV, 1444
 map showing regions favorable for oil, FOP, 9; XXV, 1441
 microthermal studies of some "mother rocks" of petroleum from, XIII, 823
 northern, cross-section of, from Etivluk River to Ikpikpuk River, FOP, 10; XXV, 1442
 northern, fossil plants found in some "mother rocks" of petroleum from, XIII, 841
 northwestern, petroleum seepages in, FOP, 12; XXV, 1444
 northwestern, references on, FOP, 12; XXV, 1444
 possible future oil provinces in, FOP, 8; XXV, 1440
 references on geology of, FOP, 14; XXV, 1446
 review of publications on, VI, 262
 Tertiary in, FOP, 11; XXV, 1443
 western, probabilities for oil, FOP, 13; XXV, 1445
 Alaska Highway, progress reports on geology of, XXVIII, 1655
 Alaska Peninsula, indications of oil in, FOP, 11; XXV, 1443
 references on, FOP, 12; XXV, 1444
 Alaska Peninsula region, structure in Iniskin Bay field, FOP, 10; XXV, 1442
 Alaska spore rock, Meade River, XIII, fol. 848
 Alazán, MEX, 98, 114, 118, 120, 130, 132, 204, 216-218, Fig. 32 (in pocket)
 Alazán beds, MEX, 120, 122, 123, 130
 Alazán fauna, MSC, 178
 Alazán formation, MSC, 177, 179
 Mexico, MSC, 178
 Alazán fossils, MEX, 116
 Alazán shale, Mexico, V, 101; VI, 97
 Albany and Carbon counties, Wyoming, Como Bluff anticline, XXVIII, 1196
 Albany County, Wyoming, production in, XXI, 764
 Albany formation, Texas, I, 94; III, 81, 95, 134, 147, 169, 170
 Albatross, bottom-sampling apparatus, RMS, 651, 653
 expedition, RMS, 50
 Albatross foraminifera, XXV, 1225
 Albercas, gas and oil in calcite crystals near, MEX, 166
 Alberg, Michel, *Le Pétrole en Pologne*, review, XIII, 525
 Albert formation, FOP, 119; XXV, 1551
 Albert series, GAS, 106

- Alberta, Canada, GAS, 1-6, 10, 11, 14, 18, 23, 25-28, 1059, 1060, PROB, 158, 161, 165, 167, 169, 172, 347, 368, 702; STRAT, 273, 285, 337, 339
- Athabaska oil sands, STRAT, 859
- Bearpaw shale and contiguous formations in Lethbridge area, ALTA, 99, XV, 1227
- Blairmore-South Fork areas, XI, 241
- Bow Island gas field, STRAT, 859; VII, 152
- Brooks gas field, STRAT, 859
- Cretaceous in, ALTA, 3, 37, 47, 89, 104, 144; FOP, 23; GAS, 10, 22, 1060; XI, 240; XXII, 1135; XXV, 1455; XXVIII, 871. (See Cretaceous)
- Cretaceous stratigraphy of Vermilion area, XXIX, 1605
- Czar district, VII, 154
- development in 1944, XXIX, 654
- Devonian in, FOP, 23; VII, 148; XXV, 1455
- diagnostic fossils of, XI, 249
- diamond drilling against high gas pressure in Turner Valley, Calgary, XII, 91
- east central, composite geologic column, XXIX, 1608
- eastern, oil and gas possibilities of, VII, 147
- Etzikom Coulee, VII, 155
- Foremost gas field, STRAT, 859
- gas in, STRAT, 273
- geologic map, XV, opp. 492
- geologic map of southern, ALTA, opp. 1; XV, opp. 1128
- invertebrate paleontology of southern plains of, ALTA, 155; XV, 1283
- limestone reservoir conditions in Turner Valley oil field, XXIX, 1156
- Lower Cretaceous in, STRAT, 285; VII, 148
- map of northern part of, showing areal distribution of McMurray formation, XXII, 1143
- Medicine Hat, VII, 156
- Mesozoic in, VII, 157
- Milk River, VII, 156
- Mississippian in, STRAT, 303
- Monitor district, VII, 155
- new fields discovered in 1944, XXIX, 657
- northern, map showing general features in vicinity of Athabaska River tar sands of, FOP, 22; XXV, 1454
- northern, oil sands, FOP, 21; XXV, 1453
- northern, oil sands area, structure sections across, FOP, 22; XXV, 1454
- oil and gas possibilities, VII, 147, 156
- oil areas in, XXIX, 658
- oil fields and prospects in, map, XXVIII, 867
- origin of McMurray oil sands, XXII, 1133
- Paleozoic in, VII, 157
- Paleozoic of southern plains of, ALTA, 13; XV, 1141
- Paleozoic limestone of Turner Valley, XXIV, 1620
- Pleistocene in, STRAT, 274
- Ribstone-Blackfoot area, XI, 256
- sediments of Montana age in Milk River Ridge region, ALTA, 87; XV, 1215
- (Alberta)
- southern, STRAT, 273
- southern, Fox Hills formation in, ALTA, 123; XV, 1251
- southern, sections of Bearpaw shale from Keho Lake to Bassano, ALTA, 115; XV, 1243
- southern, stratigraphic correlation and nomenclature in plains of, ALTA, 1, XV, 1129
- southern, subsurface study of Pale beds and Foremost formation in Lethbridge-Brooks area of, ALTA, 69; XV, 1197
- southern, and northern Montana, correlations of formations of, ALTA, 3
- southwestern, zones in Alberta shale (Benton group) in foothills of, XVIII, 1387
- stratigraphy, VII, 149
- stratigraphy of Colorado shale in southern plains of, ALTA, 43; XV, 1171
- stratigraphy of Foremost, Pakowki and Milk River formations of southern plains of, ALTA, 53; XV, 1181
- stratigraphy of Red Coulee field, ALTA, 33
- stratigraphy and oil prospects of, XI, 237
- stratigraphy and oil prospects of, discussion, XI, 515
- stratigraphy and structure of Moose Mountain area, XXVII, 38
- structure, VII, 149
- structure of Turner Valley gas and oil field, XVIII, 1417
- types of Foothills structures of, XIX, 1427
- Upper Cretaceous, ALTA, 155; VII, 148; STRAT, 274, 283
- Upper Jurassic in, STRAT, 301
- Viking gas field, STRAT, 859; VII, 153
- Alberta, Canada, and Toole County, Montana, Border-Red Coulee oil field, STRAT, 267
- Alberta and Saskatchewan, central, facies changes across, XXIX, 1624
- Alberta gas fields, data on, GAS, 5
- Upper Cretaceous in, FOP, 20; XXV, 1452
- Alberta geology, STRAT, 271, 273, 283, 297
- Alberta geosyncline, GAS, 7
- Alberta homocline, GAS, 9, 18
- Alberta natural gas, composition of, GAS, 27
- Alberta oil sands, references on, FOP, 24; XXV, 1456
- Alberta plain, STRAT, 271, 273
- Alberta shale, STRAT, 283; XXIX, 1616
- (Benton group) in foothills of southwestern Alberta, zones in, XVIII, 1387
- Alberta shales, Upper, in southeastern British Columbia, occurrence of *Baculites ovatus* zone of, discussion, XIX, 295, 703
- Alberta Society of Petroleum Geologists, possible future oil provinces in western Canada, FOP, 15; XXV, 1447
- Alberta syncline, Canada, FOP, 15, 18; PROB, 703; XI, 255; XV, 491; XXIV, 1622; XXV, 1447, 1450
- discussion, XV, 971
- Alberta, XXII, 1285
- Albite, PROB, 9, MEX, 38, 39, 206
- Albertson, M., XXII, 566, 1446; XXV, 30
- explanation of large initial production in Haynesville field, Louisiana, VII, 295
- Albian, Colima, southern Jalisco, and western Michoacan, XXVIII, 1122
- eastern Querétaro, western Hidalgo, and northern México, XXVIII, 1124
- Fresnillo district of Zacatecas, XXVIII, 1140
- Mexico, XXVIII, 1090
- middle, and late lower Albian of Mexico and Central America, characteristic fossils of, XXVIII, 1095
- middle and lower, in Mexico, several distinct facies, XXVIII, 1093
- upper, and lower Cenomanian, several facies in Mexico and Central America, XXVIII, 1095
- Albian ammonites, XXIV, 1183; XXVIII, 1160
- Albian fauna, MEX, 25
- Albian fauna, European Cretaceous, V, 6
- Albian fossils, XXVIII, 1146, 1148
- from eastern Ecuador, XI, 1280
- Albian limestones, MEX, 17, 22, 27, 29, 34, 36, 38, 93, 95-97, 160-162, 205
- La Borrega Cañon, MEX, 32
- Sierra Tamulipas, MEX, 25
- Albian Lower Cretaceous, Mexico, map, XXVIII, 312
- Albian stage of Cretaceous, stratigraphic ranges of ammonite species of upper three zones of, XXVII, 274
- Albion formation, PROB, 457
- Albion sandstone member of Medina a widespread gas-bearing formation, XXII, 81
- Albite, XXVII, 170
- Albrecht, Helmuth, XVIII, 729, 730
- Erdölorkommen von Volkenroda*, review, XVI, 713
- Albright, W. F., XX, 885
- Albritton, Claude C., Jr., XXVI, 232; XXVII, 1485, 1487, 1491; XXVIII, 547
- Albritton, Claude C., Jr., and Bryan, Kirk, XXVI, 1016
- Albritton, Claude C., Jr., and Huffington, Roy M., XXVI, 1016
- Alcalde Canyon, CAL, 49
- Alcade fault, XIII, 221
- Alcade Hills, SC, 46, 55, 59; XX, 1592
- 1601, 1603; XXIX, 986, 990
- Alcade shale, XXIX, 991
- Alcohol, RMS, 422
- use of, in sediment studies, RMS, 443, 528, 595
- Alcorn, I. W., XXIII, 1821
- Alcova, stratigraphic section of Sundance formation measured near, XXI, 742
- Sundance formation at, XXI, 741
- Alcova-capped mesa, XXV, 895
- Alcova dolomite, XXV, 135
- Alcova limestone, XXV, 887
- Alcova limestone hogback, XXV, 894
- Aldama volcanic hills, MEX, 5, 109, 141, 145
- Aldamas anticline, India formation on, GC, 598; XIX, 1367
- Alden, John Mandeville, memorial of, XXI, 1370
- Alden, R. C., GAS, 1122, 1123

- Alden, W. C., STRAT, 331
Alden field, GAS, 952
Alderson, Victor C., VII, 622
Aldine field, Harris County, Texas, XXIV, 1084
Aldrich, H. R., PROB, 539; XIII, 660
Aldrich, T. H., XXVIII, 998, 999
Aldrich field, Kansas, XXIX, 564
production at, XXIX, 565
spacing, XXIX, 565
Aldridge, Paul, XXV, 2158
Aleutian Islands, RMS, 113, 114
Alexander, XXIV, 381; XXVII, 1136
Alexander, A. E., RMS, 241
Alexander, Alex M., memorial of XIX, 147
Alexander, C. I., XIX, 1162, 1533, 1536, XXII, 979; XXVI, 1191; XXVIII, 522, 579, 1705; XXIX, 176, 1417
Concord salt dome, Anderson County, Texas, XXVIII, 1537
stratigraphy of Midway group (Eocene), of southwest Arkansas and northwest Louisiana, XIX, 696
Alexander, C. I. and Burnett, T. J., developments in East Texas in 1943, XXVIII, 841
Alexander, C. I., and Kleinpel, R. M., MSC, 27
Alexander, C. I., and Smith, J. P., southward extension of Bonham clay, Texas, XVI, 205
Alexander, Clyde W., and Weeks, Warren B., XXVIII, 217, 579, 606, 608; XXIX, 1257, 1258
Schuler field, Union County, Arkansas, XXVI, 1467
Alexander, Clyde W., Morgan, C. L., and Norman, M. E., developments in southeastern states in 1944, XXIX, 815
Alexander, Lyle T., RMS, 540; SBP, 22
Alexander, W. H., Jr., and Rose, Nicholas A., relation of phenomenal rise of water levels to a defective gas well, Harris County, Texas, XXIX, 253
Alexandrian, Big Sinking field, STRAT, 179
Alfa Cozadd well, XXIX, 678
Alfred field, XXII, 756
Algae, PROB, 25, 42, 43, 235, 451; RMS, 436; SD, 218; XXV, 1717
acid hydrolysis of, effect in formation of liquid oil, PROB, 270
agency in reducing sulphates, X, 1273
believed to be Archean, review, VII, 302
blue-green, RMS, 145
calcareous, RMS, 235, 240, 259, 286-288
chemistry of conversion of, into bitumen and petroleum and of fuco-site-petroleum cycle, XVI, 427
filaments of, RMS, 293
in Carlsbad limestone, XXI, 869
in Great Salt Lake, XXII, 1328, 1331
in salt domes, significance of, SD, 218
Algae and seaweed as parent materials, XXIV, 1875
Algal bioherms, chemical analyses of, XXII, 1398
in Great Salt Lake, XXII, 1392
Algal biscuits, XXVI, 54
Algal coal, PROB, 82
Algal deposits, calcareous, in Great Salt Lake, origin of, XXII, 1399
(Algal)
in Great Salt Lake, XXII, 1394
Algal fragments, XXVIII, 1687
Algal limestone, PROB, 366
in southern California, XIII, 1485
Algal reef, Permian, in South Park, Colorado, XVII, 863
Algal reefs in Cretaceous Austin chalk of Terlingua district, Brewster County, Texas, XXVIII, 123
in Powder Wash area, XXII, 1033
Algal sediments of Brazil, XXI, 121
Algeria, production in, XVI, 460
research in, XVI, 455
Algeria Escarpment, XXI, 850, 854
Alginic acid, RMS, 421
Algonkian in Rocky Mountains, XXIII, 1134
to Upper Mississippian, northeastern Utah to western South Dakota, cross section of, XXIII, 1134
Alhambra, California, outcrop section 8, SBP, 167-194, 411
Alibates dolomite, IV, 271
Alice dome, VI, 148
Alice field, XXIII, 867
Alidade, long shots with, XIII, 1561
Alief area, XXVII, 733
Alignment of salt domes controlled by tectonic plan of basement, SD, 206
Alignment chart, application of, to petroleum engineering, IX, 803
Aliso, Cañada de, MSC, 87
Aliso Canyon, California, outcrop section N, SBP, 164-194, 411
Aliso Canyon deeper zone, XXV, 1163
Aliso Canyon field, XXIII, 939; XXVII, 872
Alkali, RMS, 472
Alkali Butte field, Frontier water in, XXIV, 1240
Muddy water in, XXIV, 1259
Alkali carbonate, RMS, 545
Alkali Creek faulted dome, XIV, 1033
Alkali feldspars, RMS, 602
Alkali hydroxides, RMS, 485
Alkali metals, RMS, 535
Alkalies and their separation from sesquioxides, determination of, review, XII, 1123
Alkaline digest, RMS, 600
Alkaline permanganate, RMS, 539
Alkaline reaction, RMS, 261
Alkaline solution, RMS, 594
formation of montmorillonite by, RMS, 485
Alkaline solutions, effect of flooding oil sands with, XI, 223
Alkalinity, RMS, 150, 423, 458
primary, water featured by, XXIV, 1220
Alkaloids, RMS, 443
as mounting media, RMS, 603
Allamoores limestone in Van Horn region, Texas, XXIV, 148
Allan, John A., VII, 151; XI, 239, 248, 256, XV, 491; XXII, 1150; XXIV, 1623
discussion of origin of oil in bituminous sands at McMurray, XXII, 1150
Allan, John A., and Rutherford, R. L., GAS, 12; XVIII, 1390
Allan, John A., and Sanderson, J. O., XI, 248
Allan, John A., and Slipper, S. E., XXIX, 1607
Allan, Thomas H., PROB, 777
Allan, Thomas H., and Valerius, M. M., Fairport oil field, Russell County, Kansas, STR I, 35
Allee, W. C., XXVI, 1728, 1746
Allee, W. C., Hesse, Richard, and Schmidt, Karl P., XXIV, 1197
Allee pool, XXV, 1080
Allegan and Bay counties, Michigan, section showing lenticular shales in, XXV, 726, 728, 730
Allegan County, Michigan, XXII, 664
southwest-northeast cross section from, to Montcalm County, Michigan, XXV, 717
Allegany, Cattaraugus, and Steuben counties, New York, map of oil fields, STR II, 270
Allegany County, New York, gas and oil in Oriskany sandstone in, XXII, 261
well 411, SBP, 349-379, 410
Allegany County field, New York, STR II, 269, 272, 284, 289
Allegany field, New York, XXIX, 670
Allegany age, V, 38, 368
Allegany-Conemaugh boundary of type Pennsylvanian, XXIX, 165
Allegany formation, PROB, 453
Gay - Spencer - Richardson trend, STRAT, 810
Scenery Hill gas field, Pennsylvania, STR II, 444
Allegany group, Ohio, GAS, 901
Allegany Plateau, XI, 707
Allegany series, XXV, 797; XXIX, 146
Copley pool, West Virginia, STR I, 446
Allen, Alice S., XXIV, 301; XXIX, 1721
Allen, Donald M., XXIII, 1247
stratigraphic studies of Baker-Glen-dive anticline, eastern Montana, discussion, XXIII, 1246
Allen, E. T., and Crenshaw, J. L., XV, 268
Allen, E. T., and Day, A. L., XX, 279
Allen, E. T., Crenshaw, J. L., and Johnson, John, X, 1282
Allen, E. T., Crenshaw, S. H., Johnson, John, and Larsen, Esper S., PROB, 909
Allen, H. B., XXIII, 518
Allen, H. B., Eaton, J. E., and Grant, U. S., Miocene of Caliente Range and environs, California, XXV, 193
Allen, John Eliot, and Baldwin, Ewart M., XXVIII, 1779
Allen, Morris C., XIII, 1095
Allen, T. L., use of record character in interpreting results and its effect on depth calculation in refraction work, XVI, 1212
Allen, Victor T., CAL, 127, 128, 131, 132, 133, 294; SC, 26; XX, 1572; XXIV, 1747
Allen, V. T., and Grim, R. E., XXVI, 53
Allen, W. B., XIX, 1358
Allen, Walter J., and Scott, H. M., memorial of Harry Favill Wright, XXVIII, 1063
Allen County, Kentucky, oil fields, V, 169
Allen dome, PROB, 637; XVII, 1516; XXIX, 828
reflections on flank of, XXVII, 59
salt overhang at, GC, 165, 166; XVIII, 1516

- Allen field, New York (well 411), SBP, 349-379, 410; XXI, 1589, XXVII, 837; XXIX, 668
- Allen Lake anticline, XXII, 686
- Allen Lake gas field, XXI, 995
- Sundance water in, XXIV, 1277
- Allen pool, III, 166
- Allen Township, New York (well 411), SBP, 349-379, 410
- Allgemeine Petrographie der "Oelschiefer" und ihrer Verwandten mit Ausblicken auf die Erdolentstehung (Petrographie der Sapropelite)*, review, XII, 564
- Alling, Harold L., XXI, 1272
- Allison and Fitzsimmons (well 258), SBP, 255-285, 407
- Allison, L. E., SBP, 46
- Allison, R. E., VII, 565
- Allochthonous, XXIX, 440, 442
- Allochthonous components of deposits, XXVI, 1702
- Allogenic residues, XX, 1091
- Allomorphinellinae, MSC, 338
- Allophane, RMS, 468-472, 484, 487, 490
- Allophanetone, RMS, 468
- Allred, Governor, XXIII, 1315
- Alluvial and lacustrine deposits in Great Valley, SC, 48; XX, 1594
- Alluvial fan remnants, post-Oligocene, in Wind River Mountains, XXV, 142
- Alluvial fans, XXV, 256
- Alluvial plains, RMS, 269
- Alluvial prospecting, review, XII, 1121
- Alluvial valleys, RMS, 155
- Alluviating channels, RMS, 161
- Alluviation, RMS, 156, 159, 162, 164
- Alluvium, MEX, 12, 100, 122, 141, 178
- in Honda district, XXVI, 828
- in Tejon Quadrangle, XXI, 219
- Alluvium and stream gravels in Santa Maria oil field, California, XXIII, 53
- Alluwe field, XXI, 1006
- Alma, Williams, and Kibler fields, recoveries from, GAS, 566
- Alma anticline, GAS, 562
- Alma field, GAS, 563, 564
- Alma Oil Company, XXIII, 831
- Alma-Smelter field, GAS, 562
- Almandine, RMS, 602
- Almont sandstone, XXVII, 1580
- Almy, L. H., VIII, 196
- Almy, L. H., and Taylor, H. F., VIII, 197
- Almy and Adaville formations, relation of faults to, XXV, 1740
- Almy formation, XXV, 1734
- Almy sediments, horizontal, on crest of La Barge Ridge, XXV, 1740
- Alpena biostromes and bioherms, XXVII, 586
- Alpena limestone, XXIV, 1965; XXVIII, 183
- section, XXVII, 585
- Alpes, la géologie des méridionales, d'après les levés récents*, XXIII, 1721
- Alpha-particle bombardment of hydrocarbons, XXVIII, 937
- of paraffin hydrocarbons, chemical effects of, XXVIII, 938
- synthesis of water under, XXVIII, 935
- Alpha-particle reactions, free radicals in, XXVIII, 941
- Alpha particles, energy loss of, in trav-
- (Alpha)
- ersing matter, XXVIII, 933
- Alpha rays from elements of uranium and thorium series effective in generating oil or gas, XXIX, 1490, 1492
- Alpidic era, XX, 852
- Alpine geosyncline, XII, 495
- Alps, RMS, 411
- genesis of, XXI, 1356
- Himalayan border compared with, XXIII, 1417
- structure of, an indication of horizontal movement, CD, 141, 157, 199
- Aliquitrano oil field in Venezuelan Andes, XIX, 792
- Alsace, MSC, 198
- Lower, nitrogen at Pechelbronn, GAS, 1060
- Lower, temperature gradient in Pechelbronn, discussion, XIII, 1569; XIV, 105
- Lower, temperature gradient in Pechelbronn oil-bearing region: its determination and relation to oil reserves, XIII, 1257
- Alsberg, C. L., XIV, 1452
- Alta formation, PTNM, 673; XXIV, 182; XXVI, 673
- Alta Loma, XXV, 1008
- Alta Mesa pool in Brooks County, Texas, XXI, 1045
- Alta Verde and Alta Mesa fields in Brooks County, Texas, XXI, 1046
- Alta Vista field, III, 299, 307
- Altamura field, GAS, 999
- Altamira pool, MEX, 3, 15, 34, 164, 172, 186, 195
- natural gas at, MEX, 201
- Altamira shale, MSC, 165, 185, 200, 206, 209, 211, 212, 218, 221, 222, 230, 237, 238, 244, 245, 247-249, 251, 255, 256, 259, 261-266, 268, 269, 271, 273, 276-279, 283, 285, 286, 288, 289, 292, 295, 297, 299, 300, 303, 304, 307, 309, 310, 312-314, 318-320, 324, 326-328, 330-332, 334, 335, 337-340, 342, 344, 348, 350, 351, 354, 356, Fig. 14 (in pocket)
- Altamont limestone, XXV, 29, 38, 43, 50, 60
- Kansas, V, 297; VI, 464
- Oklahoma, II, 122
- Alteration, RMS, 608
- of basic igneous rocks, RMS, 486
- of biotite in glauconitization, RMS, 514
- of Franciscan sandstones, XXVII, 133
- of minerals, RMS, 601, 608
- of sediments after deposition, RMS, 525
- selective, in Santa Lucia Range, XXVII, 166
- Altered volcanic ash from Cretaceous of western Kansas, XII, 1015
- Altered zone in Mississippian limestone in Turner Valley field, XXIX, 1158, 1159
- Alternating sediments, RMS, 172, 369, 449
- Alterations of submergence and emergence, XIII, 741
- Altiplano, oil possibilities on, XXIX, 512
- Alto formation, XXVIII, 1524
- limits of, XXVIII, 1522
- Alto limestone, XXV, 691
- Alton, California, outcrop section A, SBP, 167-194, 411
- Altuda formation, PTNM, 654; XXVI, 654
- Alum Bluff formation, VI, 398; XXII, 794
- Alum Bluff group, MSC, 176
- Alum Cave seam, Coal V, in Indiana, XXIII, 1385
- Alumina, RMS, 468, 474, 511, 529
- in clay minerals, RMS, 471
- in glauconite, RMS, 504, 509
- in shale, RMS, 509
- in tidal deposits, RMS, 200
- Alumina-silica ratio, RMS, 485
- Aluminum, RMS, 456, 458, 461, 462, 467
- in clays, RMS, 469
- precipitation of, RMS, 423
- quantity of, in muds, RMS, 510
- replacements of, RMS, 479, 481
- Aluminum cup for collecting sediment samples, XXIII, 13
- Aluminum hydroxide, RMS, 382, 462, 466, 474
- Aluminum ions, RMS, 459, 463, 475-477, 482, 483
- Aluminum silicate, RMS, 456
- hydrous, RMS, 484
- Aluminum silicate minerals, RMS, 472
- Alva field, Oklahoma, II, 57
- Alvey, Glenn H., decline curve prediction from the first day and from the first thirty days, IV, 209
- Alvim, Afonso C., XX, 1210
- Alvy pool, West Virginia, analysis of oil from, XI, 596
- Amalgamated Oil Company, GAS, 207
- Amaral, Irnack do, Abreu, S. Frôes, and de Paiva, Glycon, *contribuições para a geologia do petróleo no Recôncavo (Bahia)*, review, XXI, 273
- Amarillo anticline, XVII, 886
- Amarillo arch, GAS, 385-388, 390-395, 397-399, 401, 404, 411, PROB, 627
- Amarillo buried mountains, FOP, 88; GAS, 393; XXIII, 986, 995, 1039; XXV, 6, 1520
- Amarillo district, Texas, PROB, 607, 608; VII, 237, 434
- geology and occurrence of natural gas in, XVII, 877
- stratigraphy, structure, development, IV, 269; VI, 88
- Amarillo fold, Texas, helium—origin and concentration in, XIII, 799
- Amarillo granite ridge, XIX, 1099; XXI, 1017
- Amarillo helium plant, GAS, 1054, 1064
- Amarillo Mountains, XIII, 425; XXVI, bet. 224 and 225
- Amarillo region, preliminary notes on geology and structure of, IV, 269
- Amarillo torsion-balance structure, XXIII, 1052
- Amarillo uplift, FOP, 95; XXI, 1031, 1086; XXV, 1527, 1626; XXIX, 723
- pre-Cambrian in, XXV, 1626
- Amarillo-Wichita belt of folding, FOP, 88; XXV, 1520
- Amarillo-Wichita-Red River and Anadarko-Ardmore provinces, difference in color and hardness between, XXV, 17

(Amarillo;
 difference in topography between
 XXV, 17
 Amarillo-Wichita-Red River province,
 XXV, 6
 Hobart oil field within, XXV, 17
 Amarillo-Wichita-Red River uplift,
 XXV, 1, 8
 Amarillo-Wichita-Red River uplift as a
 southeast extension of Ancestral
 Rocky Mountains, XXV, 8
 Amarillo-Wichita-Red River uplift and
 Anadarko-Ardmore geosyncline,
 surface profiles showing difference
 in surface relief between, XXV, 16
 Amarillo-Wichita-Red River uplift and
 Hutton-Tishomingo uplift com-
 parable with Franciscan complex
 of California, XXV, 7
 Amatlán, MEX, 136, 149, 151, 153, 204,
 207, 213, 214, Fig. 32 (in pocket)
 dykes in, MEX, 149
 salt water in, MEX, 5
 Amatlán field, Mexico, GAS, 999; V,
 506; VI, 111
 Amazon Basin, XXI, 1347
 Amazon River, RMS, 225
 Amazon trough, XXIX, 539, 543, 560
 Devonian in, XXIX, 543
 Paleozoic rocks of, XXIX, 546
 typical well at Bom Jardim near
 southern border of, XXIX, 545
 Amber and its significance, XXIII, 608
 Ambronn, Richard, XIII, 1271, 1272;
 XVI, 1310, 1350, XVIII, 63, 65,
 XXV, 328
 modern instruments for seismic pros-
 pecting, review, XIII, 1492
 Ambrose, Arthur Warren, XI, 1291
 review, V, 682; IX, 1299
 the petroleum production engineer
 and his relation to future produc-
 tion, IV, 137
 Ambrose, H. A., XXI, 1465
 Amelia field, Texas, accumulation of
 oil at, XXIII, 1637
 bottom-hole-pressure studies at,
 XXIII, 1655
 deeply buried structure of, compared
 with shallow, prolific, piercement-
 type salt domes, XXIII, 1637
 development and production at,
 XXIII, 1657
 difficulties of completion of producing
 wells in, XXIII, 1637
 faults at, XXIII, 1649
 Frio formation in, XXIII, 1639
 gas cap at, XXIII, 1654
 gas-oil levels at, XXIII, 1653
 geologic section, XXIII, 1647, 1648
 geologic structure map of. Contours
 based on top of Langham sand,
 XXIII, 1646
 gravity of oil at, XXIII, 1658
 Langham sand productive at, XXIII,
 1639, 1645, 1652
 oil-salt-water level at, XXIII, 1654
 origin of uplift and accumulation of
 oil at, XXIII, 1650
 pipe lines from, XXIII, 1664
 production at, XXIII, 1656
 production methods and practices at,
 XXIII, 1638, 1659
 proration at, XXIII, 1656
 regional map showing location of,
 XXIII, 1636
 reservoir conditions at, XXIII, 1653,
 1655
 stratigraphic section in, XXIII, 1642

(Amelia)
 structure in, an elongate dome or
 anticline adjacent to a big fault,
 XXIII, 1645
 summary of completions, XXIII,
 1664
 topography and general surface con-
 ditions of, XXIII, 1640
 water drive at, XXIII, 1656
 wells drilled in, XXIII, 1658
 Amelia field and problems of its de-
 velopment, XXIII, 1637, 1661
 Amelia oil field, Jefferson County,
 Texas, XXIII, 1635
 Amend and Elmer, X, 934
 Amerada and Westgate-Greenland,
 XXIII, 805
 Amerada Petroleum Company, XXII,
 963
 Amerada Petroleum Corporation, SD,
 170, 612, XXI, 985, 995, 1010,
 XXII, 743, XXIII, 686, 885;
 XXIV, 1053, 1113; XXVI, 1144;
 XXIX, 1028
 Christian 1 (well 360), SBP, 292-335,
 409
 F.D.L. 1 (well 5), SBP, 130-153, 403
 Wade 1 (well 307), SBP, 292-335,
 408
 Amerada-Stanolind, XXIII, 878
 Amerada Walton well, GAS, 453
 America, foraminifera from west coast
 of, MSC, 12
 outstanding features of petroleum de-
 velopment in, XIX, 469
 proposed Geological Institute of,
 XXIX, 240
 widespread break below *Pseudo-
 schwagerina* zone in, XXIV, 279
 America and Orient, comparison of
 Permian of, with Permian of Rus-
 sia, XXIV, 265
 American, British, and Dutch control
 of crude production, preponderance
 of, XXV, 1272
 American and European late Paleozoic
 crustal movements, correlation of,
 XIX, 1296-1303
 American Askama Corporation, XIX,
 21
 American Association for the Advance-
 ment of Science, meeting of Sec-
 tion E, Dallas, December, 1941,
 XXV, 1966, 2099
 American Association of Petroleum
 Geologists, MEX, vii, viii; MSC,
 6; RMS, iii, vi, 2
 abstracts of papers, Denver meeting,
 XXVI, 898
 abstracts of papers, Houston meeting,
 XXV, 928
 abstracts of papers, Pacific Section
 meeting, XIX, 134, 1841; XXI
 1612; XXII, 1714; XXIII, 1876;
 XXIV, 2192; XXV, 2093
 abstracts of papers, San Antonio Sec-
 tion meeting, XIX, 138; XX, 1513
 advertising manager, 1924, VII, 396
 amendments to constitution and by-
 laws, XXIX, 599
 analysis of membership of, XXVII,
 1559
 announcement and rules of presi-
 dent's award, XXIX, 118
 American Association of Petroleum
 Geologists, annual meetings
 first annual meeting, Norman, Janu-
 ary, 1916, XIII, 154
 second annual meeting, Tulsa, Febru-

(American)
 ary, 1917, I, 11, XIII, 156
 third annual meeting, Oklahoma
 City, February, 1918, II, 11,
 XIII, 159
 fourth annual meeting, Dallas,
 March, 1919, III, 16, XIII, 161
 fifth annual meeting, Dallas, March,
 1920, IV, 317, XIII, 163
 sixth annual meeting, Tulsa, March,
 1921, V, 345; XIII, 164
 seventh annual meeting, Oklahoma
 City, March, 1922, VI, 162, 266;
 XIII, 165
 eighth annual meeting, Shreveport,
 March, 1923, VII, 202, 307; XIII,
 165
 ninth annual meeting, Houston,
 March, 1924, VIII, 99, 362, 367;
 XIII, 166
 tenth annual meeting, Wichita,
 March, 1925, IX, 678, XIII, 167
 eleventh annual meeting, Dallas,
 March, 1926, X, 538; XIII, 168
 twelfth annual meeting, Tulsa,
 March, 1927, XI, 96, 524; XIII,
 169
 thirteenth annual meeting, San
 Francisco and Los Angeles, March,
 1928, XII, 105, 570; XIII, 170
 fourteenth annual meeting, Fort
 Worth, March, 1929, XIII, 531
 fifteenth annual meeting, New Or-
 leans, March, 1930, XIII, 1578;
 XIV, 647
 sixteenth annual meeting, San An-
 tonio, March, 1931, XV, 567
 seventeenth annual meeting, Okla-
 homa City, March, 1932, XVI, 499
 eighteenth annual meeting, Hous-
 ton, March, 1933, XVII, 569
 nineteenth annual meeting, Dallas,
 March, 1934, XVIII, 673
 twentieth annual meeting, Wichita,
 March, 1935, XIX, 306, 706
 twenty-first annual meeting, Tulsa,
 March, 1936, XX, 114, 236, 622
 twenty-second annual meeting, Los
 Angeles, March, 1937, XX, 1382,
 1511; XXI, 638
 twenty-third annual meeting, New
 Orleans, March, 1938, XXII, 117,
 231, 577
 twenty-fourth annual meeting, Okla-
 homa City, March, 1939, XXIII,
 112, 265, 711
 twenty-fifth annual meeting, Chi-
 cago, April, 1940, XXIV, 207, 397,
 597, 889
 twenty-fifth annual meeting, address
 of welcome, XXIV, 1157
 twenty-sixth annual meeting, Hous-
 ton, April, 1941, XXIV, 1346,
 1697, 2196; XXV, 179, 342, 535,
 918
 twenty-sixth annual meeting, re-
 marks at opening of, XXV, 1201
 twenty-seventh annual meeting, Den-
 ver, April, 1942, XXV, 1618, 1960,
 2092, 2220; XXVI, 896
 twenty-eighth annual meeting, Fort
 Worth, April, 1943, XXVI, 1861;
 XXVII, 662
 twenty-ninth annual meeting, Dal-
 las, March, 1944, XXVII, 1652;
 XXVIII, 635
 thirtieth annual meeting, Tulsa,
 March, 1945, XXVIII, 1665, 1774;
 XXIX, 115, 396, 573

(American)

- thirty-first annual meeting, Chicago, April, 1946, XXIX, 1674
- American Association of Petroleum Geologists, annual business meetings
- tenth annual business meeting, Wichita, Kansas, March, 1925, IX, 678, 690
- eleventh annual business meeting, Dallas, March, 1926, X, 540
- twelfth annual business meeting, Tulsa, March, 1927, XI, 538
- thirteenth annual business meeting, San Francisco, March, 1928, XII, 577
- fourteenth annual business meeting, Fort Worth, March, 1929, XIII, 543
- fifteenth annual business meeting, New Orleans, March, 1930, XIV, 658
- sixteenth annual business meeting, San Antonio, March, 1931, XV, 583
- seventeenth annual business meeting, Oklahoma City, March, 1932, XVI, 520
- eighteenth annual business meeting, Houston, March, 1933, XVII, 576
- nineteenth annual business meeting, Dallas, March, 1934, XVIII, 684
- twentieth annual business meeting, Wichita, March, 1935, XIX, 725
- twenty-first annual business meeting, Tulsa, March, 1936, XX, 638
- twenty-second annual business meeting, Los Angeles, March, 1937, XXI, 649
- twenty-third annual business meeting, New Orleans, March, 1938, XXII, 590
- twenty-fourth annual business meeting, Oklahoma City, March, 1939, XXIII, 723
- twenty-fifth annual business meeting, Chicago, April, 1940, XXIV, 906
- twenty-sixth annual business meeting, Houston, April, 1941, XXV, 951
- twenty-seventh annual business meeting, Denver, April, 1942, XXVI, 922, 1155
- twenty-eighth annual business meeting, Fort Worth, April, 1943, XXVII, 670
- twenty-ninth annual business meeting, Dallas, March, 1944, XXVIII, 643
- thirtieth annual business meeting, Tulsa, March, 1945, XXIX, 573
- American Association of Petroleum Geologists, Association committees, XIV, 962, 1097, 1243, 1372, 1487, 1585; XV, 101, 224, 359, 425, 590, 721, 858, 983, 1302, 1405, 1455; XVI, 114, 226, 326, 433, 525, 622, 711, 859, 1057, 1165; XVII, 102, 205, 324, 449, 609, 751, 874, 1020, 1155, 1400, 1546; XVIII, 156, 276, 427, 559, 714, 842, 966, 1100, 1221, 1382, 1553, 1718; XIX, 141, 308, 467, 583, 760, 921, 1081, 1250, 1401, 1714, 1846; XX, 117, 238, 334, 511, 665, 840, 995, 1148, 1269, 1383, 1522; XXI, 134, 286, 363, 542, 645, 824, 969, 1237, 1367, 1508, 1616; XXII, 123, 237, 328, 508, 626, 783,

(American)

- 945, 1126, 1301, 1468, 1620, 1719; XXIII, 114, 269, 358, 620, 708, 976, 1114, 1258, 1432, 1590, 1736, 1870; XXIV, 192, 398, 512, 760, 942, 1146, 1344, 1508, 1692, 1848, 2058, 2200, XXV, 182, 340, 446, 776, 914, 1190, 1428, 1608, 1826, 1958, 2088, 2218; XXVI, 144, 292, 416, 890, 1170, 1304, 1432, 1546, 1676, 1784, 1852; XXVII, 102, 230, 314, 562, 660, 876; XXVIII, 140, 284, 344, 1059, 1227, 1399, 1550, 1661, 1763; XXIX, 111, 235, 299, 1361, 1525, 1672, 1786
- Association districts, XXVIII, 884
- Association library, X, 1314; XI, 896, 1127, 1242, 1338; XII, 103, 124, 284, 456, 567, 682, 776, 876, 880, 957, 1042, 1128; XIII, 242, 527; XIV, 1579; XV, 293; XVIII, 1215
- Association statistics, XXIII, 1257
- business committee, XXIII, 1113
- business committee, minutes of, 1942, XXVI, 950; 1943, XXVII, 702; 1944, XXVIII, 677; 1945, XXIX, 609
- Carboniferous, subcommittee on, XXIV, 1346
- certificate of incorporation, VIII, 391; XVI, 1047
- Chicago convention activities, XXIV, 408, 600
- code of ethics, VIII, 383; XI, 647; XVIII, 964; XIX, 1844; XXI, 1234; XXIV, 1519; XXVI, 511; XXVIII, 164; XXIX, 395
- colleges and universities in United States attended by members and associates of, XXIII, 1118, 1435
- colleges and universities outside United States attended by members and associates of, XXIII, 1121
- committee on geologic names and correlations, XVI, 619
- committee on mimeographed publications, XXIV, 1145
- committee on Permian, XXIV, 281
- committee appointments, XXIV, 1145
- committee work, VI, 489
- constitution and by-laws, 1, 7; II, 6; III, 6; V, 434, VII, 393; XI, 315, XII, 780; XIII, 703; XIV, 671; XVI, 1049; XVIII, 835; XIX, 752; XX, 666; XXI, 682; XXII, 618; XXIII, 1263; XXIV, 1510; XXV, 982; XXVI, 954; XXVII, 705; XXVIII, 1405, 1552; XXIX, 599, 613
- constitutional committee, XXIV, 602
- convention statistics, XXIII, 1262
- data on membership, 1929, XIII, 255, 544, 547; 1930, XIV, 349, 660; 1931, XV, 573, 576; 1932, XVI, 504, 508; 1933, XVII, 577, 558; 1934, XVIII, 685, 694; 1935, XIX, 727, 736; 1936, XX, 642, 646; 1937, XXI, 652, 654; 1938, XXII, 593, 594; 1939, XXIII, 422, 728, 730; 1940, XXIV, 583, 909, 914; 1941, XXV, 526, 953, 955; 1942, XXVI, 485, 925, 926; 1943, XXVII, 389, 674, 675; 1944, XXVIII, 416, 648, 650; 1945, XXIX, 375, 583, 587

(American)

- district meeting, New York, XXIX, 1529
- districts and representatives, XI, 1343
- district representatives and business committee, XIV, 337
- Division of Geology and Geography, National Research Council, representation on, XVI, 620
- editorial on co-operation of members with editor, V, 622
- editorial on plans for Bulletin, V, 96
- employment service, XI, 649; XIII, 1087; XIV, 683
- executive committee meetings, 1925, IX, 1026, 1927, XI, 774, 1928, XII, 285, 779, XIII, 91; 1929, XIII, 189, 702, 1232, 1499; 1930, XIV, 336, 816, 960, 961; 1931, XV, 588, 982, 1454, 1931-1932, XVI, 224; 1932, XVI, 524, 709; XVII, 202, 1933, XVII, 607; 1934, XVIII, 713; 1935, XX, 233; 1936, XXI, 654; 1937, XXII, 594; 1938, XXIII, 729, 1939, XXIV, 913, 1940, XXV, 954; 1943-1944, XXVIII, 650; 1945, XXIX, 581
- financial report for 1928, XIII, 549; for 1929, XIV, 662; for 1930, XV, 297; for 1931, XVI, 511, for 1932, XVII, 583, 590; for 1933, XVIII, 385; for 1934, XIX, 734; for 1935, XX, 335; for 1936, XXI, 652; for 1937, XXII, 593; for 1938, XXIII, 728; for 1939, XXIV, 198, 912; for 1940, XXV, 953; for 1941, XXVI, 925; for 1942, XXVII, 674; for 1943, XXVIII, 653; for 1944, XXIX, 589
- financial statement for 1928, XIII, 246; for 1929, XIV, 340; for 1930, XV, 297; for 1931, XVI, 272; for 1932, XVII, 275; for 1933, XVIII, 385; for 1934, XIX, 423, for 1935, XX, 335; for 1936, XXI, 364; for 1937, XXII, 329; for 1938, XXIII, 359; for 1939, XXIV, 514; for 1940, XXV, 448; for 1941, XXVI, 502; for 1942, XXVII, 403; for 1943, XXVIII, 430; for 1944, XXIX, 389
- financial statement, Division of Paleontology and Mineralogy for 1934, XIX, 429; for 1935, XX, 341; for 1936, XXI, 369; for 1937, XXII, 334; for 1938, XXIII, 364; for 1939, XXIV, 519; for 1940, XXV, 453; for 1941, XXVI, 507; for 1942, XXVII, 408; for 1943, XXVIII, 435; for 1944, XXIX, 393
- financial statement, Geophysics Division, for 1934, XIX, 428; for 1935, XX, 342
- foreign members, VIII, 690
- functions of editor of *Bulletin*, VII, 704
- general business committee, representation in, XI, 775
- geographic distribution of members. (See data on membership)
- geologic research, XXI, 665
- grants of financial aid, XXV, 974
- headquarters office, XXI, 654; XXII, 594; XXIII, 729, 1869
- historical sketch, I, 6
- history of, XIII, 153
- honorary members, XXIX, 303

(American)

life membership, XIII, 873
 list of members and associate members geographically arranged, XXIX, 375
 local research groups, XVII, 1146
 maintaining personal interest in, XII, 879
 medal award committee, XXVII, 878
 medal award committee, report of, XXVIII, 668; XXIX, 602
 members employed by United States and allied countries in civilian work, XXVI, 1689, 1861; XXVIII, 161
 members in armed forces of United States and allied countries, XXVI, 1679, 1858; XXVII, 232, 690, 930; XXVIII, 143
 members in military and government service, XXVI, 1678; XXVIII, 142
 membership list, 1917, 1, 10; 1918, II, 9; 1919, III, 9; 1920, IV, 325; 1921, V, 694; 1922, VI, 572; 1924, VIII, 106; 1925, IX, 318; 1926, X, 316; 1927, XI, 318; 1928, XII, 295; 1929, XIII, 255; 1930, XIV, 349; 1931, XV, 309, 1119; 1932, XVI, 277, 952; 1933, XVII, 280, 1514; 1934, XVIII, 390, 1219; 1935, XIX, 432; 1936, XX, 343, 1265; 1937, XXI, 372, 1227; 1938, XXII, 338, 1293; 1939, XXIII, 368, 1427; 1940, XXIV, 523, 1694; 1941, XXV, 457, 1821; 1942, XXVI, 418, 1543; 1943, XXVII, 323, 1275, 1944, XXVIII, 347, 1402; 1945, XXIX, 302, 1364
 methods of electing officers, VI, 167, 271; XXIII, 1260
 methods of electing officers, report of committee on, XXIX, 597
 mid-year meetings, California, 1923, VII, 457, 705; New York, 1926, XI, 97; Mexico City, 1935, XIX, 1247, 1398, 1835; Pittsburgh, 1937, XXI, 822, 967, 1093, 1229, 1608, 1611; El Paso, 1938, XXII, 625, 782, 943, 1122, 1297, 1701
 mutual responsibilities, XXIII, 1739
 occupational survey of membership, XXIV, 194
 officers, I, 5; II, 5; III, 5; IV, 4; V, 114; VI, 66; VII, 316; VIII, 379; IX, 700; X, 549; XI-XVI, preliminary pages or inside back cover; XVII-XXIX, preliminary page ii
 organization, VII, 623
 organization of California members, VIII, 532
 origin of Association committees, XXII, 1616
 original members, XXIV, 892
 Pacific Coast meeting, September, 1924, VIII, 838
 Pacific Section, MSC, 1
 Pacific Section, exploratory wells in California completed in first quarter of 1944, XXVIII, 1045
 Pacific Section meetings, 1925, IX, 1219; 1926, XI, 207; 1928, XIII, 90; 1929, XIII, 1581; 1930, XV, 98; 1931, XVI, 111; 1933, XVII, 1544; 1934, XIX, 134; 1935, XIX, 1840; 1936, XX, 1519; 1937, XXI, 1611; 1938, XXII, 1714; 1939, XXIII, 1431; 1940, XXIV, 2192; 1941, XXV, 1189; 1942, XXVI,

(American)

1865; 1943, XXVII, 1559; 1944, XXVIII, 1775; 1945, XXIX, 1688
 papers for the Bulletin, XX, 333
 papers on program of Division of Paleontology and Mineralogy at Denver meeting, XXVI, 920
 papers on program of Division of Paleontology and Mineralogy at Houston meeting, XXV, 948
 papers on program of Society of Exploration Geophysicists at Denver meeting, XXVI, 921
 papers on program of Society of Exploration Geophysicists at Houston meeting, XXV, 949
 past and present officers, XXIX, 237, 301
 payment of dues, IX, 185
 petroleum geology and, XX, 387
 photographs of members, IX, 187
 preparation of manuscripts, XXIX, 1056
 presidential address, XVII, 548; XIX, 717
 presidents of the Association, XVII, 323; XVIII, 832
 proceedings of fifth annual meeting of, IV, 317
 recommendations by business committee, XXVI, 936; XXVII, 687; XXVIII, 661; XXIX, 597
 regional directors, 1923, VII, 714; 1924, VIII, 390, 1925, IX, 827; 1926-7, X, 911
 reinstatements, 1935, XIX, 759
 remarks by L. C. Snider at the fifty-third annual meeting of the Geological Society of America, XXV, 916
 report of advertising manager for 1924, IX, 700
 report of business committee, 1925, X, 547; 1926, XI, 549; 1927, XI, 1342; XII, 590; 1928, XIII, 551; 1929, XIV, 669; 1930, XV, 583; 1931, XVI, 521; 1932, XVII, 597; 1933, XVIII, 703; 1934, XIX, 741; 1935, XX, 652; 1936, XXI, 661; 1937, XXII, 602; 1938, XXIII, 738; 1939, XXIV, 923; 1940, XXV, 964; 1941, XXVI, 936; 1942, XXVII, 687; 1943, XXVIII, 661; 1944, XXIX, 597
 report of committee for securing distinguished speakers for affiliated societies for 1941, XXVI, 940
 report of committee on applications of geology, XVIII, 708; XIX, 747; XX, 657; XXI, 675; XXII, 611; XXIII, 746; XXIV, 933; XXVI, 949; XXVII, 700; XXVIII, 666; XXIX, 602
 report of committee on code of ethics, XXIX, 117, 597
 report of committee on college curricula in petroleum geology, XXV, 969; XXVI, 942; XXVII, 694; XXVIII, 670
 report of committee on geologic names and correlations, XVII, 603; XVIII, 705; XIX, 743; XX, 654; XXI, 663; XXII, 604; XXIII, 741; XXIV, 926; XXV, 977; XXVII, 699; XXVIII, 665; XXIX, 602
 report of committee on public relations, for 1932, XVII, 605
 report of committee on publication, 1937, XXII, 614; 1938, XXIII, 753; 1939, XXIV, 936; 1940, XXV,

(American)

979; 1941, XXVI, 949; 1942, XXVII, 701; 1943, XXVIII, 665; 1944, XXIX, 607
 report of committee on stratigraphic nomenclature, XV, 700
 report of constitutional committee, April, 1940, XXIV, 923
 report of distinguished lecture committee, 1942, XXVII, 693; 1943, XXVIII, 669; 1944, XXIX, 605
 report of editor, 1922, VII, 313; 1923, VIII, 379; 1924, IX, 699; 1925, X, 546; 1926, XI, 548; 1927, XII, 587; 1928, XIII, 549; 1929, XIV, 666; 1930, XV, 581; 1931, XVI, 516; 1932, XVII, 594; 1933, XVIII, 701; 1934, XIX, 740; 1935, XX, 651; 1936, XXI, 659; 1937, XXII, 600; 1938, XXIII, 735; 1939, XXIV, 919; 1940, XXV, 961; 1941, XXVI, 933; 1942, XXVII, 682; 1943, XXVIII, 658; 1944, XXIX, 594
 report of national service committee, XXV, 1189; XXVI, 937, 1554; XXVII, 688; XXVIII, 662; XXIX, 601, 1791
 report of president for 1922, VII, 308; 1923, VII, 457; VIII, 372; 1924, IX, 690; 1925, X, 540; 1926, XI, 538; 1927, XII, 578; 1928, XIII, 543; 1929, XIV, 658; 1930, XV, 573; 1931, XVI, 504; 1932, XVII, 577; 1933, XVIII, 685; 1934, XIX, 727; 1935, XX, 639; 1936, XXI, 650; 1937, XXII, 591; 1938, XXIII, 724; 1939, XXIV, 907; 1940, XXV, 952; 1941, XXVI, 923; 1942, XXVII, 671; 1943, XXVIII, 645; 1944, XXIX, 581
 report of representative to National Research Council, for 1935, XX, 661; 1936, XXI, 678; 1937, XXII, 615; 1938, XXIII, 754; 1939, XXIV, 938, 1148, 1507; 1940, XXV, 977; 1941, XXVI, 948; 1942, XXVII, 698; 1943, XXVIII, 676; 1944, XXIX, 608
 report of research committee, XI, 644; XIII, 875, 1079, 1485; for 1929, XIV, 809; 1930, XIV, 950; 1931, XV, 287, 584; XVI, 519; 1932, XVII, 601; 1933, XVIII, 706, 711; 1934, XIX, 743; 1935, XX, 655; 1936, XXI, 664; 1937, XXII, 605; 1938, XXIII, 742; 1939, XXIV, 927; 1940, XXV, 972; 1941, XXVI, 946; 1942, XXVII, 697; 1943, XXVIII, 675; 1944, XXIX, 607
 report of resolutions committee, 1927, XI, 551; 1928, XII, 588; 1929, XIII, 550; 1930, XIV, 667; 1931, XV, 587; 1932, XVI, 521; 1933, XVII, 606; 1934, XVIII, 711; 1935, XIX, 751, 1839; 1936, XX, 663; 1937, XXI, 680; 1938, XXII, 616; 1939, XXIII, 755; 1940, XXIV, 940; 1941, XXV, 980; 1942, XXVI, 935; 1943, XXVII, 686; 1944, XXVIII, 660; 1945, XXIX, 597
 report of second vice-president in charge of finances, for 1928, XIII, 547; for 1929, XIV, 659; for 1930, XV, 575; for 1931, XVI, 507
 report of secretary, for 1922, VII, 310; for 1923, VIII, 375; for 1924, IX, 695; for 1925, X, 541; for 1926,

(American)

- XI, 541, for 1927, XII, 584
 report of third vice-president in charge of editorial work, for 1928, XIII, 549, for 1929, XIV, 666; for 1930, XV, 581; for 1931, XVI, 516
 report of secretary-treasurer for 1932, XVII, 582; 1933, XVIII, 689, 697; 1934, XIX, 731; 1935, XX, 644; 1936, XXI, 652; 1937, XXII, 593; 1938, XXIII, 728; 1939, XXIV, 912; 1940, XXV, 953; 1941, XXVI, 925; 1942, XXVII, 674; 1943, XXVIII, 648; 1944, XXIX, 583
 report of treasurer, IV, 323; for 1920, V, 350; for 1921, VI, 270, for 1922, VII, 311; for 1923, VIII, 376; for 1924, IX, 696; for 1925, X, 542; for 1926, XI, 543; for period March 10 to December 31, 1927, XII, 286; for 1927, XII, 586; report of second vice-president in charge of finances, for 1928, XIII, 549; for 1929, XIV, 662; for 1930, XV, 577; for 1931, XVI, 511; for 1932, XVII, 583; for 1933, XVIII, 690; for 1934, XIX, 734; for 1935, XX, 645
 report on membership, for 1928, XIII, 547; for 1929, XIV, 659; for 1930, XV, 575; for 1931, XVI, 507; for 1932, XVII, 582; for 1933, XVIII, 689; for 1934, XIX, 731; for 1935, XX, 644
 report on special publications, XXI, 658
 reports of committee studying methods of electing officers, XXIV, 195
 represented at Centenary of the Franklin Institute, VIII, 397
 research, XI, 433; XII, 581, 939; XIII, 1079, 1221, 1485; XIV, 635, 809, 949, 1573; XV, 287; XVII, 743, 1146; XVIII, 834; XX, 612, 1380
 research committee, XII, 1043; XIV, 635, 1573; XXIII, 270, 436, 1117
 research committee conference, XXV, 337
 research committee conference groups, XXIV, 401
 research notes, XXIII, 1868
 research program, XV, 287
 revolving publication fund, XI, 1341; XIV, 339
 rules for publication of articles in *Bulletin*, V, 500
 San Antonio Section, abstracts of papers, XIX, 138; XX, 1513
 San Antonio Section annual meeting and field trip, Uvalde, March, 1930, XIV, 254, 526; San Antonio, March, 1931, XV, 220; Corpus Christi, February, 1932, XVI, 431; San Antonio, October, 1933, XVII, 1543; Laredo, November, 1934, XIX, 137; Mexico City, October, 1935, XIX, 1835; Laredo, October, 1936, XX, 1513
 second annual report on study of time of origin and accumulation of petroleum submitted to research committee by F. M. Van Tuyl and Ben H. Parker, March, 1938, XXII, 609
 seventeenth international geological congress, Moscow, July, 1937, XXI, 362
 South Texas Section ninth annual meeting, San Antonio, November, 1937, XXI, 1615

(American)

- South Texas section tenth annual meeting, Corpus Christi, October, 1938, XXII, 1712
 South Texas section eleventh annual meeting, October, 1939, abstracts, XXIII, 1873
 South Texas section thirteenth annual meeting, October, November, 1941, XXV, 1966
 sponsors, XIII, 1087
 statement of income for 1944, XXIX, 585
 student awards, XXIV, 194
 study group reports, XXIII, 1272
 study group reports, XXIV, 363
 sub-committee on Tertiary, XXV, 2098
 suggestions to associate editors, VIII, 99
 suggestions to authors, XIV, 1584
 survey of colleges attended by members and associates of the Association, XXIII, 1117, 1435
 technical service—air corps, XXVI, 290
 total membership by years, XXIX, 587
 new officers, XXI, 644; XXII, 581; XXIII, 713; XXIV, 894; XXV, 925; XXVI, 897; XXVII, 662
 American Association of Petroleum Geologists and Petroleum Division of American Institute of Mining and Metallurgical Engineers, XI, 213
 American Association of Petroleum Geologists, Society of Economic Paleontologists and Mineralogists, and Society of Exploration Geophysicists, joint annual meeting, Denver, April, 1942, XXVI, 294, 522
 joint annual meeting, Fort Worth, April, 1943, XXVII, 233, 316
 joint annual meeting, Dallas, March, 1944, XXVIII, 166, 287, 635
 American Chemical Society, lubrication symposium reprints, X, 1003
 American continents not a good fit against Old World, CD, 85
 American cordilleras, great lateral displacement involved, CD, 199
 American Fuel Oil Company, GAS, 1002
 American Geological Association, XXVI, 1244; XXVII, 1001
 American Geological Institute, proposed, constitution, XXIX, 244
 American Geophysical Union, RMS, 29
 Section of Hydrology of, XXVI, 856
 transactions, 1937, XXII, 111
 American Glycerine Company, XIX, 799
 American Institute of Mining and Metallurgical Engineers, XXV, 370, 760
 petroleum development and technology, 1939, review, XXIII, 1583
 petroleum development and technology, 1940, review, XXIV, 1842
 petroleum development and technology, 1941, review, XXV, 1950
 petroleum development and technology, 1943, review, XXVII, 1556
 petroleum development and technology, 1944, review, XXIX, 106
 Petroleum Division, meeting, October, 1926, X, 911
 American Liberty Oil Company and

(American)

- Beacon Oil and Refining Company, XXVIII, 843
 American method of oil-finding needed in Latin America, XXVI, 1213
 American-Michigan pipeline from Freeman-Lincoln gas field, Clare County, to Austin field, Mecosta County, XXIV, 992
 American Michigan Pipeline Company, GAS, 811; XXIV, 984
 American Museum of Natural History, department of micropaleontology, XXVII, 1034
 American National Oil Co., SD, 274, 305
 American oceanographic expeditions, RMS, 51
 American oil, rise of, review, XX, 1130
 American petroleum industry, developments in, 1914-1919, XXVI, 136
 economic structure of, XXI, 149
 in 1934, employees and payroll, XXI, 152
 American Petroleum Institute, SBP, 3-8; VIII, 101; XXVIII, 924; XXIX, 642
 investigation of geothermal gradients, in oil fields, XIV, 535
 research, PROB, 27, 365, 450, 989
 research investigation on origin and environment of source sediments, XIV, 311
 study of the relation of geological structure and geothermal gradients, XXI, 789
 American Petroleum Institute and United States Geological Survey, investigation of source beds of petroleum, XXV, 1921
 American Petroleum Institute's committee on crude oil reserves, XXIX, 1587
 American Production Company, SD, 549
 American River, CAL, 16, 99, 307
 American Rolling Mills Company, GAS, 916, 943
 American Salt Company, SD, 372
 American salt-dome problems in the light of Roumanian and German salt domes, SD, 167; IX, 1227
 American salt domes, SD, 168, 169, 170, 205, 730
 in a region of geologic tranquillity, IX, 1265
 nature of, IX, 1228
 occurrence, IX, 1230
 outline, SD, 172-176; IX, 1232
 structure, IX, 548
 suggestions from German salt domes, IX, 1261
 theories of origin, IX, 835
 American standard section of Permian, proposed, names defined in type region of, preferable at present to use of Russian names, XXIV, 358
 selection of, XXIV, 339
 Americans, status of, in petroleum developments of Europe and Asia, IX, 1089
 Ames, E. W., XXV, 1226
 Amherst sandstone, effect of moisture upon velocity of elastic waves in, XIX, 9
 Amino-acids, RMS, 421
 Amino-group, RMS, 469
 Amity anticline, GAS, 993
 Ammodiacinae, MSC, 186

- Ammonia, GAS, 1118; RMS, 291, 418, 421-423, 443, 594
as dispersing agent, RMS, 538, 540
heat capacity of, RMS, 67
odor of, found in shales, XXIX, 1471
oxidation of, to nitrates, RMS, 424
production of, by bacteria, RMS, 283
relative exchange powers of, RMS, 535
- Ammonia-forming bacteria in lakes, XXV, 844
- Ammonid fauna, MEX, 27, 28, 53
in Kimmeridgian and Portlandian beds of central Mexico, MEX, 94
- Ammonite fauna in dolomite at Falls of Salt Croton Creek, XXI, 462
Washita, XXIV, 1183
- Ammonite shales, Argentina, XI, 269
- Ammonite shale, Mendoza province, Argentina, XII, 703
- Ammonite shells, drawings showing various types, XXIV, 1170-1173
morphology of, XXIV, 1169
- Ammonite species of upper three zones of Albian stage of Cretaceous, stratigraphic ranges of, XXVII, 274
- Ammonite zonation, XXVII, 1494
- Ammonite zones in Middle Jurassic rocks of western United States, XXIX, 1021
- Ammonites, MEX, 10, 12, 25, 27, 33, 34, 48, 55; XXII, 1655; XXIII, 639, 1697, 1701; XXV, 640, 1794; XXVII, 1230, 1413, 1471; XXVIII, 610, 1100, 1120; XXIX, 1015, 1087, 1090
- abundant in Comanche Peak clays, XXIV, 1182
- Albian, XXIV, 1183
- Artinsk, XXIV, 261
- bathymetric distribution of, XXIV, 1173
- Callovian, XXVII, 1504
- Duck Creek formation rich in, XXIV, 1183
- free oil in, Colombia, South America, XXVIII, 875
- heavily sculptured, with quadrate whorl sections most common types found in Texas, XXIV, 1189
- in Austin chalk, XXIV, 1187
- in Eagle Ford group, XXIV, 1186
- in Fort Worth formation, characteristics, XXIV, 1184
- in Sundance formation, Wyoming, XXI, 718
- Kimmeridgian, XXVII, 1483
- Leonard, XXIV, 98
- Lower Cretaceous, XXIV, 1618
- Lower Cretaceous, useful for intercontinental correlation, XXVII, 1069
- not found in environments favorable for rudistids, corals, bryozoans, Orbitolina, Ostrea, pelecypods, and gastropods, XXIV, 1181
- of Lampasas section of central Texas, XXIX, 164
- of late Paleozoic of Texas, XXI, 1359
- scaphite group of, in interior region, XXII, 1638
- upper Aptian, in Mexico, XXVIII, 1093
- Ammonites and plants, Jurassic, in Mexico, XXVII, 1418
- Ammonium sulphate, GAS, 1118
- Ammonoid, XXII, 889; XXV, 97
- Ammonoid-bearing beds, late Paleozoic, of U.S.S.R., general correlation of, (Ammonoid)
with those of western Texas, XXII, 1016
- Ammonoid distribution at crucial localities, Oklahoma, Texas, and New Mexico, XXIX, 1774
- Ammonoid distribution and mode of life, analysis of possible paleontological factors controlling, XXIV, 1168
- Ammonoid faunas, western Texas, XXIV, 307
- Ammonoid genus *Aitinskia* found in Upper Carboniferous (Orenburgian) of southern Urals, XXII, 1016
- Ammonoid life, effects of water medium upon, XXIV, 1196
- Ammonoid *Perrinites hilli*, a critical zone fossil of Middle Permian, found in Word formation, XXIX, 1776
- Ammonoid zones, Permian, of Soviet Russia, comparison of, with those of North America, XXII, 1014
- Ammonoidea, factors indicated by fossil faunas associated with, XXIV, 1179
- Ammonoids, PTNM, 574, 600, 604, 650; XXIV, 316, 341; XXVI, 574, 600, 604, 650
- Blaine and Dog Creek, XXVIII, 1030
- confined in Urals to lower part of Permian, XXII, 1015
- Cretaceous, bibliography on paleoecology of, XXIV, 1202
- Cretaceous, in Texas area, paleontological factors controlling distribution and mode of life of, XXIV, 1164
- from upper Cherry Canyon of Delaware Mountain group in Texas, XXVIII, 1644
- in Navarro beds, XXIV, 1188
- Permian, XXIII, 1675
- Permian, in Delaware basin, XXIII, 1676
- principal element of fauna in epibathyal zone, XXIV, 1201
- Texas Cretaceous, chart suggesting necto-benthonic habitat and bathymetric distribution of principal types of, XXIV, 1194
- Texas Cretaceous, in necto-benthonic habitat, XXIV, 1199
- Amorphous silica, RMS, 485
- Amorphous solids, definition, CD, 22
- Amorphous substances not recognized in presence of crystalline material RMS, 627
- Amortization costs, V, 362
- Amory field, FOP, 152; GAS, 857, 873, 875-877; XXV, 1584
- Amotape Mountains in Peru, XII, 30
- Amotape spur, Peru, V, 594
- Amoura shale, Costa Rica, XXVI, 1647, 1650
- foraminiferal species in, XXVI, 1652
- references on, XXVI, 1655
- Amphibians, XXV, 135
- age of, XXIX, 134
- Amphibole group, XXVIII, 72
- Amphibole zones in California wells, XI, 365
- Amphiboles, RMS, 44, 602; XXII, 560
- effect of transportation upon, RMS, 33
- Amphistegina* zone, XXII, 989
- Amphisteginae, MSC, 12
- Amphitheater dolomite, II, 74
- Amplexograptus maxwelli* zone, XXV, 656
- Amplitude of the tide, RMS, 129, 132, 134
- Amrum, RMS, 335
- Amsden and Big Snowy formations in Northern Pacific well No. 1 in Baker-Glendive anticline, of probable Mississippian age, XXIII, 472
- Amsden formation, PROB, 159, 698, 716; XXI, 1252; XXII, 683; XXIII, 482; XXV, 131; XXVI, 331; XXVII, 465, 1293; XXVIII, 792
- (Ca) (Pennsylvanian), SBP, 193, 198, 200-243, 413
- erosional contact with overlying formation, XXIII, 1449
- Grass Creek field, Wyoming, STR II, 629
- Lost Soldier district, Wyoming, STR II, 638
- Northern Pacific well No. 1 in Baker-Glendive anticline, XXIII, 468
- Amsden formation waters, XXIV, 1312, 1315
- Amsden limestone Montana, V, 257, 259
- Wyoming, VI, 226
- Amsden sandstone, XXVI, bet. 328 and 329
- Amsden sedimentation in Williston basin, XXVII, 1303
- Amstutz, P. T., Jr., and Stephenson, Eugene A., optimum producing rates for Arbuckle limestone wells, review, XXIX, 1783
- Amygdulites in nepheline basalt of Richland Parish field, XII, 992
- Anacacho formation of Texas, asphalt in, XII, 995
- Anacacho limestone, Texas, V, 25
- Anacapa Island, CAL, 5, 307
- Anacapia, SC, 14, 15, 105; XX, 1560, 1561, 1651
- columnar sections of, SC, 106; XX, 1652
- eastern, SC, 11; XX, 1557
- Anacapan region, structure of, SC, 109, 110, XX, 1655, 1656
- Anadarche conglomerate, XXV, 1668
- Anadarko-Ardmore and Amarillo-Wichita-Red River provinces, difference in color and hardness between, XXV, 17
- difference in topography between, XXV, 17
- Anadarko-Ardmore geosyncline, XXV, 1, 9, 10, 11
- Anadarko-Ardmore geosyncline and Amarillo-Wichita-Red River uplift, surface profiles showing difference in surface relief between, XXV, 16
- Anadarko-Ardmore province, XXV, 3
- Anadarko-Ardmore trough, XXVI, 227
- Anadarko Basin, Oklahoma, GAS, 397, 459; VIII, 323; XIII, 425; XXI, 1534; XXIII, 995, 1058; XXIV, 1029; XXVII, 794
- increasing thickness of Permian beds toward, XXI, 1523
- possible source of gas in Kansas fields, XXIV, 1782
- problems of, similar to those of South Permian basin, XXV, 74
- stratigraphy, XIV, 165
- structure section from north to south, FOP, 87; XXV, 1519
- subidence of sea floor about equal to accumulation of sediment in, XXI, 1559

- Anadarko-Panhandle region, Oklahoma, Kansas, Texas, and Colorado, FOP, 88; XXV, 1520
map, FOP, 86; XXV, 1518
references on oil prospects in, FOP, 89; XXV, 1521
sedimentary wedges of porosity in, FOP, 89; XXV, 1521
unconformities at base of Pontotoc formation, of Pennsylvanian and of Chattanooga shale in, FOP, 89; XXV, 1521
- Anaerobic bacteria, RMS, 95, 151
bibliography, PROB, 46
food supply of, XIV, 147
in basins, RMS, 98
in sediments, RMS, 418
relation to generation of petroleum, PROB, 35, 261-268, 450
sulphate reduction by, PROB, 836, 875, 907; XIV, 143; XXVI, 849
- Anaerobic conditions in relation to formation of glauconite, RMS, 503
- Anaerobic decomposition of fatty acids, XV, 451
- Anaerobic sedimentation, RMS, 358, 359
- Anagostache, G., SD, 122
- Anaheim dome at East Coyote field, GAS, 207
- Anahuac at type locality, log showing lithology, XXVIII, 1367
- Anahuac Desert Plateau, XI, 1175
- Anahuac formation, XXVIII, 1355
Anahuac oil field type locality of, XXVIII, 1356
fossils of, XXVIII, 1356, 1369-1375
of Texas, older than Tampa of Florida, XXVIII, 1359
of Texas Gulf Coast, XXVIII, 1362
references on, XXVIII, 1368
stratigraphic position of, XXVIII, 1360
- Anahuac oil field, XXVIII, 1355
type locality of Anahuac formation, XXVIII, 1356
- Analime in zeolite-opal rock, XXV, 292
- Analyses, chemical, of algal bioherms, XXII, 1398
of faecal pellets at Great Salt Lake, XXII, 1404
of four brines, Eddy County, New Mexico, XXV, 154
of Great Salt Lake clays, XXII, 1339, 1340
of water samples from wells at Camp Polk and North Camp Polk, XXIX, 1184
- Analyses, inorganic, of ground waters and soils, XXIV, 1406
- Analyses, mechanical, of clays in Great Salt Lake bottom, XXII, 1335
of Great Salt Lake clays and loams, XXII, 1336
of loess, XXIII, 1233
of sand samples for correlation, XXI, 1311
- Analyses, numbers of, SBP, 403-411
of black shale (Agua Nueva), MEX, 50
of brines on basis of maximum sodium sulphate, XXV, 155
of calcium chloride waters, XI, 1304
of coal, PROB, 83
of coal-seam gases, XXVI, 30
of connate waters from Oriskany sandstone, XXII, 262
of content of gas in Hugoton field, XXIV, 1802
- (Analyses)
of Cromwell waters, Oklahoma, PROB, 864
of crude oils at Wilmington oil field, XXII, 1078
of crudes and gasolines from Playa del Rey field, XIX, 185
Analyses of gas, GAS, 27-29, 46, 51, 85, 107, 237, 241, 262, 264, 269, 270, 275, 293, 303, 312, 313, 315, 337, 360, 375, 409, 415, 429, 432, 437, 443, 446, 450, 453-456, 480, 558, 645, 647, 711, 738, 739, 809, 838, 851, 893, 939, 1000, 1003, 1062, 1063; STRAT, 308, 315, 377, 856; XXII, 186
Conroe field, XX, 766
Fontaine Ardente, XVI, 1130
German fields, XVIII, 725-733
Moturoa, New Zealand, XVI, 835
Westbrook field, XI, 474
Analyses of gases, MEX, 157, 202, 225
in Hiawatha member of non-marine Wasatch formation at Powder Wash, XXII, 1039
Northern fields, MEX, 202
Southern fields, MEX, 225
Transylvania, VIII, 210; XVIII, 889
Analyses of German oil-field waters, XII, 485
of Gilcrease and Dutcher waters, Oklahoma, PROB, 864
of Greta oil, GC, 662; XIX, 558
of limestones, XII, 1151
of Mexican limestones, PROB, 379
of natural gases in Japan, XI, 189, 190, 192-195
of near-surface gases, XXVI, 31
Analyses of oil, STRAT, 7, 8, 17, 40, 53, 75, 76, 117, 164, 206, 312, 375, 376, 406, 407, 452-455, 471, 472, 491, 695, 740, 774, 856
Blue Ridge, IX, 314
Conroe field, XX, 754
Crinerville field, Oklahoma, XI, 1083
Eola field, XXV, 1393
from *Discorbis* zone in Jennings dome, GC, 980; XIX, 1327
from *Marginalia* zone in Jennings dome, GC, 981; XIX, 1328
Hobbs field, XVI, 85
in salt-dome fields, SD, 450, 518, 541, 555
Oklahoma City field, XVI, 992
Papua, XI, 170
United States Bureau of Mines, PROB, 149, 151
Analyses of oil fields in Rocky Mountains, PROB, 940-952
Analyses of oils, Gulf Coast region, PROB, 143, 895, 901, 904
Mexican fields, PROB, 379
Wyoming, PROB, 143, 152
Analyses of Ordovician water, Crinerville field, Oklahoma, XI, 1085
of Oregon asphalt, XI, 396
of Oriskany crude, XXI, 1591
of Oriskany gas, XXI, 1582
of Oriskany sandstone, XXII, 252
of petroleum, Powder Wash field, XXII, 1038
of Powder Wash field water, XXII, 1037
of Prue, Calvin, and Cleveland waters, Oklahoma, PROB, 865
of representative sodium bicarbonate waters from different water-bearing formations in Atlantic and Gulf Coastal Plain, XXVI, 839
of salt, SD, 368, 370, 387
- (Analyses)
of salt water from Conroe field, XX, 757
of salty and fresh waters along Atlantic and Gulf coasts, XXVI, 842
of sand inclusions in rock salt, XXI, 1296
Analyses of sediments, XIV, 1452
of Mississippi delta, XIV, 873, 875, 884, 885, 889-891, 896, 897
of Santa Monica Bay, XXII, 201
Analyses of Seminole crude oils, STR II, 348
of shale gas and sand gas, XIII, 371
of soil air by Russian and German workers, XXIV, 1471
of sulphur, Barba, Louisiana, GC, 1021
of surface water, Triassic water, and bottom or edge waters encountered in Goldsmith field, XXIII, 1547
of Tamalipas and El Abra limestones, MEX, 42
of temperature gradients, PROB, 1000, 1002, 1009-1021
Analyses of water, STRAT, 8, 18, 41, 117, 164, 207, 316, 317, 377-381, 403, 639, 696, 741, 803-805, 855
Amarillo district, XVII, 902
Clay Creek dome, GC, 770; XX, 81
Darst Creek field, PROB, 904
Elk Hills, PROB, 962
from Arbuckle limestone, XIV, 1533
from Great Salt Lake, XXII, 1321
from Panuco and Topila wells, XII, 434
from Tonkawa sand, PROB, 866
from wells in Houston area, XXVII, 1099
from Woodbine sand at Boggy Creek field, XVI, 600
Hendrick field, XIV, 943
Hobbs field, XVI, 86
New Grosny field, Russia, XI, 1038-1042
Raccoon Bend field, GC, 699; XVII, 1482
Voshell field, XVII, 185
Analyses of waters, Appalachian region, PROB, 846-849
California oil fields, PROB, 953, 958, 960-985
from producing zones of Montana fields, XXVI, 1324, 1335, 1344, 1351, 1353, 1358, 1362
Oklahoma fields, PROB, 860, 864-867
Rocky Mountains, PROB, 940, 942-944, 947, 949, 951
tributary to Great Salt Lake, XXII, 1322
West Texas Permian basin, PROB, 869, 873
Analyses and tests of gas from wells in West Virginia, XXII, 1158
Analysis, chemical, of fine white material in Great Salt Lake clays, XXII, 1344
of gas of Hugoton gas field, Kansas, XXIII, 1067
of Great Salt Lake obolites, XXII, 1370, 1379
Analysis, grain-size, of Bradford sand from vicinity of Knapp dome in Bradford field, Pennsylvania and New York, STR II, 424
Analysis, mechanical, RMS, 532
of samples of sediments from Barataria Bay, XXIII, 583
Analysis, methods of, SBP, 17

(Analysis)

- micro-paleontologic, of Jackson Eocene of eastern Mississippi, XXI, 80
 mineral, of sediments, RMS, 592
 of a favorable structure, STR II, 672
 of anhydrite, Hockley dome, GC, 137; XV, 466
 of Bellevue crude oil from Nacatoch sand, XXII, 1679
 of Berea oil, Saginaw field, XI, 963
 of bitumen from Limagne area, XVI, 830
 of bottom sediments of Lake Pontchartrain, XXIII, 13
 of Bradford sandstone, XVIII, 199
 of Buckeye crude petroleum, GC, 756; XIX, 400
 of cap rock from Big Hill salt dome, SD, 698
 of cores, Patton producing zone, Lisbon field, XXIII, 316
 Analysis of crude oil, Goldsmith field, Texas, XXIII, 1545
 Ventura Avenue field, California, STR II, 39
 Analysis of cuttings for uranium content, carbon, hydrogen, alpha activity, and beta activity, XXIX, 7
 of dune-sand waters of Corpus Christi, XVI, 389
 of Edgerly crude oil, IX, 502
 of ferruginous schist from wells in the Luling field, Texas, STR I, 272
 Analysis of gas, Conroe field, GC, 819
 from Dakota sands, Elk Basin field, Wyoming and Montana, STR II, 586
 from Darrett zone, XXII, 1517
 from Kilpatrick reservoir, XXII, 1516
 Goldsmith field, Texas, XXIII, 1546
 Hiawatha and West Hiawatha domes, XIV, 1039
 Polish fields, XVIII, 903
 Potter County, Texas, XII, 167
 Rattlesnake field, XIII, 134
 Roma, Queensland, XI, 66
 Sayre field, XVII, 905
 Ventura Avenue field, California, STR II, 40; XII, 741
 Westbrook field, Texas, STR I, 291
 Analysis of Goose Creek crude oil, IX, 295
 of green shale in Black River group in Ohio, XXIV, 684
 of greenish shale at Monroe-Niagara unconformity in Ohio, XXIV, 677
 of Lagarto waters of Corpus Christi area, XVI, 390
 of limestone and shale in Eden formation in Ohio, XXIV, 681
 of Lisbon crude, XXIII, 322
 of Lissie-Beaumont waters of Corpus Christi, XVI, 389
 of Midway fauna of western Gulf province, XXV, 644
 of ocean water, PROB, 957; XXVI, 841
 Analysis of oil, Allegany County field, New York, STR II, 284
 Aky pool, West Virginia, STR I, 457; XI, 596
 Artesa field, New Mexico, STR I, 121
 Big Lake field, Texas, STR II, 527
 Big Lake lime zone, Yates dome, XIII, 1549
 Big Sand Draw field, XII, 1146
 Boggy Creek salt dome, XVI, 598

(Analysis)

- Bradford field, Pennsylvania and New York, STR II, 433
 Bryson field, XVI, 186
 Cabin Creek field, West Virginia, STR I, 474, XI, 717
 Cerro Alquitran, XVI, 823
 Chetopa pool, XXV, 1936
 Coffeyville field, Kansas, STR I, 51
 Conroe field, GC, 807
 Crinerville field, Oklahoma, STR I, 208
 Darrett zone, XXII, 1517
 Darst Creek field, XVII, 35
 Elk Basin field, Wyoming and Montana, STR II, 586
 Esperson dome, GC, 897, XVIII, 1654
 Florence field, Colorado, STR II, 88
 from Arbuckle limestone at Oklahoma City field, XIV, 1532
 from Edwards limestone, Salt Flat field, Texas, XIV, 1418
 from Jones sand, Schuler field, XXVI, 1508
 from Morgan sand, Schuler field, XXVI, 1507
 from Nacatoch sand, Bellevue field, Louisiana, STR II, 249
 from Reynolds oolite, Schuler field, XXVI, 1508
 from Simpson sand, Oklahoma City field, XIV, 1533
 from Woodbine sand, Bellevue field, Louisiana, STR II, 249
 Garber field, Oklahoma, STR I, 188
 Grozny fields, XVII, 59
 Homer field, Louisiana, STR II, 225
 Irma field, Arkansas, STR I, 12
 Laredo district, Texas, STR I, 407
 New Plymouth, New Zealand, XVI, 835
 Nigger Creek field, Texas, STR I, 418
 Playa del Rey field, XIX, 198
 Raccoon Bend field, GC, 695; XVII, 1478
 Rock River field, Wyoming, STR II, 620
 Saginaw field, Michigan, STR I, 109
 Salt Creek and Teapot dome, STR II, 602
 Seminole district, Oklahoma, STR II, 348
 Smith-Ellis field, Texas, STR II, 569
 Urania field, Louisiana, STR I, 100
 Ventura Avenue field, California, STR II, 39
 Westbrook field, Texas, STR I, 289; XI, 473
 Zapata County, Texas, V, 626
 Analysis of oil sands, XIV, 1337
 Analysis of organic carbon content of Barataria Bay sediments, XXIII, 589
 of Panhandle gas, XVII, 900
 of rock penetrated in Vance well, XXIV, 673
 of salt structures, PROB, 636
 of salt water, Conroe field, GC, 810
 of sample of Big Hill cap rock, IX, 718
 of some torsion-balance results in California, XV, 1419
 of Sparta and Wilcox cores, XXIV, 710
 of Spindletop crude oil, PROB, 152
 of Sugarland petroleum, GC, 732; XVII, 1385
 of sulphur at Barba, Louisiana, XIX, 1640

(Analysis)

- of Sulphur dome water, IX, 490
 of Tremembe oil shale, XXI, 122
 Analysis of water, California oil fields, PROB, 953
 Crinerville field, Oklahoma, STR I, 210
 Darst Creek field, XVII, 36
 East Texas field, XVII, 792
 from Bellevue water zones, Bellevue field, Louisiana, STR II, 251
 from Bradford sand, Bradford field, Pennsylvania and New York, STR II, 435
 from Second Wall Creek sand, Elk Basin field, Wyoming and Montana, STR II, 587
 Garber field, Oklahoma, STR I, 191
 Irma field, Arkansas, STR I, 14
 Mexia field, Texas, STR I, 376, 379
 New York oil fields, STR II, 288
 Nigger Creek field, Texas, STR I, 376
 North Currie field, Texas, STR I, 376, 377, 379
 Powell field, Texas, STR I, 376
 Richland field, Texas, STR I, 356
 Salt Creek field, Wyoming, STR II, 598, 599, 601
 Salt Flat field, XIV, 1419
 Seminole district, Oklahoma, STR II, 349
 Sulphur dome, SD, 463
 Wortham field, Texas, STR I, 376
 Yates field, Texas, STR II, 499
 Analysis, petrographic, of sand in Great Salt Lake bottom, XXII, 1338
 rapid, of gasoline fraction of petroleum, methods for, XXVII, 1596
 statistical, and graphic presentation, of sedimentary data, RMS, 558
 Analytical equations, use of, in determining seismic velocities, XXV, 1352
 Anamorphism, realm of, XXVI, 1768
 Anastomosing conditions in deltas, RMS, 155
 Anastomosing ripples, RMS, 16
 Anatase, RMS, 593, 602; XXIV, 643
 Anatolian Plateau, XV, 644
 Anarchist series, XXIX, 1391
 Anaxite, RMS, 467, 470, 471, 484
 Ancestral Rockies and Mesozoic and late Paleozoic stratigraphy of Rocky Mountain region, XVII, 109
 Ancestral Rocky Mountains, STRAT, 96, 100, 101; XIV, 765
 Ancestral Rocky Mountains and Siouis, discussion, XIV, 1224
Anchitherium faunas of Europe, MSC, 175
 Anchor station, currents at, RMS, 236
 Anchor area, Brazoria County, Texas, XXIV, 1086
 Ancient beaches, means of recognizing, RMS, 214, 215
 Ancient land masses in Gulf Coastal Plain of United States and Mexico, XXVIII, 324
 Ancient sediments, comparison of, with recent, for stagnant conditions, RMS, 359, 362, 432
 Ancient strandline, RMS, 241
 Ancyclus clay in Baltic, RMS, 312, 313
 Andalusite, RMS, 602
 Andean crystalline rocks, XI, 1262
 Andean folding, CD, 55
 Andean Mountains and Valley province, XXIX, 1071
 Andean National pipeline, XXIX, 1119
 Andean orogeny, XXIX, 502

- Andean plateau, Chaco basin and Lake Titicaca region on, XXIX, 510
typical exposures and structure of Paleozoic rocks on, XXIX, bet. 508 and 509
- Andean uplift, XXIII, 689
- Anderson, Alexander, STR II, 65, 71; X, 775; XIII, 109, 110, 1095, 1116, 1120, 1124, 1148; XIV, 562
- Anderson, Belle, RMS, 425; X, 1287
- Anderson, Belle, and Gahl, Rudolf, PROB, 267, 915; XIV, 144, 151; XXVI, 848; XXVII, 1182
- Anderson, C. C., GAS, 1054, 1057, 1059
- Anderson, Charles A., XXVII, 641; XXVIII, 953, 957
- Anderson, Charles A., and Clark, B. L., XXVII, 13
- Anderson, Charles A., and Russell, R. Dana, XXIX, 981
- Anderson, D. Quentin, RMS, 260, 281; XX, 258
- Anderson, D. Quentin, and ZoBell, Claude E., XXVII, 1177
- vertical distribution of bacteria in marine sediments, XX, 258
- Anderson, David, XXV, 1228
- Anderson, Frank M., CAL, ix, 13, 83, 98, 108, 109, 112, 118, 119, 138, 166, 175, 183, 213; MSC, 7, 38, 55, 105, 107, 153, 155; PROB, 792; SBP, 96, 97, 168-194, 415; SC, 6; VII, 612; VIII, 70, 76; IX, 990, 992, 996; X, 130, 134; XI, 1276; XII, 555, 982; XIII, 108, 620; XIV, 1321, 1324; XV, 374; XVI, 417; XVII, 82; 1170, 1171, 1172, 1178, 1179; XVIII, 377, 450, 470, 473, 476, 477, 478, 1348, 1350, 1351, 1353, 1369; XIX, 523; XX, 423, 1552; XXI, 269; XXIII, 33; XXIV, 1722, 1729, 1730, 1734, 1747; XXV, 224, 231; XXVI, 163, 165, 806, 820, 821, 823, 824, 833; XXVII, 119, 191, 198, 254, 255, 280, 302, 304, 1364, 1367, 1369; XXVIII, 469; XXIX, 528, 529, 531, 956, 957, 958, 963, 979, 993, 1004, 1078, 1080, 1084, 1092, 1093, 1096, 1102, 1129, 1135
- Knoxville series in California Mesozoic, XXI, 1344
- marine Miocene and related deposits of north Colombia, review, XIV, 109
- notes on Lower Tertiary deposits of Colombia, and their molluscan and foraminiferal fauna, review, XIV, 108
- original source of oil in Colombia, X, 382
- Paskenta beds of (Kpa) (Cretaceous), SBP, 96, 168-194, 415
- Anderson, Frank M., and Hanna, G. D., CAL, 140; XIII, 234
- Anderson, Frank M., and Martin, Bruce, MSC, 7, 18, 23, 101, 121-123, 163; XX, 221
- Anderson, Gustavus Edwin, RMS, 37, 42, 43; XIV, 37, 1517; XVI, 121, 124, 129, 132, 961; XVIII, 1297; XX, 1091; XXI, 1535
- memorial of, XXIV, 1854
- Anderson, Gustavus Edwin, and Merriitt, C. A., volume relations in open-space replacements, XXI, 1486
- Anderson, H. L., XI, 292
- Anderson, Henry W., claims against Mexico, IX, 183
- Anderson, Homer, XXI, 67
- Anderson, J. G., and Halle, Th. G., XX, 1221
- Anderson, J. Q., XXIX, 958, 986, 987, 989, 991, 993, 1006
- Anderson, Judson L., XXVIII, 1778
- petroleum geology of Colombia, South America, XXIX, 1065
- Anderson, Payton W., XXIII, 1753, 1789
- Anderson, R. P., SBP, 8
- Anderson, R. S., and Cooper, C. G., XXVII, 509
- Anderson, R. van V., XXIV, 1588
- Anderson, Robert, SBP, 92; SC, vii, 53, 63; V, 458; VII, 606; IX, 991, X, 710, 711, 759; XI, 1276; XIII, 234; XV, 374; XVIII, 294; XX, 1533, 1599, 1609; XXIV, 1731; XXVII, 255; XXVIII, 954
- observations on occurrence and origin of petroleum in Argentina and Bolivia, X, 853
- Anderson, Robert, and Arnold, Ralph, GAS, 154; MSC, 163; PROB, 792; VIII, 75; IX, 993-996, X, 130, 698; XI, 89; XIV, 1321, 1324, 1335; XV, 830; XVII, 833, 1171, 1172, 1175, 1178; XVIII, 438, 447, 477, 478, 493, 1465, 1468, 1560; XX, 1609, 1634; XXIII, 26, 29, 30, 32, 34; XXIV, 1731; XXVII, 3, 1347, 1352, 1357
- discussion of origin of petroleum of California, X, 698-710
- Anderson, Robert, and Pack, R. W., CAL, 102, 106, 136, 139, 172, 193; SC, 58, 60; IX, 997; X, 699; XIII, 222, 226, 237; XIV, 411, 1323; XVII, 82, 84; XIX, 1195, 1201; XX, 1606; XXIII, 33; XXIV, 1722, 1732-1735, 1738, 1745, 1747, 1930; XXVIII, 472, 506, 954; XXIX, 971, 982, 985, 986, 987, 993, 1005
- Anderson, T. C. I., XXV, 194
- Anderson, W. D., XXVI, 217
- Anderson, W. D., and Day, James R., abstract, XXII, 1711
- Anderson and Kerr Drilling Company, XXI, 997
- Anderson and Kerr field, Cooke County, Texas, production from lenticular Strawn sands in, XXI, 1024
- Anderson and Leon counties, Texas, gas in, XVIII, 263
- Anderson County, Kansas, Bush City oil field, STRAT, 43
- electrical prospecting at, XIX, 76
- Anderson County, Texas, Concord salt dome, XXVIII, 1537
- (wells 372, 373), SBP, 292-335, 409
- Anderson-Prichard Oil Corporation, XXIV, 478
- Anderson Survey, Texas (well 393), SBP, 292, 335, 410
- Andes, geosynclinal mountains, CD, 196
- in Ecuador, geological explorations east of, XI, 1253
- northern, in Colombia and Venezuela, tectonic structure of, XVII, 211
- rising rather than subsiding since their folding, CD, 192
- Venezuelan, geology of, XIX, 769
- Venezuelan, marine Eocene deposits on east slope of, XI, 992
- Andesite in Sierra San Carlos, MEX, 145
- Andesitic and rhyolitic flows, MSC, 115
- Andesitic lava, RMS, 211
- Andover field, New York, XXIX, 668
- Andrau, E. W. K., and Deussen, Alexander, XX, 1367, XXIII, 602
- Orange, Texas, oil field, GC, 880; XX, 531
- Andreas, A., XXII, 525
- Andreasen, A. H. M., RMS, 543, 549
- André, Karl, RMS, 389; SD, 163; XX, 692; XXIII, 609; XXVI, 789, 1725
- amber and its significance, review, XXIII, 608
- André, Karl, Brouwer, H. A., and Bucher, W. H., editors, regional geology of the earth, review, XXII, 929
- Andreen, Harry Mayo, memorial of, XVII, 1401
- Andress field, XXI, 1019
- Andress pool, XXIII, 848
- Andrews, XII, 132
- Andrews, David A., XXV, 2023; XXVII, 1571
- Andrews, E. B., PROB, 4, 5, 6, 12, 13, 16, 254; XIV, 610, 612; XV, 600; XIX, 489; XXII, 1097, 1687; XXIX, 1739
- Andrews, E. B., and Hunt, T. Sterry, XIX, 499
- Andrews, E. C., X, 1119, 1128, 1137, 1142, XI, 56
- Andrews, Philip, XXI, 1341
- latitude and longitude observations for geologic mapping, XVI, 97
- Andrews, R. H., XXIII, 1052
- Andrews, T. H., GAS, 275, 276
- Andrews County, Texas, GAS, 455
- Embar field, XXVII, 538
- exploration in, XXVIII, 827
- Fullerton pool, XXVIII, 1541
- geologic section from Fisher County through, to Eddy County, New Mexico, XXIV, 37
- San Andres oil and gas production in, XXV, 1051
- Andros Island, RMS, 285, 292, 417
- Androusoff, N., PROB, 913; XIV, 140
- Andrusov, N. I., XVIII, 603, 628, 782, 934
- Andrusow, XV, 174; XXI, 1116
- Aneroid barometer, XXI, 1169
- Angel Island, CAL, 80, 82, 89
- Angelina-Caldwell flexure, XVIII, 1256; XXIII, 1401; XXIX, 26
- in Urania field, Louisiana, STR I, 91, 96, 97
- Angell, XXII, 1099
- Angenheiser, G., *Abgewandte Geophysik*, review, XV, 93
- Angermann, Ernesto, XXVIII, 1167
- Angewandte Geophysik für Bergleute und Geologen, Zweiter Teil*, review, XIX, 126
- Angiosperms, CAL, 299
- Angle of reflection and incidence in X-ray studies, RMS, 618, 622
- Anglo-Iranian Oil Company, Ltd., XXVII, 919
- Angola Basin, XXIII, 1667
- Angola field, III, 360; V, 663
- Anguilla limestone, XXIV, 1596
- Angular velocity of earth, RMS, 106
- Angularity of grain, effect of, on porosity and permeability of unconsolidated sands, XXII, 1272
- of pebbles, RMS, 41
- Anhydrous minerals, RMS, 603
- Anhydrite, PROB, 637-642, 651; SD, 51, 53-58, 61, 65, 70, 78, 151, 169, 225, 630, 652, 698, 733, 737; SBP, 413; V, 218, 221; XXII, 964

- (Anhydrite)
alteration of, to gypsum, XXV, 156
as cementing mineral, XXV, 1858, 1866
banded, in Flood diamond-drill hole in Culberson County, Texas, XXIII, 1686
Big Hill dome, Texas, IX, 718
Delaware basin, XXV, 156
from Fletcher anhydrite member and La Huerta siltstone member of Salado formation, plates, XXVI, bet 64 and 65
high percentage of, in water-insoluble residues of Gulf Coast rock salt, XXI, 1306
Hockley dome, analysis of, GC, 137, XV, 466
Hockley salt shaft, sedimentary origin of, GC, 137, XV, 466
Homer field, Louisiana, STR II, 203, 206
Hoskins Mound dome, GC, 844, 845; XX, 166, 167
in Blaine formation of Oklahoma, hydration of, XXI, 1489
in cap rock, IX, 43, 1229
in Glen Rose formation, Pine Island field, Louisiana, STR II, 171, 172, 178
in lower Castile formation, XXIII, 1689
in rock salt, XXI, 1283
productive in wells in North Cowden field, XXV, 611
replaced by gypsum in salt dome cap rock, IX, 46
salt, and potash in Castile formation of southeast New Mexico, XXIII, 1682
Upper Pennsylvanian, West Texas, XXVI, 1412
Yates field, Texas, STR II, 487
Anhydrite cap, XV, 513
of Gulf Coast salt domes, hypotheses of origin, GC, 1011, XIX, 1630
origin, IX, 55, 64, 66
Anhydrite cap rock, SD, 58, 63, 72, 74, 75, 482
of American salt domes, origin of, review, XVIII, 269
Anhydrite gas horizon in Cotton Valley field, XIV, 990
Anhydrite-gypsum problem of Blaine formation, Oklahoma, XVIII, 1297; XXI, 1492
Anhydrite lenses in Delaware formation, XXIII, 1688
Anhydrite rock, characteristic features, IX, 50
Anhydrite stringers, XXII, 1481; XXIII, 289
Anhydrite zone, Bellevue field, XXII, 1667
Cacheuta, Lunlunta, and Barrancas, XXVIII, 1462
coastal domes, XIV, 1470
Jefferson Island dome, GC, 1009; XIX, 1628
of Glen Rose, GAS, 780
Anhydrites of Custer formation, XXI, 433
Animal life, effect of, on sea water, RMS, 149, 150
Animals, bottom-dwelling, relation of, to glauconitization, RMS, 514
Animas City Mountain, Colorado, section, XXV, 1748
Anisotropism of minerals, RMS, 604
Anisotropy, effect of, on apparent resistivity curves, XIX, 37, 1566
Anita shale in Santa Anita Canyon, XXVII, 6
Anita shale fossils, check list of, XXVII, 8
Ankareh beds, XXI, 722
Ankatell, R. J., X, 1124
Anneld tracks in Chicontepec, MEX, 99
Annelli, M., and Bellugi, A., search for oil in Parma district, western Italy, XVI, 1152
Anno Boom, RMS, 382
Annona, Pecan Gap, and Wolfe City formations in East Texas, correlation of, XXVIII, 522
Annona chalk, XXII, 1485, 1669; XXIII, 296, XXVIII, 524
Arkansas, VI, 352, 474, 478
Bellevue field, Louisiana, STR II, 240
Carterville-Sarepta and Shongaloo fields, XXII, 1478
Homer field, Louisiana, STR II, 209
Louisiana, SD, 217, II, 62; IV, 128, V, 305, 309, 632; VI, 181, 194
Pine Island field, Louisiana, STR II, 169
Stephens field, Arkansas, STR II, 6
Sugar Creek field contoured on base of, XXII, 1512
Annona chalk formation in south Arkansas, XXII, 976
Annual cycles, RMS, 58
Annual review of petroleum geology, XXVI, 1843
Annual reviews of Petroleum Technology, XXII, 1693; XXV, 327; XXVI, 286
Annular geochemical anomaly, XXIV, 1427
Annular seismic and Eltran anomalies, XXIV, 1429
Annularity, refraction anomaly shown at North Crowley oil field an indication of, XXIV, 1458
Anomalies, high, along Fall zone, XXIX, 94
Anomalinidae, MSC, 14, 15, 162, 177, 346
Anse la Butte dome, St. Martin Parish, Louisiana, GC, 154; XVII, 1505; XVII, 1123
accumulation of oil at, controlled by radial faulting, XXVII, 1151
block diagram, XXVII, 1144, 1146
bottom-hole pressures at, XXVII, 1130
cap rock in, XXVII, 1140
Catahoula Miocene in, XXVII, 1135
control of rates of production at, XXVII, 1154
development, XXVII, 1125
development map, XXVII, 1128
diagnostic faunal zones at, XXVII, 1132, 1134
distinctive fossil assemblage at, XXVII, 1137
estimated ultimate recovery from, XXVII, 1154
Fleming Miocene in, XXVII, 1135
low-gravity oil at, XXVII, 1125
map of Louisiana Gulf Coast showing relationships of, XXVII, 1124
Miocene in, XXVII, 1135
mushroom-type dome, XXVII, 1140
piercement-type salt dome, XXVII, 1149
post-Miocene in, XXVII, 1135
production at, XXVII, 1127, 1130
(Anse)
proration at, XXVII, 1130
references on, XXVII, 1156
reserves at, XXVII, 1154
salt mass in, XXVII, 1140
salt overhang at, GC, 155; XVII, 1506
section of formations and producing sands encountered at, XXVII, 1132, 1134
spacing pattern at, XXVII, 1130
structure of, XXVII, 1149
structure-contour maps, XXVII, 1143, 1148, 1150, 1152
Anse la Butte field, I, 51; V, 218, XXVII, 737
Anson pool, GAS, 467, 477
Ant Hill field, California, XXIX, 650
Ant Hills dome, XXIV, 1110
Ant Hills structure, Fall River water in, XXIV, 1267
Antarctic, RMS, 146, 147, 149, 368, 394, 402
bottom current, RMS, 404, 406
bottom current, during last glacial period, RMS, 405, 411
circumpolar current, RMS, 117
deep water, RMS, 379
surface water, RMS, 402
Antarctic continent, RMS, 399, 402
geology of, XXVIII, 1756
Antarctica, PROB, 30
Antarctis, CD, 143, 144
Antarctis and Holarctis, radial dispersion from, a possible explanation of land life, CD, 138
Antelope area, XXVI, 1146
Antelope field, Texas, XXVI, 1042
Antelope Hills, PROB, 188; XXVII, 869
Antelope Island, XXII, 1309
Antelope orogeny and erosion, XXVI, 1628
Antelope shale, XXVI, 1617
Antelope Valley, CAL, 190
Antevs, Ernst, XIV, 1292; XVI, 44; XIX, 334
explanation for accumulation of Pleistocene ice sheet, GC, 287
Anthracite, SBP, 58
Anthracitization, PROB, 80, 89
Anthony, H. E., XI, 1273
Anthophyllite, XXVIII, 72
Anthracolite limestone, Texas, III, 129-131, V, 18
Anthraxolite, PROB, 79
Anticinal accumulation of oil, XVII, 714
at Mervine field, Oklahoma, STR I, 162
on Bend arch, STR II, 682
relation of faulting to, STR II, 691
Anticinal axis displaced by fault, MEX, 210, 220, 222
Anticinal belts of Illinois basin, XXIV, 219
Anticinal dip folds, plunging, in Stephens County, Texas, STR II, 472
Anticinal dome, elongate, PROB, 217
Ventura, PROB, 209
Anticinal fields, typical, STR II, 676
Anticinal fold, faulted, Cherokee Ridge, XXII, 686
Anticinal folding, cause of oil accumulation in Osage County field, Oklahoma, STR II, 395
Crinerville field, Oklahoma, STR I, 200
Keokuk pool, XXIII, 236

(Anticlinal)

- Michigan, geological map showing, XXII, 660
 on southwest margin of Saline Basin of West Texas, STR II, 483
 Sewell-Eddleman area, XXVI, 216
 Tinsleys Bottom field, Tennessee, STR I, 247
 Anticlinal folds, MEX, 175, 209, 210, 214, 219, 220, 222
 Depew area, Oklahoma, STR II, 368
 on Rio Grande border, accumulation of oil and gas on, XXI, 1438
 Anticlinal folds and faults of Rough Creek system, XXII, 1683
 Anticlinal hypothesis of oil and gas accumulation, GAS, 593
 Anticlinal nose, Big Lake field, Texas, STR II, 514, 516
 Cañon City field, Colorado, STR II, 90
 Martinsville area, Illinois, STR II, 133
 Refugio field, XXII, 1197
 Anticlinal noses, accumulation of oil on, PROB, 400
 Pine Island field, Louisiana, STR II, 173
 Anticlinal occurrence of oil, XV, 598
 in Bradford sand, STR II, 679
 in Gaspe peninsula, XV, 605
 influenced by buried hills, STR II, 679
 influenced by hydrostatic conditions, STR II, 679
 influenced by porosity of reservoir rocks, STR II, 680
 Anticlinal or domal plunging fields, STR II, 677
 Anticlinal or gravity theory of oil and gas accumulation, XI, 595
 Anticlinal structure in Grapeland field, XXI, 1066
 in producing Sundance fields, XXI, 767
 Anticlinal structures in basin of Great Salt Lake, XXII, 1411
 of the Serra do Mda, in Territory of Acre, Brazil, petroleum occurrence possible in, XXI, 99
 Anticlinal theory, V, 413, 460; XV, 607, 608; XVII, 549; XXII, 1097, 1098
 application of, to problem of oil discovery, XX, 522
 in Canada, account of early endeavors on, XV, 597
 Anticlinal theory of accumulation, PROB, 3, 4, 6-9, 12, 15-17, 20, 71, 253, 310, 463, 480; XIX, 498
 opposition to, PROB, 9, 10; XXII, 851
 vindicated at Lance Creek field, Wyoming, STR II, 609
 Anticlinal theory of gas accumulation, PROB, 14, 16
 of oil accumulation, XXVII, 929
 of oil occurrence, I. C. White responsible for proof of, XXII, 1097
 principles involved in, XXII, 1097
 problems of, XXII, 1100
 Anticlinal theory and later developments in West Virginia, XXII, 1097
 Anticlinal uplift and faulting at Wilmington oil field, XXII, 1053
 Anticline, Artesia field, New Mexico, STR I, 119
 asymmetric, Long Beach field, California, STR II, 72

(Anticline)

- Axial Basin, northwestern Colorado, STR II, 105
 Bradford, Bradford field, Pennsylvania and New York, STR II, 431
 Bunker pool, Oklahoma, STR I, 218
 Burke, STR I, 318
 Burning Springs, eastern Ohio, STR I, 141
 Caddo field, Louisiana, STR II, 195
 closed, Virgil pool, Kansas, STR II, 146
 Crinerville field, Oklahoma, STR I, 193-195, 197, 198, 200
 cross-faulted, Santa Maria field, California, STR II, 18
 Cushing field, Oklahoma, STR II, 397, 399, 676
 domal, Yates field, Texas, STR II, 494
 Duquoin, STR II, 116
 eastern Ohio, STR I, 139
 Eldorado field, Kansas, STR II, 160, 162
 Elk Basin field, Wyoming and Montana, STR II, 578, 676
 Elk Hills, STR II, 676
 Fairport field, Kansas, STR II, 676
 Ferris dome, Wyoming, STR II, 656
 Gilliam, Pine Island field, Louisiana, STR II, 173
 Grass Creek field, Wyoming, STR II, 676
 Hewitt field, Oklahoma, STR II, 291, 294
 Hiawatha dome, STR II, 676
 hidden, on Red canyon, cross section of, XXV, 149
 Hosston, Pine Island field, Louisiana, STR II, 173
 Hosston field, Louisiana, STR II, 194
 Iles dome, STR II, 676
 in Mesón beds, surficial, MEX, 181
 Kay County, Oklahoma, STR I, 160
 La Salle, STR II, 116, 117, 133
 Lance Creek field, Wyoming, STR II, 676
 Long Beach field, California, STR II, 676
 Mexia fault zone, Texas, STR I, 335, 337
 Moffat dome, STR II, 676
 Morrison field, Oklahoma, STR I, 152
 Murrysfield, McKeesport field, Pennsylvania, STR II, 449
 north of Panuco River in Tampico Embayment, XX, 1303
 O'Brien Springs, Wyoming, STR II, 660
 Petrolia field, Texas, STR II, 548, 551
 Pine Island, Pine Island field, Louisiana, STR II, 173
 Pine Mountain, eastern coal field, Kentucky, STR I, 78
 plunging, Lance Creek field, Wyoming, STR II, 678
 plunging, Rock River field, Wyoming, STR II, 678
 plunging, Salt Creek field, Wyoming, STR II, 594
 plunging, Scenery Hill gas field, Pennsylvania, STR II, 450
 Rangely dome, STR II, 676
 Richland, Mexia fault zone, Texas, STR I, 349
 Rock River field, Wyoming, STR II, 676

(Anticline)

- Saginaw, Saginaw field, Michigan, STR I, 105; STR II, 676
 Salt Creek field, Wyoming, STR II, 676
 Sandoval, Centralia-Sandoval area, Illinois, STR II, 123
 Simpson, Bradford field, Pennsylvania and New York, STR II, 431
 southward-plunging, separating northeast and northwest Louisiana salt-dome basins, XXIV, 1895
 Thornburg dome, STR II, 676
 Tow Creek, northwestern Colorado, STR II, 107
 Urania field, Louisiana, STR I, 96
 Ventura Avenue field, California, STR II, 25, 30, 676
 Westbrook field, Texas, STR I, 287
 White River dome, STR II, 676
 Wilbarger County, Texas, STR I, 299
 Anticline Ridge, SC, 53; XX, 1599
 Anticlines, PROB, 2, 3
 arranged *en echelon* in Illinois fields, XXII, 651
 as localizers of oil accumulation, XV, 918
 asymmetric, MEX, 159, 183, 204, 217
 asymmetrical, Wheeler Ridge field, PROB, 203
 between Hiawatha gas field and Baggs, Wyoming, XIX, 537
 Bradford field, Pennsylvania and New York, STR II, 420
 calcareous facies on, MEX, 172
 classification of, XIII, 1279
 closed, PROB, 20
 commercial oil producers in Nemaha Mountains region, Kansas, STR I, 68, 69
 cross-faulted, Santa Barbara County fields, California, STR II, 680
 eastern Ohio, STR I, 141
 Elk Hills field, California, STR II, 51
 faulted, Elk Basin field, Wyoming and Montana, STR II, 580
 importance of, STR II, 675
 Kansas, VIII, 445
 local, period of primary folding of, XXII, 837
 local, secondary folding at, XXII, 840
 local, Tertiary folding at, XXII, 847
 methods used in locating, XX, 523
 miniature, Francisco pool, Illinois, STR II, 680
 miniature, Sumner County fields, Tennessee, STR II, 680
 miniature, Tri-County field, Indiana, STR II, 680
 Nemaha Mountains region, Kansas, STR I, 66
 New York oil fields, STR II, 283
 north-south, in Appalachian region, XXV, 824
 northeast-southwest, in Appalachian region, XXV, 822
 of southeastern Colorado, XI, 374
 of state of Iowa, review, XII, 773
 Osage County field, Oklahoma, STR II, 382
 pitching, Kern River field, PROB, 203
 plunging, PROB, 17
 productive in Los Angeles coastal belt, XI, 421
 shortening of columnar sections over, STR II, 694
 thinning of Agua Nueva beds on, MEX, 172

(Anticlines)

- Tri-County field, Indiana, STR I, 29, 30
 unsymmetrical, XIII, 1275
 Anticlines and domes, closure, STR II, 674
 essentials of, STR II, 673
 faulted, in Rocky Mountain region, oil and gas fields on, XXVII, 455
 unfaulted, in Montana, XXVII, 436
 unfaulted, in Wyoming, XXVII, 436
 Anticosti, GAS, 104
 Antidunes RMS, 17
 Antigua, section through island of, XXIV, 1594
 Upper Cretaceous chalk in, XXIV, 1599
 Antigua chalk, foraminiferal fauna of, XXIV, 1690
 Antigua zone, XVI, 565
 Antillean arc and Greater Antilles, XXIV, 1572
 Antillean-Caribbean region, Cenozoic in, XXIV, 1578
 Cretaceous in, XXIV, 1578
 development of orographic elements in, during Upper Cretaceous and Eocene epochs, XXIV, 1598
 Eocene in, XXIV, 1578
 geological history of, XXIV, 1602
 Mesozoic in, XXIV, 1578
 Miocene in, XXIV, 1578
 Oligocene in, XXIV, 1578
 or lands bordering the Gulf of Mexico and the Caribbean Sea, historical geology of, review, XX, 496
 Paleogene of Barbados and its bearing on history and structure of, XXIV, 1548
 Pleistocene in, XXIV, 1578
 Pliocene in, XXIV, 1578
 publications on, XXIII, 1417
 stratigraphical correlation chart of Tertiary and Cretaceous in, XXIV, 1578-1582
Antilles, la constitution geologique des, review, XX, 1497
 Antilla land mass, XI, 179
 Anting formation, XXV, 2060
 Antioch, West Virginia (well 425), SBP, 349-379, 410
 Antisell, Thomas, XXV, 194
 Anton field, XXIX, 747
 Antrim, brown, and green Ellsworth shales, alternation of, XXV, 714
 Antrim and Traverse contact, XXVIII, 185
 Antrim black shale, XXIX, 7, 13, 16
 distribution of, XXV, 727
 high thorium-uranium ratio in, XXIX, 15
 Antrim-Ellsworth-Coldwater shale formations in Michigan, XXV, 724
 correlations of, XXV, 732
 Antrim formation, XXII, 397; XXIV, 2151; XXVIII, 184
 Buckeye field, XXIV, 1965
 Antrim shale, XXV, 713, 725
 gas producing in Michigan, XXII, 401
 Michigan, STR I, 111
 Missaukee County, GAS, 808
 Auvil Rock sandstone, XXIII, 1523
 Anzoátegui, northeastern, Venezuela, columnar section, XXVIII, 6, 16, 26
 northeastern, map showing areal distribution of geologic formations, XXVIII, 4

Anzoátegui)

- northeastern, Venezuela, stratigraphy of, XXVIII, 1
 Venezuela, South America, reconnaissance geology in state of, XXI, 233, 236
 Venezuela, S. A., references on stratigraphy of, XXVIII, 27
 Venezuela, S. A., stratigraphy of, XXI, 234
 Anzoátegui basin, section across, XXI, 240
 Anzoátegui geosyncline, XXI, 241
 geophysical investigations in, XXI, 243
 Anzac Oil Company, XXIII, 854
 Aomori Bay, RMS, 503-512
 Apache Canyon, Sierra Diablo, panorama and sections, PTNM, 626; XXVI, 626
 Apache Hill, Lake Valley, New Mexico, Lake Valley type section, XXV, 2110, 2157
 Apache Hills, XXII, 537
 Apache limestone, XIII, 939
 Apache Mountains, Culberson County, Texas, XIII, 939, 973; XXV, 77
 Humble deep test, XXIX, 280
 Apache pool, Caddo County, Oklahoma, XXV, 2194; XXIX, 100
 gas and oil in, XXVI, 1065
 pre-Permian paleogeologic map, XXIX, 104
 result of seismograph survey, XXVI, 1066
 section, XXIX, 101
 structure on Bromide sand, XXIX, 103
 structure on Viola limestone, XXIX, 102
 Apar-Laet geosyncline in Borneo, XXVIII, 1449
 Apatite, RMS, 37, 602; XXIV, 642; XXVII, 170, XXVIII, 73
 Apco field, XXVI, 1398
 Apco pool, XXVI, 1032; XXVII, 764
 Apco structure, Pecos County, Texas, Ordovician development in, XXIV, 478
 Apennines, tectonics of, XVI, 1153
 Aperiodic variations in sea, RMS, 57
 Apertures, XXIX, 1498
 Apishapa shale, IV, 77
 Appalachia, CAL, 301; SC, 4; XV, 1048; XX, 1550; XXII, 1546; XXVIII, 112
 a land area during early Mississippian time, XXIV, 789
 Appalachian or Volkenroda type of oil occurrences, XXVIII, 744
 Appalachian and Californian structures compared, XI, 37
 Appalachian area, carbon content, SBP, 27-31, 364, 365
 carbon-nitrogen ratio, SBP, 34, 35, 373, 374
 correlation of samples, SBP, 351
 Appalachian area, developments in 1940, XXV, 1135
 in 1941, XXVI, 1110
 in 1942, XXVII, 835
 in 1943, XXVIII, 722
 in 1944, XXIX, 665
 Appalachian area, Devonian in, XXVIII, 740
 distance basis of relation of properties to oil zones, SBP, 377-379
 map showing Oriskany sand development, XXIV, 971
 Mississippian in, XXV, 798

(Appalachian)

- nitrogen content, SBP, 365, 367
 nitrogen-reduction ratio, SBP, 368, 371
 oil and gas zones, SBP, 351, 357
 organic content, SBP, 358-363
 oxidation factor, SBP, 59, 369, 372
 Pennsylvanian in, XXV, 796
 Pennsylvanian lenticular sands in, XXV, 796
 Permian plants of Autunian type in, XXIV, 317
 reduction number, SBP, 365, 366
 references on stratigraphy of, SBP, 356
 reflectivity, SBP, 365, 368, 370
 relation of oil zones to properties, SBP, 382
 Silurian in, XXVIII, 740
 storage of natural gas in, XXVIII, 1583
 stratigraphic units sampled in, SBP, 353
 vertical variation of properties, SBP, 379
 (wells 410-434), SBP, 349-379
 (wells 410-434), color, SBP, 75, 365, 368, 370
 Appalachian basin, FOP, 131; GAS, 71; PROB, 485-514; XXV, 1563
 deep tests in, FOP, 133; XXV, 1565
 map showing structural features, FOP, 132; XXV, 1564
 Appalachian basin area, disconformities at base of Pennsylvanian and base of Devonian in, FOP, 131; XXV, 1563
 Appalachian basins, XXV, 782
 Appalachian brines, origin of soluble barium compounds in, XXIV, 490
 Appalachian depositional features, XXV, 788, 792
 Appalachian district, migration in, PROB, 342
 source beds in, PROB, 58
 Appalachian fields, STRAT, 538
 accumulation in, PROB, 430
 history of development and geologic relationships of, XXII, 416
 synclinal oil and gas, STR II, 703
 Appalachian folding in eastern Ohio, STR I, 141
 superficial, XI, 37
 Appalachian foreland, XXV, 417
 date of deformation of, XXV, 421
 structural complexity of, XXV, 422
 theories of movement in, XXV, 419
 Appalachian gas, STRAT, 385
 Appalachian gas and oil province, geology of, XXII, 1154
 Appalachian gas and oil region, map showing fields and major structures, XXII, 1155
 map showing isometric nitrogen lines, XXII, 1181
 map showing iso-Thv lines, XXII, 1179; XXVI, 21
 map showing Thv for Oriskany fields, XXII, 1177
 Appalachian gas field, GAS, 989
 Appalachian Geological Society, developments in Appalachian area in 1940, XXV, 1135
 developments in Appalachian area in 1941, XXVI, 1110
 developments in Appalachian area in 1942, XXVII, 835
 developments in Appalachian area in 1943, XXVIII, 722
 developments in Appalachian area in 1944, XXIX, 665

(Appalachian)

- Oriskany sand symposium, review, XXII, 222
- possible future oil provinces in eastern United States, FOP, 131; XXV, 1563
- field trip, XXIV, 1351, 1704, 2065
- Appalachian geosyncline, PROB, 468, 472, 843; GAS, 105, 916, 950, 952, 965, 990; XI, 712; XX, 910; XXII, 245, 1547; XXIII, 1327, 1849; XXVII, 1054
- accumulation of oil and gas in silica sands of Central basin of, XXV, 825
- bordering New York oil fields, STR II, 283
- Bradford field, Pennsylvania and New York, STR II, 419
- Cambro-Ordovician in Central basin of, XXV, 819
- Central basin of, XXV, 781
- compared with Gulf Coast geosyncline, XXIX, 1332
- cross section through, XXV, 786-793
- Devonian in Central basin of, XXV, 805, 810
- diagram, XXIX, 1333
- faulting in Central basin of, XXV, 823
- map showing thickness of Silurian, Devonian, Mississippian, and lower Pennsylvanian sediments deposited in, XXV, 782
- marine character of Oriskany sandstone deposited in, XXII, 554
- Ordovician in Central basin of, XXV, 817
- Permian system in, XXV, 796
- section of foreland slope of, XXVII, 1059
- Silurian in Central basin of, XXV, 813
- stratigraphy in, XXV, 796
- structure section, FOP, 136; XXV, 1568
- three major basins of, XXV, 781
- West Virginia, STR I, 440
- westward migration of, XXV, 785
- Appalachian geosyncline province, XIII, 415
- Appalachian Mountain region, arching of, XXVII, 906
- Appalachian Mountains, XXII, 1546
- study of folding of, XXIX, 1651
- Appalachian oil and gas fields, paleogeology of, XVII, 1128
- unconformities in, VII, 60
- Appalachian oil and gas fields and carbon-ratio lines, XIX, 857
- Appalachian oil fields, deep oil, review, VI, 385
- Appalachian oil pools, age of, XXII, 418
- Appalachian orogeny, SC, 5; XX, 1551
- Appalachian Plateau province, a broad asymmetrical synclinalorium, XXII, 249
- at Bradford field, Pennsylvania and New York, STR II, 410
- Appalachian province, average composition of all gases in, XXVI, 20
- Big Injun sand a widespread producing horizon for both oil and gas in, XXII, 1175
- geochemistry of natural gas in, XXVI, 19
- gravity of oils in, PROB, 101
- production of Pennsylvania-grade

(Appalachian)

- crude-oil in 1943, XXVIII, 730
- regional variations in composition of natural gas in, XXII, 1153
- Appalachian region, areal variation of reduction number of Upper Devonian shale in, SBP, 360
- average composition of all gases in, XXII, 1180
- carbon ratios in, PROB, 85; SBP, 352
- composition of oil-field waters of, PROB, 841
- deep-sand developments in, during 1939, XXIV, 970
- location of samples studied in, SBP, 350
- logs and oil zones of wells in, SBP, 351
- natural gas developments and possibilities east of the main oil and gas fields of, XIX, 853
- oil and gas fields of, XXII, 417
- oil-field waters of, PROB, 834
- Pennsylvanian in, XXIX, 139
- Permian in, XXIV, 312
- Pottsville in, XXIX, 144
- Appalachian revolution, GAS, 105; SC, 79; XIX, 1295; XX, 1625; XXIII, 1847
- Appalachian salt brines, barium in, XXIV, 486, 887
- Appalachian samples, key to productivity of, SBP, 375
- summary of properties of, SBP, 374
- Appalachian states, correlation of Pennsylvanian in, XV, 119
- Appalachian states area, Pennsylvanian in, XV, 117
- Appalachian structural features, map and cross section, XXV, 786, 790
- Appalachian structure, STRAT, 820; XXV, 783
- mechanics of, XXV, 419
- some problems of, XXV, 416
- Appalachian thrusts, XXIX, 444
- Appalachian trend, MEX, 174, 175, 192
- Appalachian trough in eastern Ohio, STR I, 139
- Appalachian uplift, XXI, 773
- Appalachians, Devonian in, XXV, 422
- faulting in, XXV, 417
- folded, oil seep in, XI, 757
- mechanics of folding in, XXV, 420
- older, of the south, review, XVI, 267
- youngest folded beds of, Permian, XXV, 422
- Appanoose County, Iowa, central and northern, Missouri series in, section, XXV, 66
- cross section of upper Des Moines and lower Missouri series from Jackson County, Missouri, to, XXV, 26
- Des Moines series in, XXV, 62, 69
- Missouri series in, section, XXV, 62
- Traverse of upper Des Moines and lower Missouri series from Jackson County, Missouri, to, XXV, 23
- Apparatus, bottom samplers, RMS, 3
- for determining absorption and permeability of oil and gas sands, IX, 442
- for different modes of fluid withdrawal, diagram illustrating arrangement of, XXIV, 2173
- for mechanical analyses, RMS, 545-552
- for mineral studies, RMS, 597-604
- for sediment traps, RMS, 274

- Apparent dip in vertical section not perpendicular to strike, nomographic solution for, XX, 816
- Apparent resistivity curves, effect of anisotropy on, XIX, 37, 1566
- Apparent resistivity-electrode spacing curve, XIX, 53
- Appleby gas and condensate area, XXVIII, 841
- Application of name "Ferguson Crossing dome," Brazos and Grimes counties, Texas, XXIII, 1092
- of nitrogen-reduction ratio, SBP, 392-394
- of principle of differential settling to tracing of lenticular sand bodies, XXII, 823
- of x-ray crystal analysis to a problem of petroleum geology, XXI, 1333
- Applications for technical and scientific aid, XXVI, 1183
- of X-ray studies of sediment, RMS, 628
- Applied Geology, Section of, of International Congress of Mines, Metallurgy, and Applied Geology, Paris, October, 1935, papers presented in, review, XX, 318
- Applied sedimentology, XXV, 899
- Applin, Esther Richards, MEX, ix, 77, 81, 83; SD, 442, 512, 589, 683; VIII, 539, 551; IX, 274, 469, 1050; X, 157, 162; XII, 912, 915; XV, 746; XVI, 585; XXIII, 1712, 1714; XXV, 1221; XXVII, 604; XXVIII, 1357; XXIX, 924
- determination of fossils at Saratoga field, Texas, IX, 274
- Applin, Esther R., and Applin, Paul L., XXIX, 920, 923, 929
- regional subsurface stratigraphy and structure of Florida and southern Georgia, XXVIII, 1673
- Applin, Esther Richards, and Cushman, J. A., XIV, 227; XVII, 1297, 1304; XXI, 92
- Texas Jackson foraminifera, X, 154
- Applin, Esther Richards, and Dumble, E. T., XXVIII, 1132
- Applin, Esther Richards, and Reed, IX, 83
- Applin, Esther Richards, and Weinzierl, Laura Lane, XXII, 1006
- Applin, Esther Richards, Ellisor, Alva C., and Kniker, Hedwig T., GAS, 689; GC, 410; IX, 24; XIV, 730; XVII, 640, 641
- subsurface stratigraphy of coastal plain of Texas and Louisiana, IX, 79
- Applin, Paul L., SD, 644; III, 137; VIII, 425; X, 154, 160; XVI, 585; XXVIII, 265
- Stratton Ridge salt dome, Brazoria County, Texas, SD, 644; IX, 1
- Applin, Paul L., and Applin, Esther R., XXIX, 920, 923, 929
- regional subsurface stratigraphy and structure of Florida and southern Georgia, XXVIII, 1673
- Applin, Paul L., and Imbt, Robert F., subsurface geology of Sewell-Eddleman area, Young County, Texas, XXVI, 204
- Appraisal of mineral interest in a proved and producing oil and gas property, XXVI, 1283
- of producing oil and gas property, data required for, XXVI, 1287
- Appraisal work, VIII, 658; XXVI, 1283
- Apprenticeships, planned, XXIII, 1574

- Apsheron limestone, XXIII, 955
 Apsheron Peninsula, Russia, XXI, 1075; XXIII, 950
 map showing location of oil fields, XXII, 762, XXIII, 954
 oil in, XVIII, 765
- Apstein, C. RMS, 298, 300, 319, 321
- Aptian, XXVIII, 1158
 European Cretaceous, V, 6, 7
 Mexico, XXVIII, 1090
 or lower Albian in Zacatecas, XXVIII, 1140
 to Turonian, Onzaba-Jalapa-Cordoba area of central Veracruz, XXVIII, 1127
 upper, ammonites in Mexico, XXVIII, 1093
 upper, fauna of La Peña formation, XXVIII, 1152
- Aptian-Albian fossil localities in Central America and Mexico, XXVIII, 1091
- Aptian-Albian fossils in Chimana formation, Venezuela, XXVIII, 9
- Aptian-Albian stage, XXIX, 1084
- Aptian ammonites, XXVIII, 1160
- Aptian fossils, XXVIII, 1146
- Aptian Ridge, MEX, 162
- Aptian stage, MEX, 17, 19, 34, 96
- Aptychus-bearing formations of Cuba, probable age of, XVI, 943
- Aquia formation correlated with lower part of Wilcox, XXIX, 80
- Aquifer, XVI, 337
- Aquilonan, CAL, 112
- Aquismon, MEX, 36, 91, 98
- Aquitania, CAL, 157, MSC, Fig. 14 (in pocket)
- Aquitaman basin, XVI, 1125
- Arabia, intrusive salt masses in, XXII, 1606
- Arabian basin, RMS, 398, 399
- Arabian coast, RMS, 365
- Arabian Sea, RMS, 402
 Black Sea conditions in, XXI, 1579
 character of bottom, XXI, 1580
- Arabian Sea and bordering lands, map, CD, 153
- Arabian Sea bottom, fossils of, XXI, 1580
- Arabian shield Paleozoic basins, XXIII, 690
- Arabian tableland, indications of oil, XXI, 297
- Aragón formation, MEX, 97, 104, 105, 107-109, 136, 220, 235, Fig. 12 (in pocket); XXVIII, 1130
 guide species in, MEX, 106
 of type locality equivalent in age to Wilcox of Gulf Coast, MEX, 109
 position of, MEX, 109
 Southern fields, MEX, 105, 109
- Aragonite, RMS, 292, 620, 626
 identification of, by X-ray, RMS, 624
 in Great Salt Lake clays, XXII, 1375
 in Texas and Louisiana salt-dome cap rocks, XXII, 217
- Aragonite needles, RMS, 290, 291
- Aragonite prisms, GC, 743; XIX, 387
- Aragonite shells, MEX, 207; V, 264
- Arakan Yoma, XXII, 67
- Arambourg, C., and Piveteau, J., MSC, 173
- Arasaboe formation, XX, 1310
- Arbuckle, Wichita and Amarillo mountains, an important regional structure, STR II, 703
- Arbuckle and Ouachita mountains, Oklahoma, correlation of rock facies in, XXI, 15
- (Arbuckle)
 tectonics in, discussion, XX, 1127
- Arbuckle and Wichita mountain regions, Oklahoma, Viola limestone primarily of, XVII, 1405
- Arbuckle and Wichita mountains, Oklahoma, contact of Honey Creek and Reagan formations with igneous rocks in, XXIII, 1094
 extended into New Mexico, Colorado, and edges of Utah and Wyoming in Pennsylvanian, XXIII, 1140
- Ordovician in, XXV, 1635
- Simpson group of, XIV, 1493; XXV, 650
- Arbuckle and Wichita system, PROB, 572, 576
- Arbuckle anticline, XVIII, 585; XXV, 1624, 1662
- Arbuckle dolomite, XXII, 672; XXIII, 803, XXIV, 1003; XXV, 1109, XXVIII, 772; XXIX, 706
 Kansas, XXI, 1002; XXII, 676
 Nikkel pool, STRAT, 110
 producing horizon in Kansas pools, XXI, 1003; XXII, 674
 production, XXVII, 809
 Wherry pool, STRAT, 126
 Zenith pool, STRAT, 150
- Arbuckle graptolite zone, XX, 304
- Arbuckle group, PROB, 355; XXV, 1635; XXIX, 188
 in Nebraska, XXIV, 1008
- Arbuckle limestone, FOP, 84; PROB, 293, 294, 356, 359, 410, 412, 763, 769, 856; XXI, 1014; XXIV, 2013; XXV, 1516, 1666; XXVII, 801, 805; XXIX, 188
- Chanute pool, STRAT, 63, 65
 cross section showing beds from, to Oswego limestone, XXV, 1711
- Cushing field, Oklahoma, STR II, 398, 403, 404
 exposed on highway 77, Murray County, Oklahoma, position of Cambrian-Ordovician boundary in section of, discussion, XX, 980
- Garber field, Oklahoma, STR I, 178, 182
 high bitumen content of, SBP, 69, 283, 284
 in Clark County, Watchorn Oil Company's Watkins No. 1 in, deepest well ever drilled in Kansas, XXIII, 796
- Jesse pool, XXII, 1563
 Kansas, XIII, 452
- lower, of Wichita Mountains, Oklahoma, carbonaceous and asphaltic material in, XXIII, 1093
 migration of oil from, into Chattanooga shale in Chetopa oil pool, Labette County, Kansas, XXV, 1934
- (Oa) (Cambrian and Ordovician), SBP, 194, 199, 260-280, 415
- (Oa) (Cambrian and Ordovician), high bitumen content of, SBP, 69, 283, 284
 Oklahoma, V, 34, 471; VI, 6, 421
 Oklahoma, sandstones in upper part of, XIII, 1477
- Oklahoma City field, XIV, 1523; XVI, 989
- productive in Lyons gas field, XXIV, 1793
- Simpson formation unconformable on, XXIII, 649
- time-distance graph, XVIII, 118
- Voshell field, XVII, 182
- Arbuckle limestone deposition, theoretical reconstruction of Billings at close of, XXIV, 2010
- Arbuckle limestone development, XXIV, 1002
- Arbuckle limestone wells, optimum producing rates for, XXIX, 1783
- Arbuckle-Marathon orogeny, XXVI, 222
- Arbuckle Mountains, Oklahoma, PROB, 574, 611, 615, V, 14, 32, 122, 175, 330, 427, 546, 566, 581, 628; VI, 6, 161; XIII, 425, XV, 999; XXI, 1017; XXII, 889; XXV, 11
- arkose north of, review, VI, 161
 bibliography on, thrust faulting in, XXIX, 207
 buried southeastern, XIV, 63
 Decker's correlations in, XIX, 1121
 developments south of, XXVII, 801
 extension of a portion of the Pontotoc series around the western end of, IX, 983
 granite and limestone velocity determinations in, XVIII, 106
 graphic section of formations of Simpson group in, XXV, 656
 Lower Pennsylvanian in, XXIX, 194
 Mississippian in, XXV, 1650
 Ordovician in, XXIX, 188
 orogeny, V, 44
 overthrusting in, XVIII, 567
 overturned beds in, XVII, 865
 pre-Cambrian in, XXV, 1624
 pre-Pennsylvanian rocks of type in, XXI, 3
 rocks of, XXI, 17
- Silurian and Devonian in, XXV, 1641
- Siluro-Devonian in, XXIX, 193
- structural history of, XXIX, 206
 structural relation of Black Knob Ridge to rocks of, XXI, 22
 structure in, XVII, 569; XVIII, 571
 thrust faulting in, XXIX, 187
- Arbuckle Mountains area, map showing boundaries of tectonic provinces in, XXV, 4
- Arbuckle Mountains region, Oklahoma, Cambrian succession in, XXV, 1631
 pre-Pennsylvanian formations in, XXI, 16
- Arbuckle orogeny, effect in north-central Texas, XXIV, 111
- Arbuckle production, Frederick pool, XXIV, 1023
- Arbuckle uplift, XXV, 1660
- Arc of Lesser Antilles, XXIV, 1592
- Arca montereyana zone, MSC, 97, 155
- Arc zone, MSC, 176; XXV, 264
- Arcadia dome, SD, 222, 274, 275, 280
- Arcadia Syndicate, SD, 274
- Arcente member, fauna of, XXV, 2135
- of Lake Valley formation, XXV, 2116, 2133
 of Lake Valley formation in Deadman Canyon, type section of, XXV, 2120
- Arch, final rise of, in eastern coal field, Kentucky, STR I, 78
- Arch-gravity dam, XXVI, 1801
- Archangel'ski, XXI, 1153
- Archangel'ski, A. D., XVII, 59; XXIX, 1743
- Archean, algae believed to be, review, VII, 302
- Anzotegui, XXI, 234
- Rocky Mountains, XXIII, 1133
 Texas, V, 374

- Archean formation, impossibility of using in correlation, CD, 125
 Archean shields, CD, 39; XXII, 1546; XXVI, 1557
 Arched uplifts during Carboniferous, XIII, 573
 Archeozoic of North Sea, RMS, 332
 time of greatest crustal unrest, CD, 142
 Archer County, Texas, STRAT, 663, 665; XXI, 1023; XXIII, 851; XXVI, 1042
 Coleman pool discovery, XXV, 428
 development, XXVII, 780
 developments during 1940, XXV, 1065
 geology and oil fields of, X, 457
 Hull-Silk oil field, STRAT, 661
 relation of oil accumulation to structure in fields of, STR I, 421
 Archer County fields, Texas, STR I, 429; PROB, 340, 342, 402
 gravity of oil at, XXVII, 780
 Arching through Duval County, Texas, XXI, 1087
 Arching pressure of rigid units against their abutments, theory of, CD, 9
 Archipelagic conditions, RMS, 332
 Archuleta County, Colorado, XXI, 994
 Arcillas Rojas, XXI, 1350
 Arcola limestone member of Selma chalk, XXII, 1644, 1646, 1655
 type section of, XXII, 1656
 Arctic, RMS, 3, 50, 132, 149, 214, 220, 332, 368, 394
 Arctic region, break in, in Quaternary, CD, 54
 Nansen map of continental shelf in, CD, 169
 tension phenomena in, CD, 166
 Arctic Sea, land-locked, petroleum resources in environs of, XXVIII, 1508
Arctiocephalus zone in Montana, XXIX, 1023, 1025
 Arctowski, H., reviews of his papers on measurements of earth temperatures, XI, 765
 Arcuate mountain ranges, interpretation of, CD, 159-161, 163
 making of, CD, 160
 Ardmore, S. Dakota, RMS, 471
 Strawn, and Kerr basins, XXIV, 101
 Ardmore and Addington quadrangles, Oklahoma, United States Geological Survey topographic map of part of, showing oil and gas fields, XXV, 12
 Ardmore-Anadarko Basin, XXIV, 2008
 Ardmore Basin, GAS, 588; V, 37; XIII, 574; XV, 1011; XXV, 1662
 Pennsylvanian in, XXV, 1664
 Springer formation of, XVIII, 1021
 Ardmore Basin section, XXIX, 141
 Ardmore district, Oklahoma, developments in 1939, XXIV, 1029
 Ardmore geosyncline, XXIX, 1346
 Ardmore limestone, XXV, 35, 53, 72; XXVI, 1590
 Ardmore pool, XXVII, 801
 structural trap at, a faulted anticline, XXVII, 802
 Ardmore syncline, FOP, 88; VI, 15; XXV, 1520
 Area of denudation, RMS, 592
 of North Sea, RMS, 325
 Areal distribution of organic matter in sediments, RMS, 445
 Areal geologic map of Black Knob Ridge, Oklahoma, XXI, 4
- (Areal)
 of Criner Hills, Oklahoma, STR I, 194
 of Garber anticline, Oklahoma, STR I, 181
 of Irma field, Arkansas, STR I, 3
 of Luling field, Texas, STR I, 259
 of Michigan, STR I, 110
 of Ohio, STR I, 125
 of Westbrook field, Texas, STR I, 285
 Areal geology of Eocene in northeastern Mexico, XIX, 1357
 of Illinois, XXI, 774
 of part of southwestern Oklahoma, VIII, 312
 Areal geology and surface structure, Tupungato field, XXVIII, 1468
 Areal variation of organic carbon content of Barataria Bay sediments, Louisiana, XXIII, 582
 Appalachian area, SBP, 349-379
 California outcrop samples, SBP, 167-194
 California samples, SBP, 108-144
 Central California, SBP, 130-144
 East Texas, SBP, 297-326
 Gulf Coast, SBP, 339-345
 Los Angeles Basin, SBP, 108-126
 Mid-Continent, SBP, 262-278
 nitrogen-reduction ratio, SBP, 391
 of properties, SBP, 397-402
 Rocky Mountains, SBP, 210-235
 Rocky Mountains outcrop samples, SBP, 243-255
 Santa Fe Springs field, SBP, 165-167
 West Texas, SBP, 287
 Areas of upwelling, RMS, 126
 Arellano, A. R. V., XXVIII, 1079, 1129
 Arenaceous foraminifera, MSC, 16
 Argand, Emile, CAL, 41, 45; CD, 39, 69, 205, 206; XV, 1048; XVII, 215, 223; XX, 936; XXI, 1596; XXV, 409
 modification of Wegener's hypothesis on origin of Red Sea trough, as due to an alternation of folding and tension, XXII, 1219
 Argentina, RMS, 225; V, 604
 Cacheuta, XI, 263
 Cerro Alquitran district, XI, 263
 Comodoro Rivadavia district, XI, 263
 Cretaceous, X, 857
 deepest well in, XXVIII, 1459
 Devonian in, X, 854; XXIX, 515
 Devonian fossils in, X, 856
 dolomitic limestone, X, 855
 faults in Comodoro Rivadavia oil field, XVI, 556
 geology of southwestern Mendoza province, XII, 693
 Jujuy-Salta district, XI, 263
 Jurassic in, X, 857; XXIX, 557
 Late Tertiary rocks at Comodoro Rivadavia, XXIX, bet. 508 and 509
 Lower Triassic in Mendoza, XXVIII, 1465
 Neuquen district, XI, 263
 northern, gravimetric and seismic studies in, XXIX, 514
 occurrence of oil at Comodoro Rivadavia, Patagonia, review, IX, 181
 oil seepages and oil production associated with volcanic plugs in Mendoza province, XVI, 819
 Permo-Carboniferous in, XXIX, 515
 petroliferous belt of central-western Mendoza province, XI, 261
- (Argentina)
 Quaternary in, XXVIII, 1459
 reserves in, XXIII, 963
 review of publication on, VI, 383
 review of report on Mendoza-Neuquen oil fields, VI, 260
 Rhaetic formation, X, 856
 stratigraphy, XI, 266
 Tertiary in, X, 855, XXVIII, 1459; XXIX, 507
 Triassic in, XXIX, 557
 Tupungato oil field, Mendoza, XXVIII, 1455
 Upper Triassic in Mendoza, XXVIII, 1462
 volcanic series in Mendoza, XXVIII, 1465
 Argentina and Bolivia, observations on occurrence and origin of petroleum in, X, 853
 Argentina and Chile, paleogeography of Cretaceous in, XXIX, 504
 paleogeography of Jurassic in, XXIX, 500
 southern, XXIX, 498
 Argentine Basin, XXIII, 1667
 Argentinian Sierras, compared with African Cape Mountains, CD, 118, 122
 Argillaceous binding material, sandstones with, XXV, 1857
 Argillaceous limestone in Mississippian limestone, XXIX, 1162
 Turner Valley field, XXIX, 1159
 Argo sand, production from, Hoffman field, Duval County, Texas, XXIV, 2137, 2138
 Argovian, Sundance correlated with, XXI, 719
 Argovian fossils, XXVII, 1511
 Argovian-Kimmeridgian age in European section, assignment of Sundance to, XXI, 746
 Argovian marine beds, XXVII, 1511
 Argovian stage, XXVII, 1420
 Argovian time, XXVII, 1525
 Argus Gas Company, GAS, 413
 Argus Pipe Line Company, XXIII, 1056
 Arick, M. B., occurrence of strata of Bend age in Sierra Diablo, Culberson County, Texas, XVI, 484
 Arick, M. B., and Adkins, W. S., XXVIII, 1520
 Arid regions in Carboniferous, CD, 11
 in Cretaceous, CD, 31
 in Eocene, CD, 37
 in Jurassic, CD, 27
 in Miocene, CD, 41
 in Permian, CD, 17
 in Pliocene, CD, 45
 in Triassic, CD, 23
 Aridity, general, redbeds as criteria of, XXI, 1124
 in Ordovician, Devonian, Permian, Triassic, and Oligocene, evidences of considerable, in Australia, XXI, 1124
 Arkaree beds, Wyoming, V, 62
 Arithmetic histogram, RMS, 560
 Arithmetic kurtosis, RMS, 581
 Arithmetic mean, SBP, 9
 Arithmetic quartile, RMS, 569, 581.
 (See quartile, arithmetic)
 Arivechi, Sonora, Fredericksburg fossils near, MEX, 95
 Arivechi area of eastern Sonora, Cretaceous section in, XXVIII, 1186
 Arizona, PROB, 682; RMS, 11, 515; V, 21, 22

(Arizona)

- Cocconino sandstone, X, 828
 Defiance uplift of, X, 827
 deposits of gypsum, salt, and sodium sulphate in, XXV, 159
 Hermit shale, X, 828
 Holbrook area of, XXI, 1252
 Holbrook area, review, VI, 262
 Kaibab limestone, X, 830
 northern, southern Utah, northwestern New Mexico, and southwestern Colorado, correlation of Permian of, XIII, 1413
 northern, and eastern Utah, oil and gas fields and main structural features of, XXIV, 1106; XXVII, 458
 section of Black Mesa Basin, FOP, 71; XXV, 1503
 Supai formation X, 824
 unconformities in, X, 822, 823, 831, 834, 851, 855
 Arizona and New Mexico, Permian of, X, 819
 Arizona and Utah, Black Mesa Basin, FOP, 70; XXV, 1502
 Arizona Chemical Company, XXV, 160
 Arizona fossils, Supai formation, X, 825
 Arizona oil possibilities, VI, 47
 Arjona series, XXIX, 1093
 Arkadelphia clay, Arkansas, VI, 54, 352
 Bellevue field, Louisiana, STR II, 241
 Homer field, Louisiana, STR II, 209
 Louisiana, II, 62; IV, 128; V, 304, 631; VI, 181, 195, 250; X, 232
 Monroe field, GAS, 750
 Stephens field, Arkansas, STR II, 7
 Arkadelphia formation, XXII, 1508; XXIII, 297
 in Cartersville-Sarepta and Shongaloo fields, XXII, 1478
 Arkadelphia marl formation in south Arkansas, XXII, 978
 Arkadelphia shale, XXII, 1671
 Arkansas, PROB, 345, 578, 632, 666
 age of Brownstown marl of, discussion, XIII, 1073
 age and correlation of chalk at White Cliffs, with notes on subsurface correlations of northeast Texas, IX, 1152
 areal geologic map of Irma field, STR I, 3
 basileosaurus in, XXIII, 1228
 Calhoun field, Columbia County, XXIX, 459
 Comanche in Stephens field, STR II, 2, 5
 Comanchean, oil in, V, 20
 concentration of Ordovician waters in, PROB, 277
 correlation of Brownstown formation of, XIII, 683
 Cretaceous in Stephens field, STR II, 2, 5
 deep oil and gas at Snow Hill, XXI, 1072
 deep sands, VI, 477
 developments in, 1939, XXIV, 1027
 discovery of rock salt deposit in deep well in Union County, review, XVII, 1282
 Dorchest pool, Columbia County, deepest in, XXIV, 738
 El Dorado field, STRAT, 860; VII, 198, 354
 El Dorado field, review, VI, 554
 El Dorado maps, notice, V, 427

(Arkansas)

- El Dorado oil field and its relation to north Louisiana structures, VI, 193
 Eocene in Irma field, STR I, 4, 6
 Eocene in Stephens field, STR II, 2, 7
 example of accumulation due to lenticularity of producing formation, STR II, 699
 extensions and development during 1939, XXIV, 1095
 faults in Stephens field, STR II, 8
 fauna of the Brownstown beds, IX, 1158
 folding effects in, VII, 180
 fossils of Pecan Gap chalk, IX, 1155
 geologic factors in unitized pressure maintenance, Jones sand reservoir, Schuler field, XXVIII, 217
 geologic map of, review, XIII, 1572
 geologic structure map of Irma field, STR I, 8
 graben in Stephens field, STR II, 8
 guide notes on the Midway in southwestern, IX, 167
 history of geological knowledge, I, 26
 Irma field, STR I, 1
 Lewisville field, Lafayette County, XXIV, 1093
 Lisbon field, STRAT, 860
 Lower Cretaceous in Irma field, STR I, 6
 Lower Tertiary in Stephens field, STR II, 7
 magnetic vectors in, XVI, 1189
 map of physiographic provinces of Paleozoic area, showing porosities of sandstones in, XXI, 70
 Midway in Irma field, STR I, 10
 Midway field discovery, Lafayette County, XXVI, 1289
 Arkansas, Missouri, and Oklahoma, Osage formations of southern Ozark region, XVIII, 1132
 Moorefield formation and Ruddell shale, Batesville district, XXVIII, 1626
 natural gas in Interior Highlands of, GAS, 533
 northeast, Silurian in, XXVI, 3
 northern, zinc and lead deposits of, review, XX, 322
 northern limits of Upper Jurassic formations in, XXVII, 1427
 northwest, Cambrian in, XXV, 1633
 northwest, Hale Mountain section in, XIV, 121
 oil and gas geology of Gulf Coastal Plain in, review, XIX, 575
 oil-bearing formations of southwestern, X, 1310
 Paleozoic in, XXV, 1029
 pre-Cambrian in Washington County, XXV, 1626
 pre-Cambrian rhyolite discovered in well in northwestern, IX, 1115
 pre-Cretaceous in, XV, 806
 properties of crude oil at Stephens field, STR II, 14
 radioactivity cross section through Urbana pool, Union County, XXV, 1784
 Rainbow City field, STRAT, 860; XII, 763, 952
 redbeds facies of Eagle Mills formation in, XXVII, 1439
 relation between carbon ratios and oil and gas occurrence, PROB, 74
 relation of quality of oil to structure at El Dorado, VII, 350

(Arkansas)

- relation of Upper Cretaceous to Eocene structures in Louisiana and, VII, 379
 salt in Smackover field, Union County, XVI, 601
 sandstone porosities in Paleozoic region in, XXI, 67
 Schuler field, Union County, XXVI, 1467
 section, Irma field, STR I, 9
 Smackover field, IX, 1116
 source beds in, PROB, 60
 south, counties productive in, XXVI, 1251
 south, Cretaceous in, XXVI, 1251
 south, discoveries in 1942, XXVIII, 259, 262
 south, extensions and development, XXV, 1036
 south, Eocene in, XXII, 956, 979; XXVI, 1251
 south, field and wildcat developments in 1942, XXVIII, 326
 south, fields, gravity of oil from, XXVI, 1255-1258
 south, fields in, XXV, 1033
 south, gas and gas distillate fields, drilling activities during 1942, XXVIII, 261
 south, gas fields in, XXVI, 1254
 south, important tests in 1941, XXVI, 1258
 south, Jurassic in, XXVI, 1251
 south, Lower Cretaceous and Jurassic formations of, XXV, 329
 south, map showing relation of Schuler pool to other producing areas, XXVI, 1468
 south, Mesozoic in, XXII, 956
 south, Mississippian in, XXII, 962
 south, oil fields, XXVI, 1251
 south, oil fields, drilling activities during 1942, XXVIII, 260
 south, Pennsylvanian in, XXII, 962
 south, pre-Gulf paleogeographic map of, XXII, 957
 south, production in 1939, XXIV, 1092
 south, Smackover limestone production in, XXV, 1024
 south, stratigraphy of, XXII, 956
 south, stratigraphy with emphasis on older Coastal Plain beds, XXII, 953
 south, wildcat dry holes, XXVIII, 261
 south, yearly production in, showing discovery of various pools, XXV, 1025
 south, and north Louisiana, analyses of deepest formations penetrated in wildcat wells drilled in 1939, XXIV, 1094
 south, and north Louisiana, analyses of producers and dry holes drilled in 1939, XXIV, 1092
 south, and north Louisiana, analyses of producers and dry holes drilled in 1940, XXV, 1027
 south, and north Louisiana, deepest formations tested by wildcat wells drilled in 1940, XXV, 1027
 Arkansas, south, and north Louisiana, developments in 1937, XXII, 719
 in 1938, XXIII, 896
 in 1939, XXIV, 1092
 in 1940, XXV, 1024
 in 1941, XXVI, 1250
 in 1942, XXVIII, 257
 in 1944, XXIX, 803

- Arkansas, south, and north Louisiana, discovery wells drilled in 1939, XXIV, 1098
- south, and north Louisiana, discovery wells drilled in 1940, XXV, 1032
- south, and north Louisiana, dry holes and tests drilled in 1940, XXV, 1028
- south, and north Louisiana, graph showing geophysical activities in 1943, XXIX, 812
- south, and north Louisiana, graph showing geophysical activities in 1944, XXIX, 813
- south, and north Louisiana, important dry holes drilled in 1939, XXIV, 1094
- south, and north Louisiana, important wildcats and dry holes completed in 1944, XXIX, 809
- south, and north Louisiana, map, XXV, 1034
- south, and north Louisiana, map of oil and gas fields of. Structure contours on base of massive anhydrite of Glen Rose formation, XXIII, 900-901
- south, and north Louisiana, map showing locations of fields producing from Jurassic formations, XXVII, 1408
- south, and north Louisiana, map showing oil and gas fields, XXVI, 1252
- south, and north Louisiana, notes on stratigraphy of producing sands in, VII, 362
- south, and north Louisiana, oil, gas distillate, and gas fields, map, XXVIII, 264
- south, and north Louisiana, oil and gas fields discovered during 1940, XXV, 1031
- south, and north Louisiana, oil and gas fields of, XXIV, 1096, 1097
- south, and north Louisiana, production in, XXVI, 1250; XXVIII, 257
- south, and north Louisiana, production in 1940, XXV, 1024
- south, and north Louisiana, relations of Upper Jurassic formations in, XXVIII, 612
- south, and north Louisiana, time relations of Upper Jurassic formations in, XXVII, 1430
- south, and north Louisiana, wells and feet drilled during 1942, XXVIII, 258
- south, north Louisiana, and northeast Texas, subsurface pre-Upper Cretaceous stratigraphy of, XXVIII, 578
- southwestern, faulting in, XIV, 829
- southwestern, geologic section, XXII, 958, 959
- southwestern, oil-bearing formations of, review, X, 1310
- southwestern, Upper Cretaceous in, XIII, 1572; XXII, 1631
- southwestern, and northwestern Louisiana, Comanche strata, XXV, 1030
- southwestern, and northwestern Louisiana, stratigraphy of Midway group (Eocene), XIX, 696
- southwestern, and southeastern Oklahoma, Lower Cretaceous (Comanche) rocks of, XI, 443
- southwestern, southeastern Okla-
- (Arkansas)
- homa, and northern Texas, study of Trinity group in, XII, 1069
- southwestern, and southern Oklahoma, depth of base of Trinity sandstone and present attitude of the Jurassic peneplain in, XII, 1005
- Stephens field, STRAT, 860
- stratigraphy, VI, 193, 350
- stratigraphy of El Dorado oil field, review, VII, 198
- structure, VI, 356
- subsurface conditions in heavy oil producing area of Smackover, VII, 672
- Tertiary section, Irma field, STR I, 4
- Texas, Mississippi, and Alabama, sections of Upper Jurassic formations in, XXVII, 1421
- Troy field, Nevada County, XXI, 1072
- unconformity in, X, 11
- Upper Cretaceous in Irma field, STR I, 6
- wildcat exploration, VI, 350
- Arkansas and Louisiana, Comanche in, XXV, 1697
- Cretaceous in, XXII, 723
- Pennsylvanian in, XXII, 723
- relation of Upper Cretaceous to Eocene structures in, VII, 379
- stratigraphy of producing sands, VII, 362
- Arkansas and Oklahoma, age of Jackfork and Stanley formations of Ouachita geosyncline, as indicated by plants, XVIII, 1010
- correlations of Mississippian formations of, XXV, 1654
- geologic map of Ouachita Mountains of, XVIII, 976; XX, 480
- Mississippian in Ouachita Mountains, XXV, 1651
- Mississippian in southwestern Ozarks, XXV, 1651
- some tentative correlations on the basis of graptolites of, XX, 301
- Arkansas and Oklahoma coal fields and surrounding physiographic divisions, XXI, 1404
- correlations of Pennsylvanian strata in, XVIII, 1050
- Arkansas and Texas, Cretaceous chalks, XV, 965
- geologic map, IX, opp. 1158
- Stratigraphy of Upper Cretaceous formations of, XI, 1; discussion, XI, 308
- westward and southwestward increase in slope of pre-Trinity deposits on basement and dip on beds, XXVII, 1237
- Arkansas basin of eastern Oklahoma, natural gas in, GAS, 511
- Arkansas coal field, XXV, 9
- Pennsylvanian sedimentation in, XXI, 1403, 1418
- Arkansas discoveries and extensions in 1944, XXIX, 805
- Arkansas Fuel Gas Company, XXIII, 894
- Lathrop 1 (well 320), SBP, 292-335, 408
- Worrel 1 (well 346), SBP, 292-335, 409
- Arkansas gas, analyses of, GAS, 558
- Arkansas Geological Survey, GAS, 533
- Arkansas graben-fault zone, XXIV, 1093
- Arkansas-Louisiana Gas Company, XXII, 1485; XXIII, 895; XXIV, 1067
- Arkansas-Louisiana Pipe Line Company, GAS, 559, 562, 771
- Arkansas-Louisiana-Texas, Rodessa pool of, XXII, 970
- Comanche Cretaceous and older rocks in, XXIII, 285
- developments in, 1936-1937, XXI, 1068
- discoveries of oil and gas, XXI, 1070
- Arkansas maps and sections, list of, XXII, 433
- Arkansas Natural Gas Corporation, GAS, 572
- Arkansas novaculite, RMS, 4; XVIII, 1031; XXI, 19; XXV, 1644, 1651
- in Black Knob Ridge, XXI, 10
- Arkansas oil and gas wells, list of, XXII, 112
- Arkansas oil reserves, VI, 44
- Arkansas-Oklahoma coal basin, age of formations of, XX, 1356
- Llanoria and Ouachita Mountains source of sediments of, XX, 1353
- stratigraphy of, XX, 1342
- Arkansas-Oklahoma coal field, carbon ratios in part of, XIX, 937
- isocarb map of, XIX, 938
- Arkansas Ozarks, oil and gas possibilities in, XI, 279
- Arkansas Paleozoic area, geology of, with especial reference to oil and gas possibilities, review, XIV, 1575
- Arkansas portion of Interior Highlands, drilling activities in, GAS, 572
- Arkansas River Valley-Ouachita Mountain area in western Arkansas, north-south structure section, FOP, 93; XXV, 1525
- Arkansas syncline, XXIII, 1401
- Arkansas Valley, Carboniferous sequence in, XVIII, 981
- Arkansas Valley and Ouachita Mountains, source of Pennsylvanian sediments of, XXI, 1419
- Arkansas Valley belt, XVIII, 1073
- Arkansas Valley fields, recoveries from, GAS, 573
- structure of, GAS, 551
- Arkansas Valley geosyncline, XXV, 1, 8
- Arkansas Valley province, XXV, 3, 1672
- Oklahoma, GAS, 513
- Arkansas Valley syncline, XXV, 1660
- Arkansas Western Gas Company, GAS, 572
- Arkell, W. J., MSC, 80, 90, 95, 97-99; XXIII, 1580
- Jurassic in Great Britain, review, XVIII, 268
- Arkhangel'ski, XVIII, 785
- Arkose, V, 167, 208
- north of Arbuckle Mountains, review, VI, 161
- Arkosic material in Abo sandstone, XXI, 848
- Ardit, Th., CD, 66; XXII, 31
- Arlington formation, CAL, 62
- Arlington thrust fault, XIII, 1281
- Arm dome, XXIX, 830
- Armbrust pool, XXVI, 1115
- stratigraphic-type accumulation, XXVII, 839
- Armed forces of United States and allied nations, classification of A.A.P.G. members in, XXVII, 930
- Armstrong field, PROB, 704; XXVII, 434, 459

- Armentrout, A. L., and Hall, E. B., XIV, 567
- Armer et al (well 243), SBP, 255-285, 407
- Armour field, reflection seismic work in, XXIII, 880
- Armstrong, E. F., and Allen, J., PROB, 42
- Armstrong, Harold K., XXI, 584; XXIV, 1438, 1706
- Armstrong, Jas. M., GAS, 609; PROB, 353; III, 137
- Armstrong, Jas. M., and Scott, Gayle, XIX, 1518
- Armstrong, Roy O., XIX, 109
- Armstrong, W. J., XVI, 1021
- Armstrong, W. M., VII, 133
- Army Specialist Corps, XXVI, 1300, 1440
- Arnold, X, 398, XI, 1321
- Arnold and Eldridge, VIII, 789, XXIV, 649, 651
- Arnold, Emmet L., memorial of Theodore C. Sherwood, Jr., XII, 593
- Arnold, H. C., review, XXI, 1352
- Arnold, H. H., Jr., Apache pool, Caddo County, Oklahoma, XXV, 2194
- Salem oil field, Marion County, Illinois, XXIII, 1352
- Arnold, Ralph, CAL, 149, 177, 256, 257, 260, 267, 301; MSC, 39, 72, SBP, 92; SC, vii, 53, 63, 77, 88, 124, III, 355, 357; V, 458; VII, 420, 610; VIII, 231, 232; X, 502, 506, 710, 759; XII, 115, 116, 117, 123, 135; XIII, 515, XV, 381, 382; XVI, 140; XVIII, 485, 493, 1573; XIX, 525; XX, 218, 220, 865, 868, 1533, 1599, 1609, 1623, 1634, 1670, XXIV, 666; XXV, 231; XXVII, 255
- problems of oil-lease valuation, III, 389
- two decades of petroleum geology (1903-22), VII, 603
- Arnold, Ralph, and Anderson, Robert, CAL, 10, 88, 100, 151, 152, 173, 232, 235, 236, 249, GAS, 154; MSC, 163; SC, 53, 59, 63, 88; VIII, 75; IX, 993, 994, 995, 996; X, 130, 698; XI, 89; XIV, 1321, 1324, 1335; XV, 830; XVII, 833, 1171, 1172, 1175, 1178; XVIII, 438, 447, 477, 478, 493, 1465, 1468, 1560; XX, 1609, 1634; XXIII, 26, 29, 30, 32, 34; XXIV, 1731; XXVII, 3, 1347, 1352, 1357
- discussion of origin of petroleum of California, X, 698-710
- Arnold, Ralph, and Clark, B. L., XII, 746
- Arnold, Ralph and Eldridge, George H., VII, 411, 417; X, 753; XII, 118, 560; XIII, 510; XV, 374
- Arnold, Ralph, and Eldridge, John H., VIII, 74
- Arnold, Ralph, and Johnson, H. R., CAL, 177; MSC, 55, 107, 108, Fig. 14 (in pocket); SC, 77; VIII, 75; XI, 617; XII, 220; XVII, 1176; XVIII, 485; XIX, 1623; XXV, 194, 1329, 1335, 1341; XXVI, 1610; XXVII, 206, 1364, 1372
- Arnold, Ralph, and Kemnitzer, William J., XIX, 493
- petroleum in United States and possessions, review, XVI, 103
- Arnold, Ralph, and Loel, Wayne, new oil fields of Los Angeles basin, California, VI, 303
- Arnold, Ralph, and Loel, Wayne, X, 753
- Arnold, Ralph, and Louderback, G. D., XXVII, 117
- Arnold, Ralph, and Strong, A. M., XVIII, 789; XXIV, 667
- Arnold fault, XXVI, 1447
- Arnold pool, XXVIII, 772
- Arnott and Hooper, XVII, 1253
- Arocena, E. Terra, XIX, 1211, 1215
- Arocha, J. N., Survey, Texas (well 395), SBP, 292-335, 410
- Aronson, Sam M., XXV, 1223, 1234
- memorial of Chester A. Hammill, XXVI, 1173
- Arrhenius, Sv., SD, 154, 161, 163, 201; IX, 429, 436, 1261
- Arrhenius, Sv., and Lachmann, R., SD, 119
- Arrhenius equation for chemical reaction, XXVIII, 932
- Arrowhead pool, XXV, 1063; XXVI, 1038
- Arroyo Blanco, Austin chalk at, MEX, 54
- Arroyo Capitan, Méndez beds in, MEX, 69
- Arroyo Ciervo, SC, 29, MSC, 102; XX, 1575
- Arroyo El Bulito, MSC, 108
- Arroya formation, XXIV, 42, 57
- Arroyo Gallo, Tempoal beds in, MEX, 110
- Arroyo Grande (Edna) field, PROB, 206, 228
- Arroyo Hondo shale, XXIV, 1735, 1738
- Arroyo Loma Blanca, XXVI, 265
- Arroyo Membral, Méndez beds in, MEX, 83
- Tamesí shales in, MEX, 84
- Arroyo Murles, Austin chalk at, MEX, 54
- Arroyo Naranjal, ash bed in, MEX, 76
- Méndez beds in, MEX, 76
- Arroyo Seco, Los Angeles County, California, CAL, 10, 44, 307; MSC, opp. iii, 1, 23, 24, Fig. 14 (in pocket)
- map showing area of Lowe granodiorite, XXIX, 1238
- Arroyo Seco formation, XXIX, 1093
- Arroyo Tanlajás, MEX, 86, 100
- Arroyo Tecomate, Tentoyuca beds at, MEX, 117
- Arroyo Zardo, Tempoal beds at, MEX, 113, 114
- Arsenic, RMS, 149, 435
- in Atlantic sediments, RMS, 385
- in sea water, RMS, 143
- Arsentief, A., IX, 812
- Artem Island trend, XXIII, 955
- Artemus anticline, GAS, 932
- Artemus gas field, Kentucky, XXIX, 683
- Artemus-Himyar field, Kentucky, GAS, 945
- Artesia field, New Mexico, STR I, 112; PROB, 413; GAS, 436
- porosity an important accumulation factor in, STR II, 678
- Artesia-Malajamar nose, XXVI, 1036
- Artesia trend, XXIV, 40
- Artesian circulation, PROB, 567
- of water, vigorous, unfavorable for accumulation and retention of oil and gas, STR II, 679
- Artesian flushing, PROB, 717
- Artesian head from Sierra Tamaulipas, MEX, 171
- Artesian pressure, XII, 359; XXIX, 1171
- in sands at Heights well field, XXIX, 278
- relation to rock pressure, XII, 359
- Artesian well, XXIX, 1171
- Arthur, A. A., XXV, 752
- Artifacts, RMS, 159
- Artificial exposures, creation of, and trenching, technique followed in oil exploration of East Indies, Venezuela, and Mexico, XXIV, 1392
- Artificial horizon and geological perspective, XXVI, 1185
- Artificial lift at Wasson field, XXVII, 521
- Artificial-lift wells at Conroe field, GC, 830, XX, 777
- at North Cowden field, XXV, 629
- Artini, E., RMS, 604
- Artini scale of frequency, RMS, 604
- Artinsk, grits of, XXIV, 273
- grits of, not equivalent to Millstone grit (lower Upper Carboniferous) of England, XXIV, 289
- Artinsk ammonites, XXIV, 261, 274
- Artinsk formations in Ufa Plateau, XXIV, 261
- Artinsk limestone, upper, unconformable overlap of, on Sakmarian, XXIV, 257
- Artinskia characteristic of Permian, XXII, 1016
- Artinskia adamsi zone of Fisk formation, XXIV, 96
- Artinskian, XXIV, 271
- added to Permian by Karpinsky, XXIV, 274
- Artinskian and Kungurian strata, section through Shikhan Tra-Tau, showing relations of, XXIV, 256
- Artinskian beds, XXII, 1014
- columnar section of, between Kungur and Kuzino stations, XXVI, 406
- in Western Australia, XXV, 402
- southeast of Perm., XXIV, 259
- Artinskian deposits, map of, XXIV, 260
- Artinskian-Kungurian boundary, XXV, 403
- Artinskian sediments between Ufa Plateau and Urals, XXV, 1397
- east of Kungur and in Kizel district, columnar sections of, XXV, 1398
- Artinskian series along west flank of Urals, XXIV, 258
- assigned to Permian, XXIV, 259
- discussion, XXVI, 402
- fossils from, XXIV, 259
- in Russia, classification of, XXV, 1396
- Artinskian time, close of marine sedimentation, XXV, 403
- Artinskian trough, XXI, 1451
- Aruba, XXIV, 1568
- Arvin field, California, XXII, 704
- Asanketken dome, XXIII, 505
- Ascarite, SBP, 23
- Ascension Island, RMS, 519
- Ascension Parish, Louisiana, Darrow salt dome, XXII, 1412
- Ash, RMS, 443
- Ash and diatomite of 1870 Hill, MSC, Fig. 14 (in pocket)
- Ash Creek dome, XXVI, 862
- Ashauer, Hans, SC, ix; XX, 1535
- Ashauer, Hans, and Hollister, J. S., MSC, 75
- Ashburner, Charles A., PROB, 12, 16, 19; STRAT, 495; VII, 617; XVI, 935; XXII, 1099
- Ashland, George A., XXVIII, 1198
- Ashland, Virginia, RMS, 215
- Ashland field, Kentucky, GAS, 519, 932, 943

- Ashley, George H., SBP, 356, 357;
STRAT, 538, XIV, 806, 1071;
XVIII, 972, 982; XIX, 943;
XXIII, 1375; XXV, 420; XXVII,
116, 1072, 1198, 1199, XXIX, 143,
146, 147
- history of development and geologic
relationships of Appalachian fields,
XXII, 416
- outlook for oil and gas in Pennsyl-
vania, V, 357; abstract, V, 100
- scheme of Roman numerals with
added letters for designation of
coal seams in Indiana, XXIII,
1375
- Ashley, George H., and Cathcart, S. H.,
gas in Tioga region, Pennsylvania,
review, XVI, 425
- Ashley, George H., and Glenn, L. C.,
XVIII, 1592
- Ashley, George H., Cheney, M. G.,
Galloway, J. J., Gould, C. N.,
Hares, C. J., Howell, B. F.,
Levorsen, A. I., Miser, H. D.,
Moore, R. C., Reeside, J. B., Jr.,
Rubey, W. W., Stanton, T. W.,
Stose, G. W., and Twenhöfel,
W. H., representing The American
Association of Petroleum Geolo-
gists, the United States Geological
Survey, the Association of Ameri-
can State Geologists, and the
Geological Society of America, on
the committee on stratigraphic
nomenclature, classification and
nomenclature of rock units, XXIII,
1068
- Ashley Creek, Utah, GAS, 369; XXIII,
83
- Ashley district, Michigan, GAS, 798
- Ashley Valley gas field, XXVII, 461
- Ashtabula County, Ohio, XXII, 261
- Ashton sand, VI, 313
- Ashton zones, PROB, 221
- Asia, CAL, 301, 302; RMS, 220
- natural gas industry in, GAS, 1091
- structure of, review, XIV, 1231
- Asia and Europe, status of Americans
in petroleum developments of, IX,
1089
- Asiatic island festoons, explanation,
CD, 57
- Asiatic Tethys, XXVIII, 1420
- Asien, *Geologie von*, XXI, 1214
- Askania pendulums, XIX, 22
- Askania torsion balance, directions for
use of, review, XVII, 445
- Askarite, RMS, 184
- Asmarilimestone, XXIII, 960; XXVIII,
1498
- in Persian fields, XVII, 234
- Aspen formation, Wyoming, V, 198, 206
- Aspen shale, PROB, 167
- Aspermont pool discovery, Stonewall
County, Texas, XXIV, 1839
- Asphalt, GAS, 1009; PROB, 56, 183,
207, 213, 394, 396, 397
- California, VIII, 570
- Carboniferous, of Arkansas, VI, 196
- Carboniferous, of Oklahoma, VI, 20,
196
- coals, oil, and natural gas, origin of,
XXIV, 1868
- humic acid, origin of, V, 75
- in Anacacho formation of Texas, XII,
995
- in limestone, MEX, 15, 40, 41, 44,
168, 185
- McKittrick field, PROB, 198
- on gulf beaches, GC, 238; XVII, 944
- (Asphalt)
- Penn Mex well, Jardín, MEX, 41
- Russia, XI, 504
- Salinas pool, MEX, 185
- Trinidad, IX, 1008
- Asphalt-base crudes, XXI, 1187
- Asphalt deposits in Hungary, XVIII,
931
- Asphalt mines in Cuba, XVI, 816
- Asphalt Mountain, XXI, 1078
- Asphalt rock in Palestine, XI, 146
- Asphalt seepages, PROB, 758, MEX,
152, 155, opp. 166
- Asphalt veins, MEX, 1
- Asphaltene distribution map, Bern-
stein field, XXVII, 1611
- Asphaltic and oil-stained zones, XXVI,
50
- Asphaltic base, PROB, 107
- Asphaltic limestone, V, 25
- Asphaltic oil, MEX, 204, PROB, 207-
209, 238, 245
- in Los Angeles City pool, PROB, 213
- Asphaltic sand in Midway dome, XXII,
822
- Asphaltic sands, PROB, 333, 334, 412;
V, 559, 571, 599
- in Oklahoma City field, PROB, 295
- Asphaltic seals, reservoirs with, XXIX,
1562
- Assembly sheets for photographing
megafossils ensemble, XXIX, 1504
- Asphaltite, PROB, 79; MEX, 39
- in Tanlajás beds, MEX, 100
- Asphaltite dyke, sill, vein, MEX, 155
- Asphalts, XX, 288
- native, in Oregon, XI, 395
- natural and artificial, comparison of
properties of, XXIV, 1873
- parent material of crude oil, XXIV,
1890
- Asphalts and asphaltic oils, XXIV, 1888
- Asphalts and jet, XXIV, 1873
- Assam, Miocene in, XVIII, 305
- oil in, XVIII, 307
- Assay number, SBP, 61-64, 394-398
- basic data, SBP, 412
- California outcrop samples, SBP, 177,
178
- California samples, SBP, 118-123,
139-141
- Central California, SBP, 139-141
- East Texas, SBP, 310-315
- Gulf Coast, SBP, 340-344
- Los Angeles Basin, SBP, 118-123
- Mid-Continent, SBP, 270-272
- number of determinations of, SBP,
403-411
- relation of, to source beds, SBP, 381-
384
- Rocky Mountains, SBP, 225-227
- Rocky Mountains outcrop samples,
SBP, 247, 248
- variation of, among sediments, SBP,
63
- West Texas, SBP, 287, 288
- Asse type of salt structures, SD, 190;
IX, 1250
- Associated Oil Company, GAS, 143,
163, 164; SD, 646, 676; XXI, 984
- Clark 2 (well 152), SBP, 87-165, 404
- Cypress 1 (well 154), SBP, 87-153, 403
- Dallage 7 (well 112), SBP, 87-167,
404
- Fulton 3 (well 105), SBP, 87-177, 404
- Fulton 4 (well 154), SBP, 87-167, 404
- Leisinger 1 (well 39), SBP, 87-153,
403
- Watson 1 (well 16), SBP, 130-153,
403
- Associated Oil Company water-locating
method, PROB, 956
- Association, survey of colleges attended
by members and associates of,
XXIII, 1117
- thus, XXIV, 1162
- Association research committee, re-
search note, XXIII, 1117
- Association subcommittee on Car-
boniferous, classification of Missis-
sippian and Pennsylvanian rocks
of North America, XXIX, 125
- Association subcommittee on the
Permian, classification of Per-
mian rocks, XXIV, 337
- Associations, observed, among some
criteria of unconformities, XXVI,
58
- Assumption, basic, for study of source
beds, SBP, 4, 5, 380, 381
- in study of source beds, XXI, 1379
- Astoria, MSC, 154, 202, 204, 213, 214,
254, 276, 299, 302, 305, 329, 333,
343, 346, 348, 353
- Astoria and Newport, Oregon, check
list of foraminifera near, MSC, 70
- Astoria formation, MSC, 69, 154, 163,
171; XXIX, 1409
- Miocene, XXIX, 1389
- Astoria sandstones, XXIX, 1399
- Astoria shale, MSC, 196, 202, 204, 213,
214, 254, 276, 299, 302, 305, 329,
333, 343, 346, 348, 353
- Astoria shale faunule, MSC, Fig. 14 (in
pocket)
- Astrodapsis, XXV, 253
- Astrodapsis and *Osirea* succession of
upper Miocene, XXV, 239
- Astrodapsis zones, MSC, 23, 24, 87,
156, 157, 167
- Astronomical Union, International,
CD, 102
- Astronomy, engineering, essentials of,
XXI, 1352
- Astrorhizidae, MSC, 184
- Asuncion, MSC, 197-202, 205, 206, 210,
212, 214, 219, 224, 225, 227, 229,
234, 236, 238, 243, 244, 250, 256,
258, 261, 268, 273, 284, 287, 288,
299, 309-311, 315, 322, 323, 325,
330, 339, 343, 345-347, 349
- fauna and age of, XXVIII, 501
- fossils from, in Adelaïda, Bradley,
Bryson, and Cape San Martin
quadrangles, XXVIII, 502
- relation of, to older and younger
rocks, XXVIII, 509
- Asuncion fauna identical with Garzas
fauna, XXVIII, 504
- Asuncion formation, XXVIII, 472, 486
- lithologic character of, XXVIII, 487
- thickness of, XXVIII, 497
- Asuncion group, XXVII, 280
- Asuncion sandstone, XXVIII, 492
- of Adelaïda Quadrangle, mechanical
analyses of, XXVIII, 493
- typical exposure of, XXVIII, 498
- Asylum and Beaumont slopes, profile
from Rio Grande City, Starr
County, Texas, eastward to Gulf of
Mexico, showing, XXIX, 1701
- Asylum deposit, XXIX, 1705, 1707
- Asymmetrical folds with reference to
German salt bodies, XVI, 169
- Asymmetrical anticline, graphic method
for determining surface projection
of axis and crest traces at any
depth of, V, 159
- Asymmetry of cumulative curve, degree
of, RMS, 569

(Asymmetry)
of distribution as related to moments, RMS, 574
Atascadero formation, XXVIII, 472
Atascosa, Live Oak, and Bee counties, Texas, section showing thickness of Wilcox and strong development of Carrizo sand, XXIV, 1910
Atascosa-Nueces River, ancient, delta of, GC, 281; XIX, 327
Atashka Mountain elongate anticline, XXIII, 950
Atchafalaya basin, RMS, 160; XXIII, 1220
top of Oligocene in, XXIV, 436
Atchafalaya-Mississippi delta area, XXII, 736
Atchafalaya River best example of active distributary of Mississippi River, RMS, 157; XXIII, 1217
Athabaska area, XXVIII, 872
Athabaska bituminous sands, XXIX, 663
Athabaska oil sands: apparent example of local origin of oil, XIX, 153
Athabaska River tar sands of northern Alberta, FOP, 20; XXV, 1452
hot-water method of obtaining oil from, FOP, 23; XXV, 1455
largest known deposit of oil in world, FOP, 21; XXV, 1453
map showing general features in vicinity of, FOP, 22; XXV, 1454
Athanasia, Sava, SD, 112, 122
Athens, Texas (well 370), SBP, 292-335, 409
Athens area of Rosecrans field, GAS, 178
Athens gas-distillate field, XXVI, 1263
Athens-Rosecrans area, PROB, 750
Atherton, E. A., XVIII, 239
Athy, L. F., GAS, 1084; GC, 81, PROB, 258, 274, 280, 285, 286, 462, 619, 620, 621, 807, 812, 815, 820; STRAT, 49; XIV, 1342; XVII, 1216; XVIII, 1177; XIX, 612; XX, 716; XXII, 833; XXIII, 1486; XXV, 1997, 1998
compaction and its effect on local structure, PROB, 811
compaction and oil migration, XIV, 25
density, porosity, and compaction of sedimentary rocks, XIV, 1
Atkins, W. R. G., RMS, 50
Atkins area, XXIX, 763
Atkinson, R. L., IX, 450
Atkinson Oil Co., SD, 623
Atkinson pool, PROB, 764
Atlanta field, XXIII, 896; XXV, 1036
Atlantic, RMS, 52, 54, 88, 90, 92, 95, 103, 108, 115, 132, 142, 143, 235, 243, 299, 316, 322, 325, 365, 367, 397, 400, 403, 405, 407, 411, 414, 445, 447, 483, 484, 496, 522, 624, 628
boundary of eastern land area, CAL, 292
correlation of California formations with, CAL, 120, 121, 157
faunal connections on opposite sides of, CD, 137
Jurolaurentia extension into, CAL, 75
migration to or from, CAL, 135, 161, 302
sediments of, RMS, vi
Atlantic and Gulf Coastal Plain, analyses of representative sodium bicarbonate waters from different water-bearing formations in, XXVI, 839

Atlantic and Gulf coasts, base-change and sulphate reduction in salty ground waters along, XXVI, 838
Atlantic Boulevard, California, outcrop sections, SBP, 167-194, 410
Atlantic cables, amount of sediment deposited on, RMS, 409
Atlantic Coast, RMS, 209, 210, 212
Atlantic Coastal Plain between New Jersey and Georgia, subsurface stratigraphy of, XXIX, 885
bibliography on oil and gas possibilities in, XXII, 814
bibliography on stratigraphy of, XXIX, 953
from New Jersey to Florida, oil and gas possibilities in, XXII, 799
map showing geology of, from New Jersey to Florida, XXII, 800
sections, XXIX, 930-947
Atlantic Coastal Plain formations, correlation table of, XXIX, 888
Atlantic Company, early work in commercial paleontology, XXV, 1223
Atlantic expeditions, RMS, 51
Atlantic fauna, MEX, 139
Atlantic floor, possibly a mixture of sial and basic material, CD, 202
sial in, CD, 201
Atlantic-Indian Swell, XXIII, 1671
Atlantic Ocean, foraminifera of, MSC, 12
North, pelagic sediments of, RMS, 373
similarities on the two sides of, CD, 117, 118
South, sediments of, XXIII, 1666
western, and Caribbean Sea, deep-sea bottom samples from, MSC, 13
Atlantic Oil Producing Company, SD, 252, 530
Atlantic Pipe Line Company, GC, 663; XIX, 559
Atlantic pool, PROB, 411
Atlantic Refining Company, XXIV, 738, 1027, 1793; XXVI, 1068; XXIX, 706, 796
Kenner 1 (well 385), SBP, 292-335, 410
Swink 1 (well 387), SBP, 292-335, 410
Atlantic Ridge, RMS, 391
Atlantic rift, CD, 39
Atlantic seaboard, MSC, 20, 121, 129
Atlantic trough, RMS, 413
Atlantis, CAL, 301
Atlantisheft, *Geologische Rundschau*, XXIII, 1722
Atmosphere, RMS, 150
as influenced by sea, RMS, 61
circulation of, RMS, 123
effect of, on ocean, RMS, 58
Atmospheric pressure, RMS, 113
expressed in CGS units, RMS, 63
Atmospheric variation, RMS, 128
Atoka, Oklahoma, Tallhina chert section at, XIX, 1231
Atoka County, Oklahoma, Black Knob Ridge, XXI, 2
Atoka formation, GAS, 514, 517-519, 524, 527, 544, 554, 559, 562, 563, 565-567, 571; XVIII, 1047; XXI, 14, 1009, 1404; XXII, 962, 1568; XXIII, 227
abrupt southward increase in thickness of, XXV, 9
Arkansas-Oklahoma coal basin, XX, 1345
(Cat) (Pennsylvanian), SBP, 295, 297-335, 414

(Atoka)
Fitts pool, XX, 960
Oklahoma, III, 268; V, 34, 123, 562; VI, 13; XXIV, 432
production from, in Jesse pool, XXII, 1577
Texas, III, 76, 149
Atoka-Wapanucka zone, XXIII, 227
Atrato-San Juan trough, XXIX, 534
Attapulgette, RMS, 469
Attapulgette, Georgia, RMS, 471
Atterberg, A., RMS, 547, 560, 565-567, 578, 579
Atterberg grade scale, RMS, 560, 565, 566, 579
relation of, to Phi and Zeta scales, RMS, 567
Attribute combinations, maps of, XXIX, 1258
Atwater, Gordon I., XXIII, 147
Atwater, Gordon I., and Clement, G. M., XXIV, 745, 749
Atwater, Gordon I., and Trowbridge, Arthur C., XVIII, 1631; XIX, 1118
Atwill, E. R., MSC, 78, 101, 102; SC, 28, 30, 58; XVI, 370; XVII, 833; XX, 220, 1574, 1576, 1604; XXIV, 1734, 1735, 1738, 1745; XXVI, 1154; XXVIII, 953-956
memorial of Edward Virgil Winterer, XXVIII, 694
Oligocene Turney formation of California, XIX, 1192
progress of stratigraphic studies in California, XXVI, 153
significant developments in California, 1939, XXIV, 1112
truncation of Maricopa sandstone members, Maricopa Flat, Kern County, California, XV, 689
Atwood, J. T., XIV, 566
Atyeo pool, Kansas, STR II, 157
Aufgaben und Arbeitsweisen der Oelgeologie, review, XII, 774
Aufreder, L., XVII, 949
Aufsuchung von Wasser mit Geophysikalischen Methoden, review, XVIII, 1375
Augite, MEX, 145; RMS, 382, 497, 499, 622, 627
allotriomorphic, RMS, 392;
idiomorphic, RMS, 382
in southern North Sea, RMS, 344
Aur, I. V., GAS, 198
memorial of, XIV, 681
Augusta field, Kansas, GAS, 492, 1055; PROB, 319
Augusta oil pool, PROB, 294, 770; IV, 90, 255; V, 138, 141, 146, 422, 576, 580
Aurand, Harry A., STRAT, 22, 24; XI, 112, 120; XIII, 851; XV, 1307; XVI, 1263; XVII, 412; XXIII, 1172
present development in Greasewood area, Weld and Morgan counties, Colorado, XVII, 433
Aurand, Harry A., and Johnson, J. Harlan, preliminary contribution to Benton paleogeography of eastern Colorado, XIII, 850
Aurin, Fritz Love, V, 548; VIII, 291, 323, 326, 328; X, 667; XII, 765; XXV, 1229
announcement of national service committee, XXVI, 1299
Army Specialist Corps, XXVI, 1440
joint annual meeting of American Association of Petroleum Geologists, Society of Economic Paleon-

- (Aurin)
 tologists and Mineralogists, and Society of Exploration Geophysicists, Fort Worth, April, 1943, XXVII, 233, 316
 letter to geological departments in petroleum industry, XXVII, 237
 members of A.A.P.G. in military and government service, XXVI, 1678; XXVIII, 142
 memorandum of national service committee, XXVI, 1310; XXVII, 412
 memorandum of national service committee changes in personnel procurement regulations, XXVI, 1862
 memorial of Maree Cummings, XXVI, 1855
 pre-Pennsylvanian oil and gas horizons in Kay County, Oklahoma, IV, 173
 report of national service committee, XXV, 1189; XXVI, 937, 1554; XXVII, 688; XXIX, 1791
 report of president for 1942, XXVII, 671
 report of secretary for 1926, XI, 541
 report of treasurer for 1926, XI, 543
 the petroleum geologist in the war, XXVII, 929
 twenty-eighth annual meeting, Fort Worth, Texas, April 7-9, 1943, XXVI, 1861
- Aurin, Fritz Love, and Clark, Glenn Cecil, Tonkawa field, Oklahoma, VIII, 269
- Aurin, Fritz L., Clark, Glenn Cecil, and Trager, Earl Adam, STRAT, 445; XI, 1316; XII, 179; XIV, 1536; XIX, 1416; XX, 91
 notes on subsurface pre-Pennsylvanian stratigraphy of northern Mid-Continent oil fields, V, 117, 324
- Aurin, Fritz L., Officer, H. G., and Clark, Glenn C., core drilling for structure in north Mid-Continent area, X, 513
- Aurin, Fritz L., Officer, H. G., and Gould, Charles N., STR I, 177, 178; XVI, 120; XVII, 241, 247, 248, 251, 253; XXI, 1520
 subdivision of Enid formation, X, 786
- Aurin, Fritz L., Weaver, Paul, Owen, Edgar W., Markham, Edmond O., and Ver Wiebe, Walter A., development and use of engineering geology; foreword, XXVI, 1795
- Aurora field, New York, GAS, 952
- Aurora Lake, XXVIII, 1213
- Aurora limestone, XXVIII, 1094, 1150, 1152, 1160, 1185
- Aurora reef limestones, XXVIII, 322
- Austauschcoefficient, RMS, 4, 19, 21, 22, 74, 78
 formula for computing, RMS, 21
- Austin, Ray L., Fitzgerald, P. E., and James, J. R., laboratory and field observations of effect of acidizing oil reservoirs composed of sands, XXV, 850
- Austin and Washington counties, Texas, structural features of Brenham salt dome, GC, 780
- Austin age, beds of, in Florida and parts of Georgia and Alabama, XXVIII, 1715
- Austin chalk, PROB, 276, 295, 296, 378, 419; SD, 212, 215, 241, 252, 256-258, 267, X, 44; XXI, 1047; XXII, 1632
 ammonites in, XXIV, 1187
 Arkansas, VI, 352, 478
 Balcones fault zone, XIV, 1177
 Cretaceous, of Terlingua district, Brewster County, Texas, algal reefs in, XXVIII, 123
 East Texas, STRAT, 611
 (Ka) (Cretaceous), SBP, 204, 296-335, 414
 Louisiana, IV, 128; VI, 181
 Luling field, Texas, STR I, 267, 268, 273
 Lytton Springs field, Texas, X, 958
 Mexia fault zone, Texas, STR I, 331
 Nigger Creek field, Texas, STR I, 416
 normal faults in, XXVIII, 548
 south Texas, XXII, 750
 structure contour map of top of, VII, 27
 Texas, III, 300, 301, 305; V, 7, 382, 420; X, 49, 50, 61, 769; XI, 7
 Austin chalk and Eagle Ford shale, areal variation in volatility of, in East Texas Basin, SBP, 310
 areal variation of nitrogen-reduction ratio of, in East Texas Basin, SBP, 320
 Austin chalk and Taylor marl, areal variation of organic content of, in East Texas Basin, SBP, 300
 Austin chalk age of San Felipe formation, PROB, 385
 Austin chalk zone in Cuyaga anticline, GAS, 670
- Austin County, Texas, Raccoon Bend field, GC, 676
 (well 399), SBP, 335-349, 409
 Austin dome, XXV, 890
 Austin fauna, SD, 239
 Texas, X, 31
- Austin gas field, Mecosta County, Michigan, XXII, 164; XXV, 1129
 accumulation of gas, STRAT, 246
 cross sections of, XXII, 166
 structural map of, XXII, 165
- Austin gas pool, Michigan, GAS, 811
- Austin group, XXV, 1694
- Lisbon field, XXIII, 293
- Austin limestone, XXII, 1432
- Austin Oil Company, SD, 503
- Austinburg pool of Ashtabula County, Ohio, GAS, 907
- Austinburg sand, XXV, 812
- Australasian upper Paleozoic correlations, XXV, 399
- Australia, PROB, 76, 89; RMS, 220, 349, 402
 coast of, RMS, 401
 early foldings not explainable on Wegener's theory, CD, 85
 eastern, conditions which produced Triassic and Jurassic fresh-water sediments of, XXI, 1122
 evidences of considerable aridity in Ordovician, Devonian, Permian, Triassic, and Oligocene, XXI, 1124
 exploration for oil in, VIII, 244
 foraminifera from Murray Island MSC, 12
 geologic column for, XI, 59
 geological formations of, XVIII, 228
 middle and west, XXIII, 105
 middle and west, physiographic map of, XXV, 372
 oil in Kimberley district, review, VI, 386
- (Australia)
 oil and gas prospects of, discussion, XI, 638
 oil prospects of Desert Basin of Western, X, 1118
 oil prospects of Northwest Basin of Western, X, 1136
 oil shales of, XI, 83; XXIV, 392
 oil well in, XIV, 945
 Paleozoic folding, CD, 208
 peneplanation of, in Middle Tertiary time, XXI, 1122
 Recent foraminifera dredged off east coast of, MSC, 13
 report on aerial survey operations in, during 1932, review, XVIII, 380
 review of oil and gas prospects of, XI, 55
 sea temperatures of Permian in, XX, 1066, 1067
 Tertiary geology of, XXV, 1813
 unity of Permian ice-age in, XXV, 407
 western, conditions of erosion and deposition, XXVI, 773
 western, geology of Northwest Basin, XX, 1028
 western, upper Paleozoic of: correlation and paleogeography, XXV, 371, 1809
- Australia and Asia, petroleum resources in environs of shallow, island-studded seas between, XXVIII, 1508
- Australia and New Guinea, fitted into Arabian Sea, CD, 154
 natural gas in, XVIII, 226, 549
- Australian and New Zealand Tertiary stages, correlation of, XXV, 1814
- Australian Coal Measure series, flora of *Sphenopteris* beds in, XXV, 378
- Australian kerosene shale, shearing tests on, XIII, 351
- Australian oil shale, X, 868
- Australian pre-Cambrian platform, XXV, 410
- Australian shield, XXVIII, 1453
 trough of sedimentation along margin of, from early Sakmarian time into Kungurian time, XXV, 410
- Austria, Republic of, and neighboring territory, geological map of, review, XVIII, 1375
- Austrian Alps, RMS, 40
- Authigenic dolomite, RMS, 385
- Authigenic minerals, RMS, 4, 383, 530, 533
 in sediments from New South Wales, XXIV, 643
- Authors, suggestions to, XIV, 1484
- Authors cited, on geology of California, list of, CAL, 319
- Autochthone, XXIX, 442
- Autochthonous components of deposits, XXVI, 1702
- Autochthonous folds, XV, 1001
- Automatic balance of Odén, RMS, 550, 551
- Automorphic form of minerals, RMS, 603
- Auto-oxidizable substances in sediments, RMS, 420
- Auto-traction hypothesis of crustal evolution, review, XV, 976
- Autrey Oil Company, SD, 757
- Autrey, R. L., MEX, 1; XXII, 1659
- Antry, Vernon E., discovery of oil in Ellenburger formation, K. M. A. oil field, Wichita County, Texas, XXIV, 1494

- Autunian type of Permian plants in Appalachian area, XXIV, 317
- Aux Vases formation, XXIII, 1499
- Aux Vases limestone, XXV, 879
- Aux Vases production, XXVI, 1606
- Aux Vases sandstone, XXIV, 218, 823; XXV, 1116, 1122
- productive in Clay City field and Noble field, XXIII, 1500
- productive in Salem field, XXIII, 811, 1353, 1369
- productive in Salem (Lake Centralia), Cisne, and Iola pools, Illinois, XXIII, 808
- Aux Vases-St. Genevieve sections, Illinois Basin fields, XXIII, 1501
- Ava-Campbell Hill gas field, GAS, 832, 833
- Avalon, RMS, 260
- Avalon dome, Tansill formation in, XXV, 1723
- Avanah dome, XXVIII, 1498
- Avant, D., Survey, Texas (well 374), SBP, 292-335, 409
- Avant limestone, II, 121
- Avant pool, III, 410
- Avenal Creek, CAL, 49, 307
- Avenal sandstone, CAL, 128, 141; SC, 58; XX, 1604; XXIII, 937
- Avenal sandstone and Kreyenhagen shale in Coalinga region, XXIV, 1729
- Avenal syncline, XIII, 220
- Avenales, Quadrangle, MSC, 133
- Average velocity in streams, RMS, 9
- Averages, definition of, SBP, 9
- use of, in interpretation of size-distribution of sediments, RMS, 572, 582
- Averitt, Charles V., XIV, 1353
- Averitt, Paul, XXV, 2023
- Avery & Martin, SD, 443
- Avery, C. Dwight, and Miller, J. Charles, relationship of geology to unit operation of oil and gas fields, involving government lands, XVIII, 1454
- Avery, Dudley A., SD, 373; IX, 773
- Avery, John Marsh, IX, 762
- Avery Island, XXIX, 801
- Avery Island field, XXVII, 735
- Avery Island salt dome, Louisiana, SD, 224, 361-375; VIII, 674; IX, 761; XXVII, 732
- Avery Rock Salt Mining Company, SD, 358
- Aviation gasoline, dominant position of United States in manufacture of, XXVII, 989
- increase in requirements for, XXVII, 981
- 100-octane, XXV, 1268
- Aviators field, XV, 764
- Avoca limestone, XXV, 1080
- Avoca pool, XXIII, 855
- Avon Park limestone, XXVIII, 1680, 1686
- Suwannee fauna of Florida also characteristic of, XXVIII, 1682
- Avoyelles Parish, Louisiana, geology of Eola oil field, XXV, 1363, 1597
- Awards, system of, XXVI, 1247
- Axelrod, J. M., XXVI, 73
- Axial Basin anticline in northwestern Colorado, STR II, 99, 105
- Axial rotation, problem of, CD, 172, 173
- Axis of rotation of earth, periodic shift of, XXIX, 1632
- of structure, shifting of, PROB, 496
- Axis-controlled countries in Europe, production and reserves, XXVIII, 1499
- Axis powers, petroleum-supply situation of, XXV, 1272
- production of synthetic fuels by, XXVIII, 1499
- Axis' supply position, summary of, XXV, 1279
- Aycock, Charles, XXIX, 51
- Ayers anticline, GAS, 833
- Ayers field, GAS, 832, 833
- Aylesworth pool on Madill anticline, XXVII, 803
- Azerbaijan, summary of methods of exploration for new oil fields in, review, XIX, 1826
- Azores, RMS, 376
- Azotea Mesa, XXVI, 82
- Azotea tongue of Carlsbad limestone, XXI, 863; XXVI, 85
- Azov Sea, RMS, 448, 449
- B**
- Baak, J. A., RMS, 211, 327, 338, 344, 345
- Baars, J. K., XV, 450; XXVII, 1183
- Baas-Becking, L. G. M., XV, 267; XXII, 1406
- Baba Gurga dome, XXVIII, 1498
- Babb and Victorio flexures, post-Leonard features of, PTNM, 633; XXVI, 633
- Babb flexure, PTNM, 624; XXVI, 624
- Babbage and Herschel, XIII, 592
- Baca structure, carbon dioxide in, GAS, 1066
- Bace, A. C., XIII, 946
- Bach, PROB, 36, 39, 40
- Bachaquero field, XXIII, 958
- Back, XXII, 1133
- Back pressure on oil wells, experiments on, VII, 37
- Back radiation, RMS, 85
- Back reef in Pecos Valley, XXI, 848
- Back-reef deposits of Permian of Pecos Valley, view of, XXI, 853
- sandstone, anhydrite, halite, and red-beds, progressive advance of, toward reef zone, XXI, 889
- Back-reef formation of Pecos Valley, correlation of, with those of Texas and Oklahoma, XXI, 879
- Back-reef province of Permian of Pecos Valley, XXI, 846
- Back-reef sediments, Permian, in New Mexico, nomenclature of, XXVI, 84
- Back-reef shelf area, formations for Guadalupe series in, PTNM, 592; XXVI, 592
- Backbone anticline, XXI, 1410
- Backhaus, A. A., PROB, 925
- Backshore, RMS, 207, 214
- Bacoi-Tntea field, XXIII, 960
- Bacon and Hamor, VII, 621
- Bacon, Raymond F., SD, 717
- Bacon limestone, East Texas, XXIX, 770, 839, 1777
- Bacteria, PROB, 26, 36, 39, 40, 41, 44, 263, 302; RMS, 4, 95, 151, 357, 416-427, 438, 439, 443, 444, 447, 530. (See Micro-organisms)
- as agent in oil recovery, research on, XXIX, 675
- as sources of petroleum, RMS, 424
- content of, in subsurface layers of sediments, RMS, 265
- discoloration of sediments by, XIV, 626
- (Bacteria)
- effect on glauconitization, RMS, 510-512
- effect on organic material, PROB, 35
- fermentation of cellulose by, PROB, 38, 45; RMS, 422
- formation of hydrocarbons by, PROB, 35
- in basins, RMS, 98
- in bottom deposits, RMS, 150, 416-427, 528, 529
- in coal, PROB, 43
- in geologic formations, PROB, 43
- in Great Salt Lake, list of species, XXII, 1331
- in marine sediments, occurrence and activity of, RMS, 416
- in marine sediments, references on, RMS, 425
- in marine sediments, vertical distribution of, XX, 258
- in sea, RMS, 150
- in sludge of lakes, XXV, 834
- increase of, in stored samples, RMS, 418
- influence on formation of oil, PROB, 32, 35, 43, 235, 262, 264, 266, 450, 452, 462
- marine, PROB, 43
- oxidation of petroleum hydrocarbons by, XXVII, 1182
- production of ammonia by, RMS, 283; XXV, 844
- relation to faecal pellets, RMS, 521
- relation to nitrogen content of sediments, RMS, 265
- responsible for reprecipitation of calcium carbonate in lakes, XXV, 842
- sulphate-reducing, in oil-field waters, X, 1274, 1286
- sulphate-reducing, in soils and waters of Illinois oil fields, XIV, 153
- Bacterial activity, RMS, 266
- in Baltic sediments, RMS, 305, 321
- Bacterial decomposition, RMS, 266
- of organic debris, XXVIII, 1512
- Bacterial genesis of hydrocarbons from fatty acids, XV, 441
- discussion, XV, 703
- Bacterial metabolism, RMS, 287
- Bacterial oxidation, PROB, 265
- Bacterial oxidation of various hydrocarbons, effect of marine sediment on, XXVII, 1185
- Bacterial precipitation of calcium carbonate, RMS, 291
- Bacterial reduction theory of derivation of hydrogen sulphide, SD, 710
- Bacteriological samplers, RMS, 652, 655
- Baculites ovatus* zone, XVIII, 1412
- of Upper Alberta shales in southeastern British Columbia, occurrence of, XIX, 295, 703
- discussion, XIX, 703
- Bacuranao field, Cuba, XVI, 815
- Baddley, E. R., GAS, 119; MSC, 109; SC, ix; XX, 1535; XXVI, 1154
- Baddley, E. R., Hoots, H. W., and Reed, R. D., MSC, 75
- Baden, MSC, 209
- Baden, Martin W., IX, 975
- Badger Basin, deep drilling in, XXI, 995
- Badger Basin dome, XXVII, 436
- Badger Basin field, FOP, 52; XXV, 1484
- Badings, H. H., XXI, 123, 556; XXII, 2, 34

(Badings)

- Palaeogeogen in Indischen Archipel*, review, XXI, 122
- Badlands area of gypsum and shale in St. George district, Utah, XXIII, 123
- Baffin Bay, RMS, 225
- Bagg, R. M., MSC, 11, 16, 18, 21, 22, 121, 210, 214, 225, 227, 236, 255, 300, 301, 316, 322, 323, 343, 345, 347; VII, 612, X, 131; XXVIII, 377
- Baggelaar, H., XXVIII, 1643
- Baggins californica* zone, MSC, 129, Fig. 14 (in pocket)
- Baggins robusta* zone, XXV, 224, 232, 235
- Baggins siphogenerina* zonules, MSC, 17, 18, 86, Figs. 4, 14, and Table I (in pocket)
- Bagginnæ, MSC, 15, 323
- Baggs, Wyoming, anticlines between Hiawatha gas field and, XIX, 537
- Baggs anticline, XIX, 543
- Bagnold, R. A., RMS, 14
- physics of blown sand and desert dunes, review, XXVIII, 566
- Bahama and Florida marine calcareous deposits, RMS, 283
- Bahama Banks, PROB, 358
- Bahamas, RMS, 3, 148, 284, 450
- faecal pellets from, RMS, 519
- Bahrain Island, Cretaceous, n, XXIII, 964
- production in, XXIII, 964
- Bafa series, XXIX, 551
- Bafa trough, XXIX, 539, 560
- cil in XXIX, 550
- Baicoi field, Roumania, SD, 137; VI, 526; IX, 153
- Baicoi salt dome, SD, 181; IX, 1241
- Baier, C. R., RMS, 423-425; XXVII, 1183
- Bailey, I, 26; XII, 950, XXIV, 381
- Bailey, E. B., XXVI, 1725
- Bailey, E. B., Collet, L. W., and Field, R. M., XXVIII, 1006
- Bailey, E. H. S., SD, 614; IX, 506
- Bailey, G. E., XXVII, 84
- Bailey, H. B., XXVIII, 1298
- Bailey, J. P., and Reed, R. C., subsurface correlation by means of heavy minerals, XI, 359
- Bailey, J. R., XX, 287
- Bailey, J. R., and Thompson, W. C., PROB, 921
- Bailey, J. W., XII, 970
- Bailey, R. K., GAS, 424
- Bailey, Thomas L., CAL, 13, 219; MSC, 33, 80; PROB, 666; SD, 223; VIII, 437, 778; XII, 237, 246; XV, 470, 761, 811, 868, 882; XVII, 454, 490, 491, 505, 506, 545, 640, 1316, 1326; XXIII, 183, 184, 190, 191; XXIV, 2070, 2089, 2100, 2131; XXV, 2003, 2005, 2006; XXVII, 124, 1101; XXVIII, 1355; XXIX, 1705, 1724
- Frio clay, south Texas, discussion, XVI, 259
- Bailey, Thomas L., and Woodford, A. O., XX, 1666; XXVII, 124
- Bailey, Thomas L., Evans, Frank G., and Adkins, W. S., revision of stratigraphy of part of Cretaceous in Tyler basin, northeast Texas, XXIX, 170
- Bailey, Willard F., XXIV, 1642, 1644, 1656
- natural gas from Paleozoic horizons in southern Cincinnati Arch region,

(Bailey)

- GAS, 853
- Bailey formation, XXV, 675
- Bailey limestone, XXV, 673
- Bailey (Wassam) zone, PROB, 219
- Baillie, RMS, 647
- Baillie sounding machine, RMS, 647
- Bain, G. W., and Haarman, E., XXV, 429
- Bain, H. Foster, PROB, 908; XIX, 1114; XXV, 64, 65, 70, 71
- Bainbridge formation, XXVI, 12
- distribution of, in southeastern Missouri and in southern Illinois, XXIII, 598
- Missouri, correlations of, XXIII, 600
- Missouri and Illinois, XXVI, 17
- Missouri and Illinois, proposed stratigraphic analysis of, XXVI, 18
- Moccasin Springs, Missouri, Osgood member, XXVI, 8
- of southeastern Missouri, type section of, XXIII, 595
- Bainbridge Island, MSC, 77
- Baird, Chester A., SD, 342, X, 290
- Baird formation, CAL, 63
- Baichunas dome, XXIII, 496
- Bajocian ammonites, XXIX, 1022
- Bajocian rocks, XXIX, 1019
- Baked marls, MEX, 151, 215
- Bakelite, as matrix for thin sections, RMS, 594
- Baker, A. A., XIII, 1414; XVII, 963, 1230; XXI, 723
- geologic structure of southeastern Utah, XIX, 1472
- Baker, A. A., and Reeside, John B., Jr., XIV, 784; XVII, 146; XXIV, 309, 619
- correlation of Permian of southern Utah, northern Arizona, northwestern New Mexico, and southwestern Colorado, XIII, 1413
- Baker, A. A., and Williams, James Steele, XXV, 438
- Permian in parts of Rocky Mountain and Colorado Plateau regions, XXIV, 617
- Baker, A. A., Dane, C. H., and Reeside, John B., Jr., XVII, 125; XXI, 723, 724, 730, 731, 746, 753, 754, 1259; XXIII, 1167, 1170, 1171, 1172; XXVI, 1395
- Paradox formation of eastern Utah and western Colorado, XVII, 963
- Baker, A. A., Dobbin, C. E., McKnight, E. T., and Reeside, J. B., Jr., notes on stratigraphy of Moab region, Utah, XI, 785
- Baker, Bill, XX, 392
- Baker, Charles Laurence, CAL, 24; GAS, 1004, 1067, 1069; GC, 584; MEX, x, 23, 27, 28, 32, 39, 45-50, 52, 56-58, 60, 61, 72, 73, 85, 124, 159-162, 165, 166, 169, 179, 181, 196, 200; PTNM, 674, 701; PROB, 75, 391; SD, 702, 771; III, 174; V, 164; VII, 228; X, 1261; XII, 1019; XIII, 439, 651, 921, 962; XIV, 73, 84, 715, 1432; XV, 812, 820, 1030, 1038, 1047, 1060, 1072; XVII, 506, 508, 516, 942; XIX, 222, 224, 230, 243, 245, 249, 250, 251, 254, 255, 1363, 1760; XX, 495, 1230; XXIII, 1758; XXIV, 146, 182, 183, 188; XXVI, 232, 384, 674, 701; XXVII, 1478, 1488, 1506; XXVIII, 305, 982, 1009, 1020, 1078, 1142, 1144, 1616; XXIX, 553, 1724

(Baker)

- Cretaceous of West Texas and its oil possibilities, V, 5
- date of major diastrophism and other problems of Marathon basin, Trans-Pecos Texas, discussion, XII, 1111
- discussion of Permian symposium, XIII, 1057
- Panuco oil field, Mexico, XII, 395
- possible distillation of oil from organic sediments by heat and other processes of igneous intrusions; asphalt in the Anacacho formation of Texas, XII, 995
- probable lower Mississippian age of Caballos novaculite, New Mexico, XXIV, 1679
- reviews, IX, 181; XV, 92; XX, 496
- Reynosa problem of South Texas, and origin of caliche, discussion, XVII, 1534
- Baker, Charles Laurence, and Bowman, W. F., XV, 1030, 1059, 1061, 1063, 1076
- Baker, Charles Laurence, and Suman, John R., XXVIII, 979
- Baker, Charles Laurence, Adkins, W. S., Buse, Emil, and Sellards, E. H., PROB, 378
- Baker, Charles Laurence, King, P. B., and Sellards, E. H., XXVIII, 1005
- Baker, C. L., Udden, J. A., and Bose, Emil, PROB, 666
- Baker, G. E., SBP, 46
- Baker, G. F., SD, 710; IX, 730
- Baker, H. A., RMS, 564
- Baker, L., Survey, Texas (well 355), SBP, 292-335, 409
- Baker, R. F., SBP, 7; V, 224 VIII, 541; XV, 746; XVIII, 814
- Baker, R. F., and Sealey, F. C., XXVI, 1441
- Baker, Ray, X, 157
- Baker, Thomas, X, 1119, 1258
- Baker, Van K., SD, 424
- Baker, W. A., Jr., MEX, ix; XII, 398, 405; XIV, 73, 74
- Baker, William, XXVIII, 1136
- Baker Canyon member, XXVI, 170
- Baker-Glendive anticline, eastern Montana, FOP, 76; GAS, 245; PROB, 945; XXI, 991; XXII, 689; XXV, 1508; XXVI, 1557, 1567; XXVII, 1304
- Big Snowy oil zone on, XXVI, 1564
- deep wells drilled with rotary tools on, XXIII, 461
- fossils in, XXIII, 468
- geophysical survey of, XXIII, 463
- probable Mississippian age of Amsden and Big Snowy formations in Northern Pacific well No. 1, XXIII, 472
- stratigraphic studies of, XXIII, 461
- stratigraphic studies of, discussion, XXIII, 1246
- Baker-Glendive field, GAS, 246, 256
- Baker Oil Co., SD, 612
- Bakersfield, California, MSC, 124, 184, 188, 190-194, 204, 219, 227, 230, 232, 233, 240, 241, 243, 251, 260, 264, 290, 292, 305, 312, 316, 320, 322, 335, 353
- coal in Eocene near, XXIV, 1676
- check list of foraminiferal samples from, MSC, 27
- faults at, SC, 71; XX, 1617
- Bakersfield area, California, shape of

- (Bakersfield)
water table on alluvial fan, XVI, 349
Bakersfield district, CAL, 20, 174, 178, 179, 219, 242, 243, 307
Bakher, I., 143
Baku district, Russia, XI, 501; XXIII, 950
backbone of oil industry in U.S.S.R., XXV, 369
Baku oil fields, Russia, PROB, 265, III, 293; XXIII, 748; XXI, 1075
review, VI, 390
Baku type of oil-bearing folds, XXIII, 766
Balance between defective "force" and resultant of real forces, RMS, 107
Balance of forces in convection currents, RMS, 109
in drift currents, RMS, 118
in ocean currents, RMS, 107
in rivers, RMS, 107
Balanced assemblages of organisms easily disturbed, XXI, 1111
Balaniidae in East Indies, RMS, 354
Balcones, Luling, and Mexia fault zones in Texas, XXIX, 1733
map, XXIX, 1735
references, XXIX, 1737
Balcones and Mexia faulting in north-east Texas, GAS, 661
mechanics of, X, 1261
Balcones escarpment, III, 124, 305, V, 25; VI, 59
Balcones fault, PROB, 315; XXVI, 1813; XXIX, 1417
at San Marcos, XI, 832
Balcones fault-graben system, XX, 1357
Balcones fault-line trend, XXIX, 783
Balcones fault system, XXI, 1042
Balcones fault zone, GAS, 661; PROB, 578; STR I, 305, 306; XII, 997; XIII, 428; XVI, 742; XVIII, 1067; XXI, 1432; XXIX, 1305, 1733
electrical conductivity of surface beds in, XIV, 1180
electrical investigation of, XIV, 1157
of central Texas, rocks underlying Cretaceous in, XV, 819
Balcones faults, XV, 1047
observations on two deep borings near, III, 124
Balcones system in central Texas, evidence of recent movements along faults of, XX, 1357
McLennan County, Texas, recent movements on a fault of, XVII, 439
Bald Mountain, XXV, 895
Bald-headed structures, XX, 526
Bald Hill pool, III, 273, 410; V, 285
Baldacci, Luigi, SD, 469
Baldry, Robert Ashley, XXIX, 538
Baldwin, Blanchard, and Keyte, I. A., XIII, 903
Baldwin, David A., X, 835
Baldwin, Ewart M., and Allen, John Eliot, XXVIII, 1779
Baldwin, H., Brainerd, A. E., and Keyte, I. A., XVIII, 540
Baldwin, Harry L., VII, 476, 478; XIII, 958; XV, 1030; XXIV, 307; XXIX, 499, 503
Tupungato oil field, Mendoza, Argentina, XXVIII, 1455
Baldwin, Harry L., Jr., XIII, 999, 1016; XVII, 110, 375; XXIII, 1172
Baldwin, Harry L., Jr., Brainerd, A. E., and Keyte, I. A., pre-Pennsylvanian stratigraphy of Front Range in (Baldwin)
Colorado, XVII, 375
Baldwin, I. L., IX, 1294; XXVII, 1176, 1188
Baldwin formation, XXIV, 837
Baldwin Hills, California, CAL, 256, GAS, 173, XII, 648
Pliocene and Pleistocene history, X, 502
structure indicated by pattern of consequent streams, XII, 519
Baldwin Hills fault, SC, 129; XX, 1675
Baldwin Hills uplift, PROB, 216, 742, 749
Baldwinsville gas field, Onondaga County, New York, GAS, 986; XXII, 89
largest flows of gas from Utica shale, XXII, 94
Balize subdelta, RMS, 159-165
Balk, Robert, XX, 862
review, XXI, 276, 1357; XXIV, 882
structural behavior of igneous rocks, review, XXI, 1500
structure elements of domes, XX, 51
Balk, Robert, and Ruedemann, Rudolf, editors, geology of North America, review, XXIV, 1134
Ball, C. G., Bell, A. H., and McCabe, L. C., XXIII, 1522
Ball, James Ogden, and Barb, Clark F., hydrocarbons of Uinta basin of Utah and Colorado, review, XXVIII, 341
Ball, John, XXII, 1218
Ball, John R., XXVI, 5, 6, 11
memorial of Ulysses S. Grant, XVII, 206
some Silurian correlations in lower Mississippi drainage basin, XXVI, 1
type section of Bainbridge formation of southeastern Missouri, XXIII, 595
Ball, John R., and Flint, R. F., XXVI, 4
Ball, John R., and Grove, Brandon, XXVI, 16
Ball, Lionel C., GAS, 1061; XI, 66
Ball, Max Waite, VII, 618, 623; VIII, 485, 539; XIII, 167; XIV, 503; XVIII, 1456; XIX, 170; XXII, 1140, 1145, 1146, 1150, 1152; XXIV, 1884; XXVII, 425
Athabaska oil sands: apparent example of local origin of oil, XIX, 153
for encouragement and guidance of associate editors, VIII, 99
gas near Fort Collins, Colorado, VII, 79
geophysics at Colorado School of Mines, X, 1305
memorial of Cassius Asa Fisher, XV, 103
minutes of seventeenth annual business meeting, March, 1932, XVI, 520
relative ages of major and minor folding and oil accumulation in Wyoming, V, 49
report by president for 1923, VII, 457
report of president for 1923, VIII, 372
representation in the American Petroleum Institute, VIII, 101
review, XVI, 1045
this fascinating oil business, review, XXIV, 883
waters from Green River shale, IX, 171
(Ball)
why is an editor? VII, 704
Ball, Max W., Weaver, T. J., Crider, H. D., and Ball, Douglas S., shoe-string gas fields of Michigan, STRAT, 237
Ball, Sydney H., CAL, 65; I, 31; V, 664, 670
Ball, Sydney H., and Shaler, M. K., V, 665, 668
Ball area, GAS, 674
Ballantyne, R. S., Jr., and Willis, Robin, drilling-time logs and their uses, XXVI, 1279
Ballard, Norval, XIII, 1477; XVII, 1406; XX, 302, 1087; XXIII, 108, 1837, 1848, 1851; XXIV, 1953; XXV, 431; XXVII, 1592, 1594
regional geology of Dakota basin, XXVI, 1557
regional geology of Dakota basin, discussion, XXVII, 90
stratigraphy and structural history of east-central United States, XXII, 1519
stratigraphy of North Dakota, discussion, XXVI, 1776
Ballau Manufacturing Company, RMS, 659
Ballentine, George, XXIII, 1846
Baltown, Riley, and Benson sands, XXV, 806
Balsam, RMS, 603
Balsam Basin, XX, 1294
Balsam portal, XXVIII, 313
Baltic Sea, RMS, 51, 94, 95, 127, 227, 261, 322, 366, 447
changes of level in, RMS, 312
conditions of deposition in, RMS, 299-300
eastern shores of, favorable for origin of black shales, XXIII, 1190
ice lake, RMS, 307, 312
organic sediments in, PROB, 30; RMS, 303, 307
sediments of, RMS, 298
sediments of, references on, RMS, 321
undersaturated nature of, with respect to calcium carbonate, RMS, 316
variation in nature of sediments of, within short distances, RMS, 306, 308, 312
Baltrusaitis, E. J., XXVIII, 186, 196
Baluchistan, oil in, XVIII, 290
Bamberg balances, X, 1201; XXIX, 210
Bamberg instruments, XIX, 22
Bammel and Eureka fields, oil and gas in, XXIII, 878
Bammel dome, Texas, XXII, 739
Bammel field, effect of leakage of gas at, on water levels in Houston municipal wells, XXIX, 278
history of, XXIX, 261
Bammel gas field, map, XXIX, 261
Bancroft and Adams, IX, 158
Bancroft, J. A., and Adams, F. D., XIII, 308, 332, 334, 338, 340; XVI, 1031
Bancroft, W. D., XII, 915
Bancroft, W. L., X, 1039
Bancroft discovery, result of torsion-balance reconnaissance followed by reflection detailing, XXIII, 877
Bancroft oil field, Beauregard Parish, Louisiana, Eltran map, XXIV, 1413
Banda Sea, RMS, 351; XXII, 57
Banded agate structure, XXIX, 1164

- Banded anhydrite in Texas, XXII, 1686
 Bandera field, XXIII, 865
 Bandera shale, V, 293, 509, VI, 464; XXV, 37, 39
 Banding in anhydrite, SD, 58, 64, 67, 72
 Banff, PROB, 159
 Banff formation, XXVII, 44
 Bangor pool, XXIV, 986
 Banka Island, RMS, 349
 Banks, RMS, 246, 259
 Banks, Joseph E., RMS, 643, 645
 Banks, Thomas R., XVII, 816
 Banks' coring tube, RMS, 643
 Banks of marl, RMS, 293
 relation of, to sediments, RMS, 279
 sediments of, RMS, 246, 257
 Bankston coal, XXIII, 1385
 Bankston Fork limestone, XXIII, 1512, 1522
 Bannatyne field, Montana, PROB, 167, 703, 710; XIII, 783; XXIX, 1268
 geologic map, STR II, 255
 section, XXIX, 1299
 Swift formation productive at, XXIX, 1285
 Bannatyne sand, Montana, XXIX, 1268
 Banta, A. P., XXVII, 1189
 Bar at South Burbank pool, Oklahoma, XXI, 579
 Verden sandstone deposited as a, XXIII, 576
 Bar chart prepared for negative lantern-slide presentation, XXVI, 1670
 Bar diagrams of mineral frequencies, RMS, 609
 Baraboo uplift, XXII, 1546
 Barada pool, XXVI, 1083, 1085; XXVII, 813; XXIX, 707
 Baragwanath, W., XI, 56
 Baranik-Pikowsky, M. A., PROB, 923
 Barataria area, Jefferson Parish, Louisiana, XXIV, 1088
 Barataria Bay, Louisiana, RMS, 160, 169, 178-194, 560, 587; STRAT, 484, 488
 distribution of sediments in, XXIII, 587
 isopleth map of, RMS, 191
 map showing geological processes, XXIX, 1247
 Phi median map of, RMS, 186
 Phi quartile map of, RMS, 190
 sediments of, RMS, 178-194, 575, 576
 Barataria Bay sediments, Louisiana, areal variation of organic carbon content of, XXIII, 582
 Barataria dome, faulting at, XXVIII, 1303
 Barataria field, Jefferson Parish, Louisiana, XXV, 322; XXVIII, 1259
 electric-log cross section, XXVIII, 1262
 Barb, Clark F., PROB, 448, 475; XVI, 374
 Barb, Clark F., and Ball, James Ogden, hydrocarbons of Uinta basin of Utah and Colorado, review, XXVIII, 341
 Barb, Clark S., oil and gas industry of Colorado, review, XXVI, 1293
 Barbados, Eocene in, XXIV, 1558
 fauna of, XXIV, 1554-1556, 1558, 1559, 1564, 1570, 1574, 1586, 1590, 1591, 1593
 fossils of, XXIV, 1554-1556, 1558, 1559, 1564, 1570, 1574, 1586, 1590, 1591, 1593
 (Barbados)
 map of, XXIV, 1551
 Paleogene of, and its bearing on history and structure of Antillean-Caribbean region, XXIV, 1548
 references on Paleogene of, XXIV, 1607
 Scotland formation in, XXIV, 1552
 stratigraphical sequence in, XXIV, 1552
 Trinidad, and northern South America, stratigraphy of, XXVII, 92
 Venezuela, and Trinidad, relations between, XXIV, 1549
 Barbados and the arc of the Lesser Antilles, relations between, XXIV, 1549
 Barbara Oil Company, XXIV, 1791
 Barbat, William F., CAL, 219, 235; MSC, 50, 105, Fig. 14 (in pocket); SC, 61, 63, 64; XV, 257; XXVII, 1162; XXVIII, 1561, 1568, 1573; XX, 1607, 1609, 1610; XXI, 584; XXIII, 25, 42; XXV, 195; XXVI, 1608, 1613; XXVII, 1364, 1368, 1370; XXVIII, 954
 age of producing horizon at Kettleman Hills, California, discussion, XVI, 611
 Barbat, William F., and Cunningham, George M., MSC, 50; XXVIII, 450, 467, 469, XXVII, 1368, 1369
 age of producing horizon at Kettleman Hills, California, discussion, XVI, 417
 Barbat, William F., and Cushman, J. A., MSC, 50, 184, 190-194, 204, 219, 227, 230, 232, 240, 241, 243, 251, 260, 264, 290, 305, 308, 313, 316, 320, 322, 353, Fig. 14 (in pocket)
 Barbat, William F., and Galloway, John, PROB, 792, SC, 64; XVII, 1170, 1172
 San Joaquin clay, California, XVIII, 476
 Barbat, William F., and Johnson, Floyd L., MSC, 68, 237, 249, 258, 261, 268, 318, Fig. 14 (in pocket); SC, 61; XVII, 1170, 1175; XX, 1607; XXIII, 26, 29, 31, 32, 34, 37, 39, 44; XXV, 250
 Barbat, William F., and Rand, William, XIII, 222
 Barbat, William F., and von Estorff, F. E., MSC, 55, 56, 61, 187, 196, 213, 214, 216, 218, 219, 222, 239, 240, 243, 244, 251, 253, 260, 261, 264, 265, 271, 276, 291, 316, 331, 343, 353, Fig. 14 (in pocket); XXVIII, 377
 Barbat, William F., and Weymouth, A. Allen, MSC, 32, Fig. 14 (in pocket)
 Barber, W. B., XXVII, 159
 Barber pool, XXVI, 1038
 Barbers Hill, Chambers County, Texas, GAS, 707; XXI, 1086
 deep sand development at, XIV, 719
 oil beneath overhanging salt at, GC, 145; XVII, 1496
 overhanging cap rock and salt at, XVI, 469
 prediction of overhang at: study in quantitative calculations from torsion-balance data, XIX, 25
 Barbers Hill area, Chambers County, Texas, aerial photo-mosaic of, GC, xvii
 Barbers Hill dome, PROB, 642, 894, 895; GC, 162; XVII, 1513
 Barbers)
 effect of character of rim syncline on production at, XX, 1422
 salt overhang at, GC, 163, 164, XVII, 1514
 sections, PROB, 663, 664
 Barbers Hill oil field, Texas, comparison of secondary mounds with those of German salt domes, SD, 203
 Oligocene production at, GC, 11; SD, 530; I, 47; V, 333; IX, 958; XXVIII, 510
 sulphur waters at, SD, 775
 Barbier, G., and Demolon, A., XVII, 1225, 1226
 Barbour, I., 23
 Barbour, G. B., XXVI, 51
 Barcena, XI, 1181
 Barcanes, submarine, RMS, 347
 Barco area, Colombia, producing zones of, XXIX, 1124
 Cretaceous oils of, XXIX, 1136
 gravity of oil in, XXIX, 1125
 production largely from Cretaceous, XXIX, 1135
 Barco concession, Colombia, XXIII, 962; XXIX, 528, 1124
 geology of, reprints, XXVIII, 1665
 map of principal structures of, XXIX, 1126
 pipe line from, XXIX, 1128
 production from, XXIX, 1128, 1139
 Barcodón, stratigraphical data from wells in, MEX, 235
 Bard, T. R., VIII, 63
 Bardeen, John, XVI, 1264
 Bardeen, John, and Peters, Leo J., XVI, 1291, 1292
 some aspects of electrical prospecting applied in locating oil structures, review, XVI, 616
 Bardsdale district, California, XXI, 981
 Bardsdale field, PROB, 191, 742, 755
 Bardwell, XV, 616
 Bardwell, D. C., and Lind, S. C., XXVIII, 924, 939, 947
 Barents Sea, RMS, 220, 225
 Barker pool, PROB, 708
 Barisan Mountains, XXII, 53
 Barite, PROB, 656; RMS, 602; XXVIII, 1574; XXIV, 643
 in Big Hill dome, Texas, SD, 699; IX, 719
 in rock salt, XXI, 1292
 Barite concretions in Wanakah beds, XXV, 1755
 Barite pisolites from Batson and Saratoga fields, IX, 1294
 Barito River Basin, Borneo, structurally analogous to south Sumatra, XXVIII, 1447
 Barium, RMS, 454
 in Appalachian salt brines, XXIV, 486, 887
 in brines, STRAT, 810
 in brines from Pennsylvanian, Mississippian, Devonian, and Silurian formations in West Virginia, XXIV, 490
 in Pottsville brines of Kanawha, Boone, and Logan counties, West Virginia, XXIV, 493
 in salt brines from Pottsville sediments, map of western part of West Virginia showing percentage of, XXIV, 489
 present in most sulphate-free brines of Ohio and Pennsylvania, XXIV, 488

- (Barium)
relative exchange powers of, RMS, 536
Barium carbonate, solubility of, XXIV, 491
Barium hydroxide, SBP, 23
Barker, R. C., XXIV, 1679
Barker, Reginald Wright, MEX, 122, 123, 125; XXVII, 1061, 1077, XXVIII, 1079, 1132
micropaleontology in Mexico with special reference to the Tampico Embayment, XX, 433
Barker and Southern Ute domes, New Mexico and Colorado, GAS, 380
Barker coal bed, VI, 144
Barker gas field, XXVII, 858
Barker's Ranch, MSC, 27, Fig. 14 (in pocket)
fauna, MSC, 23, 163
Barksdale, J. D., and Cushman, J. A., XXIV, 1933
Barley Patch area of Huntington Beach field, GAS, 188
Barnacles, RMS, 235
Barnard, Bruce M., XIII, 150
Barnegat Bay, RMS, 661
Barnegat Bay traverse, XXIX, 950
Barnegat Inlet, study of, review, XXVIII, 1208
Barnes, K. B., XXV, 853; XXVI, 1723
Barnes, R. Bowling, GC, 84; XXVIII, 1180
Barnes, Roy M., GAS, 119; SC, 126; XXVIII, 435; XX, 950, 1672; XXI, 584; XXV, 1166; XXVI, 1154; XXVII, 1260, 1265
memorial of D. Bruce Seymour, XVIII, 1222
memorial of Frank Morse Smith, XII, 687
Pacific section sixteenth annual meeting, November, 1939, abstracts, XXIII, 1876
report on Pacific section annual meeting, Los Angeles, November, 1938, XXII, 1714
twenty years of petroleum geology in California, XXIV, 1705
Barnes, Roy M., and Bowes, Glenn H., GAS, 186; SC, 126
Barnes, Roy M., and Collins, R. E., California oil production and reserves, VIII, 212
Barnes, T. C., RMS, 67
Barnes, Virgil E., XVII, 1213, 1215; XXIV, 478; XXVIII, 328; XXIX, 414, 1450, 1455
earth temperatures of north-central Texas, XVI, 413
oil-field waters of north-central Texas, XVI, 409
review, XXI, 1359
Barnesville field, Ohio, XI, 956
oil production, STR I, 135
Barnett, Claribel, XXIII, 1568
Barnett, D. G., O'Hern field, Duval and Webb counties, Texas, STRAT, 722
Barnett, V. H., PROB, 693; X, 1076, 1083, 1087, 1090
Barnett, poet., Mississippian limestone—Marble Falls limestone unconformity, Bend Arch district, GAS, 626
Barnett beds, XXIV, 83
Barnett formation, XXIV, 67
Barnett Hill, XXII, 853
Barnett Hill formation, XXII, 905, 906, 908
(Barnett Hill)
in Chokie-Limestone Gap area, XXII, 912
in Hartshorne vicinity, XXII, 910
in type locality, XXII, 911
Barnett shale, VI, 150; XXIV, 1053; XXV, 1075, 1650, 1657, 1663; XXVI, 212, 1048
Bryson field, STRAT, 541, 542
Barnhart, Carl, XV, 406
Barnhart field, Reagan County, Texas, XXVI, 387, 1398; XXIX, 750
Barnhart pool, XXVI, 1032; XXVII, 764
Ellenburger production at, XXVIII, 826
Barnsdall, Vincent, and Welch, XXIX, 795
Barnsdall Oil Company, GAS, 166; GC, 1040; RMS, 513; XXVIII, 543, XXII, 707; XXIII, 892
Bell Lutton 1 (well 27), SBP, 130-153, 403
O'Dea 10 (well 58), SBP, 87-153, 404
Trust 3 (well 55), SBP, 87-153, 403
Barnsdall pool, VI, 467
Barnsley pool, XXIX, 748
Barnwell field, GAS, 23, 28, 1060
Barnwell formation, XXII, 791
Barometer, aneroid, XXI, 1169
Barometers, RMS, 63
dependence of probable error of single observation upon separation of, XXI, 1173
Barometric elevations, causes of error in, XXI, 1178
Barometric leveling, X, 1305
Barometric surveying, corrections for temperature in, XXVIII, 133
ultimate precision of, XXI, 1168
Barr, K. W., Morton, F., and Richards, A. K., application of chemical analysis of crude oils to problems of petroleum geology, XXVII, 1595
Barrabé, Louis, XVI, 1119, 1137
la constitution géologique des Antilles, review, XX, 1497
oil in Limagne area, France, XVI, 825
Barrage, E. J., XXVI, 1566
Barrage, E. J., Furnish, W. M., and Miller, A. K., Ordovician fossils from upper part of type section of Deadwood formation, South Dakota, XX, 1329
Barrancas field, XXIX, 499
green conglomerate in wells of, XXVIII, 1465
Barrancón, MEX, 86, 90
Barranquilla-Cartagena highway, Colombia, thrust fault on, XXVIII, 1219
thrust fault on, and classification of faults, discussion, XXVIII, 1649
Barranquin formation, XXVII, 5
in Venezuela, fossils of, XXVIII, 5, 7
Barred basin, close analogies with Ventura Basin, XXI, 1141
Barred basin theory, application of, in Southern California, XXI, 1139
Barred basins, conditions in, favorable to petroleum genesis, XXI, 1130
extensive, caused by submergence of epiplaned land surface, XXI, 1122
geological evidence of, XXI, 1133
phenomena of, XXI, 1117
planktonic invasions into, XXI, 1129
sedimentation in, and source rocks of (Barred basins)
oil, XXI, 1101
sedimentation in, and source rocks of oil, discussion, XXI, 1350
Barred basins and source rocks of oil, references, XXI, 1156
Barreras formation on coast of Alagoas, Brazil, XXI, 308
Barrel costs versus well-day costs, IV, 299
Barrell, Joseph, CAL, 115, 207; GAS, 940; RMS, 214; VII, 607; XII, 918, 920, 922, 923, 925, 926, 927, 1164, 1166; XIII, 713, 715, 741, 1075; XIX, 1005; XX, 689, 690; XXVI, 1750, 1753
theory of deposition of sediments, XIII, 716
Barreman, XXVIII, 1158
Barreman ammonites, XXVIII, 1141
Barreman limestone, XXVIII, 1089
Barreman stage, XXIX, 1084
Barren Fork section of Osage, XXIII, 333
Barren sediments, comparison of, with producing wells, Los Angeles Basin, SBP, 126-130
definition of, SBP, 83-87
in type section, inclusion of, XXIV, 2046
Barren shale member, MSC, Fig. 6 (in pocket)
Barrera del Guadalupe, XXI, 839
Barret, William M., GAS, 664; XIV, 1088; XVI, 1173; XIX, 1073
magnetic disturbance caused by buried casing, XV, 1371
magnetometer study of Caddo-Shreveport uplift, Louisiana, XIV, 175; discussion, XIV, 175, 327
relation of geophysics to salt-dome structures, discussion, XIX, 1069
Barrett, A. F., GAS, 305, 321
Barrett field, XXVIII, 837
Barrier between two seas in southwestern Michigan in Mississippian, XXV, 714
Barrier areas, MSC, 2
Barrier Beach, Davis sand, Hardin field, STRAT, 594
Barrier beaches, RMS, 165, 166, 174, 192, 232, 450
of Gulf Coastal Plain, significance of, XXIII, 210
Barrier Reef, Great, of Queensland, XXVI, 786
Barrier reef formation, MEX, 39, 40
Barrier reefs in West Texas basin, discussion, XIII, 1397
Barrier reefs and atolls, reference to explanation by Molengraaff, CD, 212
Barrier sand reefs enclosing series of inlets, XXVI, bet. 154 and 155
Barril Viejo, Cretaceous section in, XXVIII, 1176
Barrilla and Davis mountains, areal geology of, XXII, 1427
topography of, map, XXII, 1424-1425
Barrilla and eastern Davis mountains of trans-Pecos Texas, Cretaceous and Eocene stratigraphy of, XXII, 1423
Barron, Buddy, XXVII, 1060
Barron, T., and Hume, W. F., XXII, 1218
Barron area, GAS, 675
Barrow, Claude V., XVI, 1021
Barrow, L. T., XI, 825; XIII, 1066,

- (Barrow)
1347; XIV, 832, 1402, XVI, 584;
XVII, 17, 1294, 1364, 1460
Barry, John O., XXIX, 51
Barry, John O., and LeBlanc, Rufus J.,
XXV, 741, XXIX, 25, 53, 61, 62, 64
fossiliferous localities of Midway
group in Louisiana, XXV, 734
Bars, RMS, 4, 167, 271, 344
building of, by ocean, RMS, 95
deposits on, in Mississippi delta,
RMS, 169
offshore, RMS, 208, 215
on deltas, RMS, 165
or reef structures competent to cause
formation of oil source beds in
reservoirs of Yates pool, Pecos
County, Texas, XXI, 1138
Barsch, O., geophysical survey of the
Reich as background for prospecting
for mineral deposits, review,
XXII, 494
Barstow, fossils at, CAL, 188, 221, 223
Barstow and Ricardo faunas, CAL, 222
Barstow beds, SC, 40; XX, 1586
Barstow fauna of Mohave district, SC,
80; XX, 1626
Barstow formation, correlation table,
CAL, 212, 303
suggestive of lesser aridity than at
present, CAL, 212
Barstow *Myriophyllum* fauna, MSC, 156
Bartell, F. E., and Miller, F. L., XXIV,
2164
Bartell, F. E., and Osterhoff, H. J.,
PROB, 288
Bartell, L. D., XIV, 37, 55
Sand Flat field, Smith County, Texas,
XXVIII, 1647
Bartello pool, XXV, 1116
Barth, Tom F. W., RMS, 625
Bartle, Glenn G., XXV, 31
effective porosity of gas fields in
Jackson County, Missouri, XXV,
1405
geology of Blue Springs gas field,
Jackson County, Missouri, XVII,
1148; discussion, XVII, 1536
subsurface study of Cherokee formation
near Kansas City, Missouri,
XXII, 918
Bartle, Glenn G., and Smith, Rufus M.,
STRAT, 104
relative porosity and permeability of
producing formations of Hugoton
field as indicated by gas with-
drawals and pressure decline,
XXIV, 1798
Bartlesville and Burbank sands, com-
position of, XXI, 254
in northeastern Oklahoma and south-
eastern Kansas, physical char-
acteristics of, XXI, 246
Kansas and Oklahoma, XXI, 31, 247,
249, 359
Oklahoma and Kansas, oil and gas
fields in, XXI, 32
Osage county and part of Kay
county, Oklahoma, XXI, 41
physical characteristics of, XXI, 39,
257
Bartlesville and Burbank shoestring oil
sands in parts of Oklahoma and
Kansas, origin and distribution of,
XXI, 30
of Kansas and Oklahoma, example of
fossil bars, XXI, 1136
Bartlesville sand, PROB, 292, 295, 305,
325, 326, 592; XIX, 516; XXIV,
2001; XXVI, 1066; XXVII, 799;
(Bartlesville)
XXIX, 714, 716
Avant oil field, Oklahoma, XXI, 249,
250
Cushing field, Oklahoma, STR II,
398, 404
curves showing similarity of crude
oils from Burbank sand and from,
XXV, 1806
Delaware Extension pool, Oklahoma,
STR II, 363
Depew area, Oklahoma, STR II, 367,
371
eastern Osage County, Oklahoma,
XXI, 564
Glenn pool, Oklahoma, STR I, 234,
235, 237, 239; XI, 1060
Golden Lanes, Kansas, XI, 1170
Madison pool, Kansas, STR II, 152,
153
Madison pool, Kansas, origin of, STR
II, 154
Missouri, II, 118
northeastern Oklahoma fields, XXI,
1006
Nowata County, Oklahoma, XXI, 249
Oklahoma, II, 118; III, 259, 266, 276;
IV, 180; V, 126, 325, 402, 486; VI,
321; VIII, 764
principal producing formation in east-
ern Kansas gas fields, XXIV, 1779
shoestring pools in Greenwood
County, Kansas, STR II, 159
Bartlesville sand field, PROB, 323
Bartlesville sand pools, PROB, 401
of northeastern Oklahoma, water
encroachment in, and its bearing
on East Texas recovery problem,
XVI, 881, 1038
Bartlesville sandstone, Chanute pool,
STRAT, 64-68
East Tuskegee pool, STRAT, 445
Bartlesville shoestring sands, Green-
wood and Butler counties, Kansas,
origin of, XVIII, 1313; discussion,
XVIII, 1710
Bartlesville waters, Oklahoma, analy-
ses, PROB, 865
Bartlesville zone in northeastern Okla-
homa fields, XXI, 1006
Bartlett, XXI, 840
Bartley, Jerald H., XXV, 1046
Bartolo (East Montebello) field, Cali-
fornia, XX, 940
Bartolo conglomerate, XXIV, 658
Barton, Cecil L., PROB, 405
Barton, Donald C., GAS, 737; GC, 81,
85, 104, 146, 149, 213, 437, 455;
PROB, 110, 111, 134, 163, 237,
238, 418, 997; SD, 29, 36, 142, 164,
167, 248, 358, 398, 400, 419, 424,
478, 482, 704, 718, 771; SBP, 2,
339; IX, 58, 758, 859, 869, 908; X,
40; XI, 742; XII, 394, 468, 469;
XIII, 45; XIV, 186, 504, 741, 900,
1571; XV, 59, 520, 1428; XVI, 169,
177, 405, 470, 585; XVII, 488, 915,
925, 945, 946, 958, 960, 1497, 1503;
XVIII, 1068, 1176, 1177, 1181,
1193, 1200, 1247, 1252, 1286, 1345;
XIX, 334, 336, 337, 609, 616, 656,
657, 669, 672, 674, 802, 807, 1629;
XX, 170, 291, 390, 619, 737, 821;
XXI, 488; XXIII, 191, 194;
XXIV, 435, 1204, 1465, 1476;
XXVI, 1441; XXVII, 1083, 1123,
1124, 1595; XXVIII, 1305; XXIX,
1136, 1138, 1312
abstract, XXII, 1714
accuracy of determination of relative
(Barton)
gravity by torsion balance, XVI,
1235
American salt-dome problems in the
light of Roumanian and German
salt domes, SD, 167; IX, 1227
Belle Isle salt dome, St. Mary Parish,
Louisiana, GC, 1033
Belle Isle torsion-balance survey, St.
Mary Parish, Louisiana, XV, 1335
control and adjustment of surveys
with magnetometer or torsion bal-
ance, XIII, 1163, 1570
correlation of crude oils with special
reference to crude oil of Gulf
Coast, XXV, 561
discussion of age of Gulf Border salt
deposits, XVIII, 1286
discussion of Barbers Hill salt domes,
XIV, 741
discussion of building of Mississippi
delta, XIV, 900
discussion of cap-rock petrography,
XV, 528
discussion of elastic-wave surveys,
XIV, 1571
discussion of fluid mechanics of salt
domes, GC, 104; XVIII, 1200
discussion of origin of Bartlesville
shoestring sands, XVIII, 1345
discussion of Stille's views on salt
dome tectonics, SD, 165
discussion of theories of origin of
German salt deposits, IX, 439
discussion of torsion-balance results
in California, XV, 1428
effect of salt domes on accumulation
of petroleum, XV, 61
European geophysical notes, XII,
1181
evolution of Gulf Coast crude oil,
XXI, 914
evolution of petroleum, discussion,
XVIII, 143
foreword, Gulf Coast oil fields, GC,
ix
geologic research in oil industry,
XXI, 665
geophysical methods in Gulf Coastal
Plain, IX, 669
geophysical prospecting for oil, XIV,
201
graphical methods of calculation in
interpretation in work with torsion
balance, discussion, XIII, 388
late Recent history of Côte Blanche
salt dome, St. Mary Parish, Louisi-
ana, GC, 1026; XX, 179
local research groups, XVII, 1146
magnetic and torsion-balance survey
of Munich Tertiary basin, Bavaria,
XVIII, 69
mechanics of formation of salt domes
with special reference to Gulf
Coast salt domes of Texas and
Louisiana, GC, 20; XVIII, 1025
memorial of, XXIII, 1888; XXIV,
1160, 1521
memorial of George Steiner, XV, 105
methods of distinguishing fused cores,
VII, 193
migration of oil at Belle Isle, Louisi-
ana, XX, 619
migration of oil at Spindletop, XX,
619
Moes Bluff salt dome discovery, dis-
cussion, XI, 308
natural history of Gulf Coast crude
oil, PROB, 109

- (Barton)
 petrographic study of salt-dome cap rock, XIV, 1573
 petroleum potentialities of Gulf Coast petroleum province of Texas and Louisiana, XIV, 1379
 Pine Prairie salt dome, SD, 419; IX, 738
 prediction of overhang at Barbers Hill, Chambers County, Texas: study in quantitative calculations from torsion-balance data, XIX, 25
 published works of, XXIII, 1892
 reading the aerial photo-mosaic of Barbers Hill area, Chambers County, Texas, GC, xvii
 report of president for 1938-1939, XXIII, 724
 report of representative to National Research Council, for 1935, XX, 661
 report of research committee, for 1933, XVIII, 706
 for 1934, XIX, 743
 for 1935, XX, 655
 for 1936, XXI, 664
 for 1937, XXII, 605
 research committee at Los Angeles, March, 1937, XX, 1380
 review of geophysical prospecting for petroleum, 1929, XIV, 1105
 reviews, V, 102; IX, 1118; XI, 998, 1125; XII, 101, 451, 953, 1122, 1123, 1172; XIII, 85, 86, 182, 183, 1402, 1492-1494, 1571; XIV, 107, 245, 955, 1357, 1358; XV, 93, 291, 713, 1297, 1299; XVI, 106, 108, 217, 219, 423, 946; XVII, 198; XVIII, 269, 1092; XIX, 125, 1075, 1551; XX, 108, 109, 837, 838, 1376; XXI, 273, 354, 502, 1206, 1500, 1607; XXII, 111, 223
 salt domes of South Texas, SD, 718; IX, 536
 surface fracture system of South Texas, GC, 251; XVII, 1194
 surface geology of coastal southeast Texas, XIV, 1301
 tables of terrane effects, XIII, 763
 the wigglesick, VII, 427; X, 312
 theory of origin of salt domes, IX, 859
 torsion-balance survey of Esperson salt dome, Liberty County, Texas, XIV, 1129
 translation of Hans Stille's "upthrust of the salt masses of Germany," IX, 417
 variation in physical properties, foreword, PROB, 97
 variation and migration of crude oil at Spindletop, Jefferson County, Texas, GC, 309; XIX, 618
 West Columbia field, Texas, V, 212, 325
 West Columbia salt dome and oil field, abstract, V, 102
 Barton, D. C., and Goodrich, R. H., GC, 963; XVII, 647; XIX, 1309, 1310
 Jennings oil field, Acadia Parish, Louisiana, SD, 398; X, 72
 Barton, Donald C., and Mason, S. L., barite picolites from Batson and Saratoga oil fields, IX, 1294
 Barton, Donald C., and Paxson, Roland B., PROB, 668; XXI, 475, 482
 Spindletop salt dome and oil field, Jefferson County, Texas, SD, 478;
- (Barton)
 IX, 594
 Barton, Donald C., Ritz, C. H., and Hickey, Maude, XVIII, 1069; XXIII, 198, 199, 1620; XXIX, 1330-1332
 Gulf Coast geosyncline, GC, 192; XVII, 1446
 Barton, H. E., Murphv, James K., and Purcell, Paul E. M., Seymour pool, Baylor County, Texas, STRAT, 760
 Barton, Jackson M., pre-Permian axes of maximum deposition in West Texas, XXIX, 1336
 Barton, Margaret Fowles, XXV, 562
 Barton arch, PROB, 575, 769; GAS, 459, 461, 465, 467, 468, 470; XII, 177; XIII, 422; XIV, 1551
 Barton geosyncline, XXIX, 1332
 Bartosh, E. J., XXI, 584
 Pacific section seventeenth annual meeting, November, 1940. Abstracts, XXIV, 2192
 Wilmington oil field, Los Angeles County, California, XXII, 1048
 Bartram, John G., GAS, 248, 254, 257, 262, 264, 265, 269; PROB, 97, 162, 349, 350, 408, 409, 687, 928, 930; SBP, 196; STRAT, 165; XV, 1153; XVI, 862; XVII, 110, 565; XVIII, 1474, 1491, 1663; XXI, 719, 747, 754, 913, 1253, 1592; XXII, 1022, 1026, 1235; XXIII, 479; XXIV, 337, 1347; XXV, 1839, bet. 2166 and 2167; XXVI, 327, 1559
 character of producing sandstones and limestones of Wyoming and Montana, XVI, 864
 deep drilling in Wyoming and Montana, XV, 553
 discussion of geology and unit operation, XVIII, 1491, 1492
 Elk Basin oil and gas field, Park County, Wyoming, and Carbon County, Montana, STR II, 577
 migration in Rocky Mountain district, XX, 613
 occurrence of black oil in Wyoming, X, 443
 oil gravities in Rocky Mountain states, PROB, 157
 Permian sub-committee of the committee on geologic names and correlations, XXIII, 1430
 report of committee on geologic names and correlations for 1937, XXII, 604
 for 1938, XXIII, 741
 for 1939, XXIV, 926
 for 1940, XXV, 977
 for 1942, XXVII, 699
 for 1943, XXVIII, 665
 for 1944, XXIX, 602
 report of committee on method of election of officers, XXIX, 597
 report of resolutions committee for 1936, XXI, 680
 summary of Rocky Mountain geology, XXIII, 1131
 Upper Cretaceous of Rocky Mountain area, XXI, 899
 use of stratigraphic names, XXII, 763
 Bartram, John G., and Erdmann, Charles E., natural gas in Montana, GAS, 245; STRAT, 273
 Bartram, John G., and Hupp, J. E., PROB, 692; XXVII, 434
 subsurface structure of some un-
- (Bartram)
 metrical anticlines in Rocky Mountains, XIII, 1275
 Bartram, John G., and Foark, Louis, Headton field, Oklahoma, V, 469
 Bartrum, J. A., X, 1258
 Bartsch, Paul, XXVIII, 1011; XXIX, 1512
 Bartlett, J. W., GAS, 1102
 Baruch, Bernard M., IX, 713
 Barwick, John S., GAS, 468, 487; STRAT, 127; XII, 190, 199; XIV, 1537, 1544, 1546; XVII, 174; XIX, 1407, 1408
 Salina basin of north-central Kansas, XII, 177
 Barzalosa formation, XXIX, 530
 Barzynski, General, XXV, 1265
 Basal beds of Salado formation in Fletcher potash core test, near Carlsbad, New Mexico, XXVI, 63
 Basal black shale, XXVI, 39
 Basal cleavage of clay minerals, RMS, 469
 Basal conglomerate of Travis Peak formation, XXIII, 631
 Basal conglomerates, SC, 26; MEX, 8, 11, 138; XX, 1572; XXVI, 39
 Basal Pennsylvanian conglomerate, Zenith pool, STRAT, 143
 Basal redbeds-Wellington contact in Kansas, XXIII, 1758
 Basalt in southwestern Washington, occurrence of oil in, XI, 87
 Basalt boulders, vesicular, in Santa Margarita formation, XXVI, 1618
 Basalt dikes in Colorado, occurrence of oil in, XVI, 775
 Basalt dykes, sills, plugs, MEX, 143, 145, 147, 149, 150, 184, 193, 206, 212, 213, 215, 216, 218, 227, Fig. 9 (in pocket)
 Basaltic flows, XXII, 1435
 Basaltic lava fragments in sediments, RMS, 211
 Basaltic material in Atlantic sediments, RMS, 382
 Base of Permian, XXIV, 353
 Base classification, XXVII, 1306
 Base exchange, RMS, 4, 144, 386, 536, 538, 540
 capacity of clays, RMS, 472
 definition of, RMS, 454
 determination of, in mechanical analysis, RMS, 541
 in dispersion, RMS, 538, 539
 in relation to composition of clay with special reference to effect of sea water, XVIII, 358
 in relation to sediments, RMS, 454
 in relation to sediments, references on, RMS, 464
 in waters, XXIV, 1230
 power of clays, RMS, 454, 456, 462
 properties of different kinds of clays, RMS, 456, 457
 relation to crystal structure, RMS, 458-463
 relation to occurrence of oil, RMS, 463
 relation to pH of clays, RMS, 458
 relation to sea water, RMS, 463-464
 Base-exchange and sulphate reduction in salty ground waters along Atlantic and Gulf Coasts, XXVI, 838
 Base-exchange minerals, effect on sea water, XXVI, 846
 in water-bearing sands not at equilibrium with present-day sea water, XXVI, 848

- Base-forming reactions, RMS, 424
 Base level, XXIII, 1326
 Base levels of deposition, XIII, 717
 Base-replacement studies of Oklahoma shales—critique of Taylor hypothesis, XVII, 66
 Basement, movement of, PROB, 627
 non-Franciscan, SC, 11; XX, 1557
 Basement complex, MSC, 101, 122
 beds with *Valculineria californica* resting on, CAL, 190, 206
 Edison field, STRAT, 4
 El Novillo Cañon, MEX, 159
 folding and faulting bear relation to character of, CAL, 281
 Kern Front field, STRAT, 12
 strike of, in Sierra Madre Oriental, MEX, 159
 two types of, CAL, 274, 275
 Zacatecas, MEX, 8
 Basement contours, New Jersey to South Carolina, XXIX, 952
 Basement fossils, Yates field, Texas, STR II, 487
 Basement map of Southern California, SC, 3; XX, 1549
 Basement rock, Anacapia, SC, 105; XX, 1651
 configuration of, Atlantic Coastal Plain, XXIX, 951
 Downey Plain, SC, 117; XX, 1663
 southeastern Virginia, XXIX, 73
 Basement rocks, Florida, XII, 1107
 in Shell-Humphreys well, Pecos County, Texas, XIV, 314
 Basement sand, Big Lake field, Texas, STR II, 517
 Yates field, Texas, STR II, 482, 487
 Basement sands in Yates area, Texas, XXIV, 142
 of Trinity group, XII, 1073
 Basement slate and granite at Anacapia, SC, 110; XX, 1656
 Bashkir Sterlitamak district, XXIII, 957
 Bashkirian limestone in Urals correlated with Bend limestone of Texas, XXIV, 244
 Basic and ultrabasic intrusives in Franciscan, XXVII, 153
 Basic data, designation of, on samples analyzed in study of source beds of petroleum, SBP, 412
 on samples analyzed in study of source beds, SBP, 412
 table of, SBP, 412
 Basic English for geology, XXIX, 1516
 Basic igneous rocks, alteration products of, RMS, 486
 Basic intrusives and flows in Anacapia, SC, 108; XX, 1654
 Basics in sea water, RMS, 143
 Basilosaurus in Arkansas, XXIII, 1228
 Basin at Homer field, Louisiana, STR II, 198
 Basin and range physiographic province, XXVI, 1803
 Basin and Range province, SC, 71; XX, 1617
 of northern trans-Pecos Texas, XIX, 222
 Basin-and-Range structural type, Franklin Mountains characteristic of, XXIV, 159
 Basin-and-range structure, XXVII, 431
 Basin and shelf areas in West Texas, PTNM, 617; XXVI, 617
 Basin anticline in Illinois, XXIII, 1495
 Basin area of central Michigan, oil in, XXIX, 693
 Basin areas in Nebraska during Cretaceous, XXVI, 1535
 Basin complex, XXV, 820
 Basin district, Michigan XXV, 1131; XXVI, 1097, 1106
 discovery and development of gas in, during 1940, XXV, 1128
 field development, XXVII, 823
 field development in 1943, XXVIII, 763
 map, XXV, 1126
 oil discoveries in 1943, XXVIII, 760
 Basin fields in Illinois, counties included in, XXIII, 1493
 development of, XXIII, 1495
 McClosky limestone of Ste. Genevieve formation productive in, XXIII, 1495
 production data, July, 1939, XXIII, 1496
 Basin fields in southeastern Illinois, geology of, XXIII, 1493
 Basin margin flexure of Gulf Coastal Plain, XXVII, 1236
 Basin mechanics, XXIII, 1484
 Basin Oil Company, XXIX, 694
 Basin Ranges, effect of faulting on, CAL, 50
 glacial conditions in, CAL, 258
 Basin system of Hungary, tectonics and paleogeography of, XVIII, 925
 Basin type of province in Southern California, XXI, 551
 Basins, RMS, 219, 220, 246, 254, 299, 307, 309, 331, 334, 445
 calcareous sediments in, RMS, 293
 causes of, RMS, 95
 conditions in, RMS, 95
 effect of, on circulation, RMS, 59
 in East Indies, RMS, 349
 in South Atlantic, distribution of, XXIII, 1667
 nature of circulation in, RMS, 95
 organic content of sediments of, RMS, 263, 305
 sedimentary, PROB, 274
 sediments of, RMS, 242, 255
 Southern California, compared with Eel River basin in Northern California, XXI, 552
 stagnant, properties of, RMS, 96, 356-372
 structural, XXI, 1119
 structural, in California, PROB, 739
 structural, in the Bend in Stephens County, Texas, STR II, 478
 texture of sediments in bottom of, RMS, 278
 Basins and mountain ranges, correlation of, CD, 167
 Basis for locating wildcats drilled in 1937, XXII, 1234
 Basis of proration in Texas, XXIII, 1314
 Bason Drilling Company, XXI, 525
 Basrah Petroleum Company, XXIII, 962
 Bass, N. Wood, GAS, 459, 464; PTNM, 754; PROB, 1012; RMS, 215; SBP, 257; STRAT, 95, 238, 419, 435, 473, 478, 486, 488, 819; XIII, 595; XVII, 171; XVIII, 1496; XIX, 1407; XX, 1471; XXI, 35, 258, 954, 1136, 1560; XXII, 923; XXIII, 462, 593, 1755, 1756, 1806; XXV, 1683; XXVI, 284, 754; XXVII, 919
 geologic structure of Dakota sandstone in western Kansas, IX, 1019
 (Bass, memorial of John Mandeville Alden, XXI, 1370
 origin of Bartlesville shoestring sands, Greenwood and Butler counties, Kansas, XVIII, 1313
 origin of shoestring sands of Greenwood and Butler counties, Kansas, review, XXII, 1458
 recent subsidence in Hamilton County, Kansas, XV, 201
 reviews, XVII, 566; XXII, 1287
 significance of initial daily production of wells in Burbank and South Burbank oil fields, Oklahoma, XXV, 1175
 Verden sandstone of Oklahoma—an exposed shoestring sand of Permian age, XXIII, 559
 Bass, N. Wood, and Kennedy, L. E., XXI, 35
 Bass, N. Wood, and Leatherock, Constance, Chattanooga shale in Osage County, Oklahoma, and adjacent areas, XX, 91
 Bass, N. Wood, and Miser, H. D., XXI, 54
 Bass, N. Wood, and Rubey, W. W., PROB, 812; X, 1070; XIX, 1406; XX, 1191
 Bass, N. Wood, and Smith, H. M., STRAT, 309
 Bass, N. Wood, Dillard, W. Reese, and Oak, Donald P., Chanute pool, Neosho County, Kansas—a water-flooding operation, STRAT, 57
 Bass, N. Wood, Kennedy, L. E., Dillard, W. R., and Leatherock, Constance, STRAT, 71, 238, 443, 461, 478, 481
 Bass, N. Wood, Leatherock, Constance, Dillard, W. Reese, and Kennedy, Luther E., origin and distribution of Bartlesville and Burbank shoestring oil sands in parts of Oklahoma and Kansas, XXI, 30
 Bass, N. Wood, Neumann, L. M., Ginter, R. L., Mauney, S. F., Ryniker, Charles, and Smith, H. M., relationship of crude oils and stratigraphy in parts of Oklahoma and Kansas, XXV, 1801
 Bass Island formation, XXII, 399
 Bass Island-Salina contact, XXVII, 834
 Bass Island-Sylvania break, PROB, 549
 Bass well, SD, 413
 Bassano, southern Alberta, sections of Bearpaw shale from Keho Lake to, ALTA, 115; XV, 1243
 Bassendorf formation, MSC, 103, 161, 164, 220, 228, 317, 354
 Bassett, C. F., XXV, 672
 Bassignac tuffs of Martinique correlated with Gatun formation of Panama, XXIV, 1597
 Bassler, I. 73; III, 290
 Bassler, Harvey, X, 831, XI, 52
 Bassler, Harvey, and Reeside, J. B., Jr., VI, 208; XIII, 1418; XVII, 150; XXIV, 635
 Bassler, R. S., V, 615; VII, 519, 612; VIII, 457, 622; XV, 1103, 1279; XIX, 1117; XX, 310, 805, 807, 808, 1072, 1073; XXII, 1547; XXIV, 1644; XXVI, 4; XXVIII, 1724; XXIX, 886, 897, 920, 921, 922, 925
 memorial of Edward Oscar Ulrich, XXVIII, 687

- Bassler, R. S., and Canu, Ferdinand, VIII, 544; XXVI, 1196
- Bassler, R. S., and Pate, W. F., XXVI, 13, 14
- Bassler, R. S., and Ulrich, E. O., VIII, 546
- Bastanchury zone, PROB, 225
- Bastian Bay field, XXIX, 798
- Bastin, Edson S., PROB, 267, 914; RMS, 425, 641; STRAT, 319, X, 1282, 1286; XI, 1285, 1290, 1303; XIV, 143, 145, 151; XVII, 55; XX, 173; XXVII, 1182
- problem of the natural reduction of sulphates, X, 1270
- studies of action of bacteria in geochemical phenomena, XIV, 143
- Bastin, Edson S., and Greer, Frank E., PROB, 915, XXVI, 848; XXVII, 1182
- additional data on sulphate-reducing bacteria in soils and waters of Illinois oil fields, XIV, 153
- Bastos, XIX, 1738
- Bastrop County, Texas, character and possible origin of producing rock in Hilbig oil field, XIX, 206
- Bastrop Park deposit, XXIX, 1716
- Bastrop Park gravel, XXIX, 1703
- Bateman, E. W., XXIX, 484
- Bateman Lake, Louisiana, XXII, 744; XXVIII, 1280; XXIX, 798
- Bateman Lake field, La., electric-log cross section, XXVIII, 1282
- faulting at, XXVIII, 1303
- Bateman Strawn pool, XXIX, 763
- Bates, Fred W., XXVIII, 544
- geology of Eola oil field, Avoyelles Parish, Louisiana, XXV, 1363, 1597
- Bates, Fred W., and Bornhauser, Max, XXVIII, 981
- geology of Tegetate oil field, Acadia Parish, Louisiana, XXII, 285
- Bates, Fred W., and Wharton, Jay B., Jr., XXVIII, 981
- Anse la Butte dome, St. Martin Parish, Louisiana, XXVII, 1123
- Bates, Henry M., XVIII, 1459
- Bates, Katherine, XXVII, 1156
- Bates, Mowry, memorial of, XI, 107
- oil and gas fields of northern Louisiana, II, 61
- Bates, Robert L., lateral gradation in Seven Rivers formation, Rocky Arroyo, Eddy County, New Mexico, XXVI, 80
- review, XXV, 172
- Bates, Robert L., and Needham, C. E., XXVIII, 832
- Bates, Robert L., and others, oil and gas resources of New Mexico, review, XXVII, 1010
- Bates, W. C., XVIII, 1348
- Bates, W. H., XXIX, 1170, 1185
- Bates Park anticline, XXIV, 1263
- Batesville district, Arkansas, Moorefield formation and Ruddell shale, XXVIII, 1626
- Batesville sandstone, XXV, 1653
- in Interior Highlands of Arkansas, GAS, 542
- Bath House Beach, CAL, 238, 307
- Bather, F. A., XIII, 594
- Batholithic intrusions, Neogene, in East Indies, XXII, 53
- Batholithic invasion, Jurassic, of area of Sierra Nevada, Tehachapi Mountains, and desert ranges, SC, 72; XX, 1618
- (Batholithic)
- Searles Lake region, SC, 72; XX, 1618
- Batholiths, PROB, 165
- in Borneo, XXII, 26
- Bathonian-Callovian boundary, XXIX, 1279
- Bathonian stage, XXIX, 1019
- Bathyal, MSC, Fig. 5 (in pocket)
- Bathyal bottoms, XXIV, 1168
- Bathyal facies of Middle Cretaceous, MEX, 22-24, 94-96, 160
- Bathyal faunal facies, MSC, 158
- Bathyal zone, MSC, 82
- Bathymetric, isopachous, and paleolithologic maps and sections of hypothetical coastal area, XXIX, 434
- Bathymetric chart, Van Riel's, XXII, 57
- Bathymetric classification, XXIV, 1167
- Bathymetric distribution of ammonites, XXIV, 1173
- Bathymetric distribution chart of fossils of Tejon formation, XXVII, 1376
- Bathymetric zones, MSC, 81, 82, 128
- of Mexican and Texas Aptian and Albian seas as indicated by types of cephalopods, paleogeographic map showing, XXIV, 1195
- Batocrinus cultus* zone, XXI, 1162
- Baton Rouge, RMS, 32, 153, 156
- Baton Rouge field the result of torsion balance and reflection seismograph, XXIII, 879
- Baton Rouge oil of exceptionally high octane rating, XXIII, 879
- Batro series in Mendoza province, Argentina, XII, 703
- Batson, Texas, GAS, 708
- Batson dome, PROB, 116, 661
- cap-rock production at, GC, 3; XVIII, 502
- Batson oil field, Texas, SD, 524; I, 46; V, 243, 333; IX, 1277
- Batte, T. R., Jr., GAS, 1010
- Battle, J. C., and Judson, Sidney A., XVII, 1501
- Battle Mountain formation, correlations, XXVI, 1391
- type section, XXVII, 1379
- Baturin, V., XVIII, 783
- Bau der Erde*, review, XIII, 87
- Bauer and Litchfield, XX, 1318
- Bauer, A. D., and Finley, W. L., XIII, 313
- Bauer, A. D., Cook, M. B., and Dean, E. W., properties of typical crude oils from the producing fields of Kansas, VI, 370
- Bauer, C. Max, GAS, 404, 1070; PROB, 778; XII, 426, 808; XVII, 895; XXIII, 1450, 1478; XXV, 142; XXVII, 425
- gas a big factor in Texas Panhandle, XII, 165
- oil and gas fields of Texas Panhandle, X, 733
- quartzite pebbles at base of Lance formation in Montana, IX, 344
- Bauer, C. Max, and Robinson, Ernest Guy, PROB, 697; STRAT, 337; XV, 1134
- comparative stratigraphy in Montana, VII, 159
- Bauer, Georg, XXIII, 1101
- Bauernschmidt, A. J., Jr., East Hackberry salt dome, Cameron Parish, Louisiana, XV, 247
- lignite in dolomite, XIV, 517
- Sulphur dome, Calcasieu Parish, (Bauernschmidt)
- Louisiana, XIV, 1079
- West Ranch oil field, Jackson County, Texas, XXVIII, 197
- Bauernschmidt, A. J., Jr., and Aid, Kenneth, geology of southwestern Mendoza Province, Argentina, XII, 693
- Baughman, George W., and Lee, Marvin, XXI, 133
- recent developments in Kansas and Nebraska in 1936, XXI, 1000
- Bauman, E. H., V, 176
- Baumann, Fred S., *das Erdöl in Deutschland*, review, XVI, 424
- Baumé gravity of crude oil. (See Gravity of oil)
- Baumgartner, L. S., XII, 201
- Bautista Creek, CAL, 303
- Bauxite, RMS, 627
- formation of, from syenite in Arkansas, XXI, 1489
- Bavaria, RMS, 517
- magnetic and torsion-balance survey of Munich Tertiary basin, XVIII, 69
- Bavendamm, W., RMS, 291, 423; XX, 260; XXII, 1343
- Baver, A. D., Smith, N. A. C., and Cooke, M. B., PROB, 109
- Bawles, N., SD, 332; X, 280
- Baxter, R. A., XVI, 770
- Baxter basin gas fields, Sweetwater County, Wyoming, VI, 515
- Dakota waters in, XXIV, 1259
- Frontier water in, XXIV, 1241
- geology of, GAS, 323
- helium in, GAS, 1059
- Sundance water in, XXIV, 1274
- Baxter shale, GAS, 330
- Baxterville field, Mississippi, XXIX, 825
- Bay, Harry X., and George, William O., XXIV, 2101
- subsurface data on Covington County, Mississippi, GC, 369; XIX, 1148
- Bay, RMS, 161, 167, 170, 213, 285, 288
- in Baltic Sea, RMS, 299
- Melville, RMS, 192
- of Biscay, RMS, 146
- of Fundy, RMS, 3, 147
- of Naples, RMS, 417
- of Palermo, Sicily, Recent foraminifera from, MSC, 13
- Bay City, Michigan, exceptional Silurian brine near, XXIX, 567
- Bay deposits on Mississippi delta, RMS, 171
- Bay origin of Bradford sand in Bradford field, Pennsylvania and New York, STR II, 429
- Bay Ste. Elaine, Louisiana, GAS, 710
- Bay Ste. Elaine field, Louisiana, XXIX, 799
- Bayard sand, XXV, 806; XXVI, 1115
- in West Virginia, PROB, 490
- Bayles, Robert, XXIV, 1723
- Baylor and Haskell counties, Texas, XXIV, 1053
- Baylor County, Texas development, XXV, 1076; XXVII, 778
- Seymour pool, STRAT, 760
- Baylor Mountains, XXIV, 153
- Baylor University, RMS, 283
- Bayou Baptiste field, Louisiana, XXIII, 884
- Bayou Blue field, Louisiana, XXIX, 799
- Bayou Bouillion field, Louisiana, I, 45

- (Bayou)
(well 408), SBP, 335-349, 410
Bayou Bouillon salt dome, St. Martin Parish, Louisiana, SD, 345; IX, 1283
Bayou Castor Saline, SD, 270
Bayou Conway, XXIII, 1221
Bayou Couba field, XXVII, 736
Bayou Des Allemands, Louisiana, XXII, 743
Bayou des Glaises, XXV, 1012
Bayou des Glaises piercement salt dome, XXIX, 794
Bayou Lenann member, XXIX, 61
Bayou Mallet, Acadia Parish, Louisiana, *Heterostegina* zone at, XXI, 1058
Margulina-*Frio* sands at, XXI, 1058
Bayou Manchac, XXIII, 1217
Bayou Pechant field, XXIX, 794
Bayou Perot, XXV, 1010
Bayou Pigeon, XXV, 1011
Bayou Sale field, St. Mary Parish, Louisiana, XXVI, 989; XXVII, 737; XXVIII, 1298
electric-log cross section, XXVIII, 1297
Bayou Sauvage ridge formed by an ancient pass of deltaic origin, XXIII, 9
Bayou Teche, origin of, XXIII, 1209
Bayport formation, XXII, 396, 408; XXIV, 1968, XXVIII, 190
Bays, G., XXIV, 1466
Bazette area, GAS, 676
Bazette fault structure, XXVII, 782
Bazette gas field, XXVII, 782
Bazzoni, C. B., XXVIII, 119
Beach, F. K., GAS, 1114
Beach, H. H., XXIX, 1163
Beach, J. O., XVII, 1406; XX, 302; XXI, 1513
Beach Mountain, XXIV, 153
Beach plain, RMS, 208
Beach profiles of glacial Lakes Algonquin and Nipissing showing post-glacial uplift, XXIX, 1642
Beach sand, comparison of, with dune sand, XXIX, 215
Beaches, RMS, 36, 37, 167, 207, 238, 271, 272
concentrates of minerals on, RMS, 609
drifting along, RMS, 213
dunes, and sandstones, some, size distribution of sand in, XXIX, 215
effect on rounding, RMS, 41
effect on sorting, RMS, 36
gravels on, RMS, 40
on deltas, RMS, 165, 171
pebbles of, roundness of, RMS, 589
periodic changes of, RMS, 275
references on, RMS, 216
ridges on, RMS, 208
sands of, RMS, 38, 185, 207, 577, 609
sands of, size distribution of, RMS, 169, 185
sands of, slope of, RMS, 208
sands of, sorting of, RMS, 215
Beacon area in Santa Maria oil field, XXIII, 75
Bead Mountain limestone, XXIV, 42
Beaker brush, self-flushing, XXIII, 1244
Beal, Carl Hugh, III, 392; IV, 10, 135, 192, 215; V, 178; VI, 43, 79, 81, 320; VII, 609; VIII, 232; IX, 447; X, 747; XVI, 940
essential factors in valuation of oil properties, III, 367
Beal, Carl Hugh, and Jordan, D. S., XXVIII, 1000
Beal, Carl H., and Lewis, J. O., III, 421, 430, 435; XII, 360
Beal, Isaac N., XIII, 75
Beall, I. W., XV, 616
Beaman, W. M., XXV, 2163
Bean, Ward C., Coleman pool discovery, Archer County, Texas, XXV, 428
Bean pool, XXVI, 1022
Bear Branch member, XXV, 670
Bear Creek, MSC, 53, 65, 111, 188, 190, 204, 205, 208, 216, 222, 258, 260, 276, 291, 306, 316, 342, 346, 355
type San Lorenzo faunules from, MSC, Fig. 14 (in pocket)
Bear field, XXVIII, 856
Bear River, MSC, 119, 196, 211, 223, 230, 232, 240, 243, 251, 258, 260, 264, 266, 273, 288, 299, 301, 328, 330, 335
faunules from, MSC, Fig. 14 (in pocket)
Bear River shale, V, 196
Beardon field, PROB, 777
Beardsley, Wayne, XIV, 1505
Bearing of foraminifera and ostracoda on Lower Cretaceous Fredericksburg-Washita boundary of north Texas, XXVII, 1060
Bearpaw formation, GAS, 27
Milk River Ridge region, Alberta, ALTA, 94, 95; XV, 1222, 1223
Bearpaw Mountains, XXVII, 427
Bearpaw Mountains zone of shallow thrust-faulting, GAS, 264; XXVII, 433
Bearpaw shale, Alberta and Montana, ALTA, 9; IV, 250; V, 258, 268; VI, 146; XV, 1137; XXII, 1634
Lethbridge area, Alberta, ALTA, 101-111; XV, 1229-1230
sections of, from Keho Lake to Basano, southern Alberta, ALTA, 115; XV, 1243
Spring Coulee region, Alberta, ALTA, 140; XV, 1268
Bearpaw shale and contiguous formations in Lethbridge area, Alberta, ALTA, 99; XV, 1227
Bears Den, GAS, 250
Bears Den field, Montana, XXVII, 464; XXIX, 1275, 1281
Bears Den fold, PROB, 713
Bears Den nose, PROB, 703
Beartooth-Bighorn region, Montana and Wyoming, structural research work in, XVII, 680
tectonic map of, XX, 1162
Beartooth range, STR II, 580
Beartooth thrust fault, PROB, 700, 702, 723
Beartooth uplift, XXVII, 427
Beartrap Canyon, XXIII, 550
Beatty & House, SD, 611
Beaufort scale, RMS, 121
Bauman, E. A., VI, 12
Beaumont and Lissie formations of Gulf Coast of Texas, deposition of, XXIV, 693
Beaumont anticline, PROB, 298, 300, 599; GAS, 488
Beaumont clay, GC, 422; III, 313; V, 221; XVII, 652; XXII, 1198
Amelia field, XXIII, 1641
Beaumont clay and Lissie formation in south Texas, discussion, XVIII, 948
Beaumont clay area, deltaic character of, XIV, 1303
Beaumont clays, Hitchcock field, STRAT, 643
Spindletop dome, XXI, 478
Beaumont delta deposit, XXIX, 1312
Beaumont deltaic plain, GC, 210, 243, XVII, 915, 952
Beaumont field, PROB, 298
Beaumont formation in Gulf Coastal Plain, GC, 433, 449, 452, XIV, 1301; XIX, 652, 671; XXI, 480, 497; XXIII, 190
West Columbia field, Texas, STR II, 454
Beaumont-Lissie contact, XXIII, 191
Beaumont-Lissie sands, water-bearing zones of, GC, 282
Beaumont sediments, early distribution of, by Colorado and Brazos rivers, Coastal Plain of Texas, XXIV, 698
Beaumont surface structure in coastal Texas and Louisiana, GC, 465; XIX, 684
Beaumont terrace, GC, 211, 216; XVII, 913, 919; XXVIII, 200
Beaumont terrace deposit, XXIX, 1708
Beauregard Parish, Louisiana, Neale field, XXIV, 2036
Beautiful Mountain dome, PROB, 409, 410
Beautiful Mountain structure, XIII, 138
Beauvais sandstone, XXV, 683
Beaver Bend formation in Tri-County field, Indiana, STR I, 26
Beaver County, Pennsylvania (well 418), SBP, 349-379, 410
Beaver Creek anticline, Fremont County, Wyoming, XXII, 691; XXIII, 917
structural contour map of, XXIII, 916
Beaver Creek dome, PROB, 946; XXIII, 917
Beaver Dam Mountains, XXIII, 123
Beaver Dam Mountains fault block in St. George district, Utah, XXIII, 127
Beaver Dam Wash fault block in St. George district, Utah, XXIII, 127
Beaver River formation in Scenery Hill gas field, Pennsylvania, STR II, 444
Beaver sand, Kentucky, PROB, 519; IV, 306; VI, 28
Beaverburk limestone, VI, 88
Beaverton field, Gladwin County, Michigan, XXII, 407
Beaverton pool in Gladwin County, Michigan, XXII, 663
Bebula transgression in East Indies, XXI, 557
Beccari, J., XXV, 1212
Beccarius, XXV, 1209
Beche, H. T. De la, MEX, 166
Beck, X, 398
Beck, Al, XXI, 560
Beck, Alfred, GAS, 305; PROB, 408; XXV, bet. 2166 and 2167; XXIX, 529, 1093, 1129, 1130
review, XIII, 1573
Salt Creek oil field, Natrona County, Wyoming, STR II, 589
Beck, Kurt, XXI, 1274
Beck, L. C., XI, 405
Beck, R. Stanley, MSC, 233; XXVII, 1364, 1372, XXIX, 956
Beck, Richard, XXI, 139

- Beck, W. M., and Hendrickson, B. H., XVII, 932
- Becke, F., RMS, 498
- Becke method, RMS, 604
- Beckelhymer, R. L., XXV, 104
- new development in Orange field, Orange County, Texas, XXIII, 602
- Becker, IX, 856; XII, 971; XIV, 55
- Becker, Clyde M., PROB, 776; VIII, 323, 329; XIII, 955; XIV, 624; XV, 406, 994, 1008, 1009, XXI, 1534, 1535, 1538, 1544, 1545, 1563, 1564; XXII, 931; XXIII, 562
- memorial of, XXII, 1621
- memorial of George Whitney Adams, XIV, 1373
- structure and stratigraphy of southwestern Oklahoma, XIV, 37
- Becker, George F., CAL, v, 98, 100, 104, 112; PROB, 1013; SD, 18; SC, vii; XII, 1023; XIII, 1453, XX, 1533; XXIV, 1728; XXVII, 114, 203, 254
- Becker, George F., and Day, A. L., IX, 848
- Becker, George F., and Whitney, J. D., XXVII, 122
- Becking, L. B., XV, 442
- Becking, L. B., and Tolman, C. F., PROB, 450
- Beckley, V. A., PROB, 43
- Beckman, J. W., PROB, 267, 920, XIV, 146; XIX, 162; XXVII, 1183
- Beckman, M. W., and Turner, F. E., stratigraphy and age of Seguin formation of central Texas, XXVII, 608
- Beckman, Philip E., GAS, 1047
- Beckner, Lucien, XXII, 267
- Beckstrom, R. C., review, XII, 223; XIII, 861
- Beckstrom, R. C. and Van Tuyl, F. M., PROB, 257, 258, 462, 679; XIII, 559
- compaction as a cause of migration of petroleum, XII, 1049
- effect of flooding oil sands with alkaline solutions, XI, 223
- effect of pressure on migration and accumulation of petroleum, X, 917
- Beckwith, H. T., PROB, 763, 773
- Beckwith, R. H., XVIII, 1659; XXI, 716; XXV, 884, 1730; XXVIII, 1198, 1205, 1212
- trace-slip faults, XXV, 2181
- Beckwith formation, V, 195, 206; XXI, 720
- Bed, XXIII, 1074
- Bed load, RMS, 25, 26, 35, 36
- collective motion of, RMS, 15
- means of determination of, RMS, 26, 27
- Bedding, cause of, in tidal flat deposits, RMS, 197
- influence of burrowing animals on, RMS, 203
- undisturbed by animals in fiords, RMS, 357
- Bedding normals, problem of two tilts solved by, XXII, 1265
- Bedding-plane shears, XXVII, 1255
- Bedding planes, effect on solubility of dolomitic limestones, XX, 1398
- Bedding surfaces, form of, XXVI, 1726
- Beder, R., XIX, 1742, 1746, 1749
- Beder, R., and Windhausen, A., XX, 1232
- Bedford coal, XXV, 42; XXVI, 1590
- Bedford formation, XXII, 397; XXVIII, 185
- Bedford pool, XXV, 1109
- Bedford shale in Buckeye field, XXIV, 1966
- Bee Canyon fault, XXI, 226
- Beech Creek limestone, Francisco pool, Indiana, STR II, 139
- Tri-County field, Indiana, STR I, 26
- Beech Hill field, New York, XXIX, 668
- Beech Hill - Independence - Andover areas, XXVII, 837
- Beech River member in Missouri, Illinois, and Arkansas, facies of, XXVI, 13
- Beecher, XXI, 311
- Beecher, C. E., and Parkhurst, I. P., XII, 174; XV, 913
- Beecher City field, Illinois, XXII, 653
- Beechwood member, XXV, 687, 688
- Beede, Joshua William, PTNM, 577, 607, 608, 689, 708, 709; I, 26, 32, 103; II, 54, 71, 76, 77, 82; V, 163, 176, 546, 548, 566; VIII, 287, 317, 319, 323, 328, 332, 339; IX, 631, 1215; X, 148, 150, 151; XII, 928, 1113; XIII, 577, 594, 653, 884, 903, 905, 913, 918, 950, 958, 959, 960, 961, 963, 972, 973, 980, 987; XIV, 973, 977; XV, 1089; XVI, 484; XXI, 472, 836, 1551; XXII, 915, 918; XXIII, 573, 574, 1798, 1802, 1806; XXIV, 165, 249, 274, 301, 303; XXVI, 577, 607, 608, 689, 708, 709; XXIX, 1775
- memorial of, XXIV, 1855
- notes on structures and oil showings in redbeds of Coke County, Texas, III, 117
- Beede, Joshua William, and Bentley, W. P., XVI, 194, 200; XXV, 84
- Beede, Joshua William, and Christner, D. D., XVI, 200
- Beede, Joshua William, and Dunbar, C. O., XXIV, 298
- Beede, Joshua William, and Haworth, Erasmus, XXIII, 1232
- Beede, Joshua William, and Kniker, H. T., XXIV, 289, 293, 297, 302, 321
- Beede, Joshua William and Rogers, XIII, 471, 885
- Beehive dome in St. George district, Utah, XXIII, 144
- Beek, W. G., and Moore, G. H., XX, 883
- Beeker, R. E., XXIX, 7
- Beekite in Tertiary oil-bearing formations of southern Ecuador, XVII, 1388
- Beekite rings, XXVI, 56
- Beekly, A. L., PROB, 773
- Virgil pool, Greenwood County, Kansas, STR II, 142
- Beekman field, XXVIII, 276
- production at, XXVIII, 277
- Beekmantown formation in Turkey Mountain lime pools, Oklahoma, STR I, 212
- Beekmantown limestone, CAL, 62
- Beer Mug anticline, XXV, 890
- Beers, Roland F., XXIV, 1463; XXV, 1181; XXVIII, 946; XXIX, 1481, 1490
- radioactivity and organic content of some Paleozoic shales, XXIX, 1
- Beeth, C. D., XVII, 110
- Beeth, Donald, XXII, 287
- Beggs, George, XX, 1163
- Beggs field, III, 273; IV, 279; V, 291
- Beggs pool, PROB, 411
- Behavior of fluids in oil reservoirs, (Behavior)
- XXII, 1237
- Behm, map of western Pangaea, CD, 115
- Behre, Charles H., Jr., PROB, 837; XVII, 353; XVIII, 535, 536, XIX, 1000
- Behre, Charles H., Jr., and Summerbell, R. K., PROB, 837
- Behrend, Fritz, XXVII, 152
- Die Rolle der Humussubstanzen bei der Verwitterung*, review, XVI, 219
- Behrens, T. H., RMS, 298, 317, 319
- Beidell, Colorado, RMS, 471
- Beidellite, RMS, 456, 467, 470, 471, 485
- Beiser, W. S., XXIX, 919
- Beiswenger, G. A., XXV, 1172
- Bejucal limestone, Cuba, II, 142
- Beke, Charles, XXII, 1220
- Beland field, XIX, 520
- Belaya fault zone in Urals, XXI, 1445, 1458
- Belchic, George, XXII, 1486
- Belchic, George, and Breitung, C. A., XXII, 1474
- gas production from Spring Hill-Sarepta gas field, Webster and Bossier parishes, Louisiana, VII, 555
- Belden shale member, XXVI, 1383
- coal beds in, XXVI, 1395
- marine invertebrate fauna in, XXVI, 1387
- type section, XXVI, 1385
- Belemnites zone, XXI, 740
- Belgian Congo, V, 661, 666
- fauna of, XV, 157
- geological notes on, V, 661
- Belgium, PROB, 998; RMS, 211, 322, 345; V, 27
- Mons region in, natural pipes of, XVIII, 1501
- Belgium and Belgian Congo, oil possibilities of, XVIII, 1160
- Beljaev, G., Rauser-Cernoussova, D., and Reitlinger, E., Carboniferous foraminifera of the Samara Bend, review, XXV, 1943
- Belknap, RMS, 647
- Belknap's sounding cylinder, RMS, 647
- Bell, XV, 606; XVIII, 1507
- Bell, A. F. L., VII, 231
- Bell, Alred H., PROB, 431; XI, 425; XXII, 1235; XXIII, 1353; XXIV, 769
- developments in Eastern Interior basin, in 1939 and first quarter of 1940, XXIV, 959
- in 1940, XXV, 1114
- in 1941, XXVI, 1086
- in 1942, XXVII, 814
- in 1943, XXVIII, 751
- in 1944, XXIX, 685
- natural gas in Eastern Interior Coal Basin, GAS, 813
- origin of oil and gas reservoirs of Eastern Interior Coal Basin in relation to accumulation of oil and gas, PROB, 557
- structure of Centralia and Sandoval oil fields, Illinois, STR II, 120
- Bell, Alfred H., and Cohee, George V., recent petroleum development in Illinois, XXII, 649
- recent development in Illinois with discussion of producing formations below McClosky sand, XXIII, 807
- Bell, Alfred H., and Moulton, Gail F., three typical oil fields of Illinois

(Bell)

- region, STR II, 115
 Bell, Alfred H., and Webb, E. W., GAS, 188
 Bell, Alfred H., and Weller, J. Marvin, Illinois basin, XXI, 771
 Bell, Alfred H., Ball, C. G., and McCabe, L. C., XXXIII, 1522
 Bell, Donald, XXIV, 2070
 Bell, Douglas E., and Brill, V. A., active faulting in Lavaca County, Texas, XXII, 104
 Bell, F. E., XVIII, 788
 Bell, G. L., XXVII, 156
 Bell, H. S., XXI, 1470
 Bell, H. W., VII, 351
 discovery of rock salt deposit in deep well in Union County, Arkansas, review, XVII, 1282
 subsurface conditions in the heavy oil-producing area of Smackover, Arkansas, VII, 672
 Bell, H. W., and Cattell, R. A., VI, 191; VII, 352, 569
 Monroe gas field, Louisiana, review, VI, 155
 Bell, H. W., and Grimm, M. W., some tests on cement and cement accelerators, XII, 279
 Bell, H. W., and Kerr, J. B., petroleum engineering in the Burkhurnett field, Texas, review, VI, 260
 Bell, J. Mackintosh, X, 1228
 Bell, John, MEX, ix
 Bell, K. G., Goodman, C., and Whitehead, W. L., XXVIII, 924, 946; XXIX, 19
 radioactivity of sedimentary rocks and associated petroleum, XXIV, 1529
 Bell, Kenneth, GAS, 836
 Bell, Olin G., XVI, 259; XVII, 1293, XXII, 1185
 Friendswood field, Harris County, Texas, XXII, 1602
 review, XI, 893
 Bell, Robert, XXII, 1134, 1145, 1146, 1150
 theory of origin of McMurray oil, XXII, 1146
 Bell, W. A., XIX, 1269, 1304
 Bell Canyon formation, PTNM, 581; XXV, 92; XXVI, 581
 relation of, to Capitan limestone, PTNM, 589; XXVI, 589
 Bell County, Texas (well 395), SBP, 292-335, 410
 Bell Ridge field, V, 459
 Bell sandstone, XXII, 683; XXV, 1860
 cores from, XXV, 1842
 Bell shale, XXVII, 578; XXVIII, 182
 available as source of most of Michigan's major production, XXIV, 1977
 Bell-shaped curve, RMS, 584
 Bell Springs area, Wyoming (well 227), SBP, 194-243, 407
 Bell Springs dome, Wyoming, STR II, 665; XXIX, 1598
 Bell zone, PROB, 226
 Santa Fe Springs, percentage of oil in core logs from wells in, XXI, 1483
 Santa Fe Springs field, GAS, 201
 Bell zone oil, colorimetric method of testing, XXI, 1481
 Bellair-Champaign uplift, XXVIII, 302
 Belle City dolomite, XXIII, 223
 Belle City limestone, Dora pool, STRAT, 412
 in Stonewall Quadrangle of Okla-

(Belle)

- homa, XX, 1458
 Belle Fourche shale, O-age field, STRAT, 851
 Belle Isle, PROB, 418
 Belle Isle field, Louisiana, XXIX, 797
 Belle Isle salt dome, St. Mary Parish, Louisiana, SD, 383-385, 389-391; GC, 152, 1033; IX, 783, XXVII, 1503
 map, GC, 1034; XIX, 645
 salt overhang at, GC, 153; XXVII, 1504
 section, GC, 1036; XIX, 647
 Belle Isle torsion-balance survey, St. Mary Parish, Louisiana, XV, 1335
 Belle Plains formation, PTNM, 682; XXVI, 682
 Belle Plains group, XXIV, 42
 Bellemine, George J., petrology of Whittier conglomerates, southern California, XXIV, 649
 Bellerophon fauna of San Andres limestone, XXI, 850
 Bellevue and North Lisbon fields of northern Louisiana, correlation of Upper Jurassic formations in, XXVII, 1428
 Bellevue dome a deeply buried salt plug, XXII, 1663, 1677
 Bellevue field, California, XXIX, 650
 Bellevue field, Bossier Parish, Louisiana, XXVIII, 554
 cross section of, XXII, 1676
 faults at, XXII, 1678
 geologic formations, XXII, 1664
 logs of wells in, XXII, 1670, 1671
 Lower Cretaceous in, STR II, 237, 238
 Nacatoch sand chief source of production at, XXII, 1660
 production at, XXII, 1680
 section of Lower Cretaceous in, STR II, 237, 238
 Bellevue oil field, Bossier Parish, Louisiana, STR II, 229; VI, 184, 247, 250, 365; VII, 645
 geology of, XXII, 1658
 map of, contours on top of Nacatoch sand, XXII, 1672
 structure map of, contours on top of oolite zone, XXII, 1674
 Bellevue pool, PROB, 340, 341
 Bellevue uplift, Bossier Parish, Louisiana, map of, contours on base of Annona chalk, XXII, 1675
 Bellingham area, GAS, 223, 231
 Bellugi, A., oil possibilities in Italian East Africa, XXI, 293
 Bellugi, A., and Anelli, M., search for oil in Parma district, western Italy, XVI, 1152
 Belly River group, Alberta, ALTA, 141; GAS, 1060; XV, 1269; XXIX, 1623
 Belly River sandstone, IV, 250
 Belly River series in Alberta, ALTA, 8; XV, 1136
 Belmont pool, VI, 468
 Belowesa beds, Europe, VI, 526
 Belridge and Kettleman Hills, Reef Ridge shale faunules from, MSC, Fig. 14 (in pocket)
 Belridge diatomite, XXIII, 25
 Belridge Oil Company, GAS, 138
 Belridge oil field, MSC, 195, 229, 237, 249, 250, 318; PROB, 197, 746, 797
 Belridge 64 zone of North Belridge field, California, XXII, 712
 Belt, Ben C., MEX, ix, 31, 36, 47, 77,

(Belt)

- 78, 84, 110, 117, 131, 132; PROB, 240, 377; SC, 771, 772; II, 136, 149, 157; XI, 1111; XXVII, 924, XXVIII, 1079
 Chapéño salt dome, Tamaulipas, Mexico, SD, 772; IX, 134
 stratigraphy of Tampico district, Mexico, IX, 136
 Belt, Ben C., and Weaver, Paul, PROB, 396, 397
 memorial of Lovic Pierce Garrett, XXVIII, 1064
 Belt Creek section of Ellis group, XXIX, 1298
 Belt Creek trough, XXIX, 1287
 Belt series of Rocky Mountains near International Boundary, oil seepages in, XVI, 786
 pre-Cambrian, XXVII, 427
 Belton anticline, XXIX, 187, 188, 195, 197
 Belts area, in Baltic, RMS, 299
 Beltz, E. W., principal sedimentary basins in East Indies, XXVIII, 1440
 Belvidere formation, Hugoton field, STRAT, 84
 Bemis and Shotts pools in Ellis County, Kansas, XXII, 674; XXIV, 999
 Bemis pool, Ellis County, Kansas, XXI, 1002; XXIII, 806
 Bemis south pool, Kansas, XXIII, 803
 Benmann, W., XXIV, 1890
 Ben Bolt field, Jim Wells County, Texas, XXIII, 1237
 Ben Lomond, MSC, 53
 Benade, W., RMS, 199, 204
 Benard, M., XVI, 1113
 Bend age, occurrence of strata in, in Sierra Diablo, Culberson County, Texas, XVI, 484
 Bend Arch, PROB, 341, 342, 577, 627; III, 37, 44-71, 152, 185; IV, 288; VI, 493; XX, 527; XXI, 1017, 1084, 1085; XXIII, 845; XXIV, 109, 1045; XXV, 1064; XXVI, 204, 1040; XXVII, 771; XXVIII, 835
 anticlinal oil accumulation on, STR II, 682
 in Archer County fields, Texas, STR I, 429
 in Stephens County, Texas, STR II, 472, 477
 seismograph surveys on west flank of, through Knox, Baylor, Haskell, and Throckmorton counties, XXIV, 1048
 structure of, XI, 679
 subsurface structure, STR II, 473; GAS, 610, 614, 626, 630, 647, 662
 Bend Arch district, Texas, log sections, GAS, 619, 620
 natural gas in, GAS, 609, 642
 Bend Arch gases, GAS, 644, 645
 Bend Arch province, XIII, 427
 Bend arch region of north-central Texas, three layers of geology, XXVII, 910
 Bend Arch regional structure, GAS, 628
 Bend arkose conglomerates, XXVI, 1048
 Bend coal in Hagaman well, carbon ratio of, GAS, 624
 Bend conglomerate, XXV, 1073
 Bend conglomerate pay, XXIX, 762
 Bend division, eastern San Saba County, cross section extending 110 miles from type area of, to western Callahan County, XXIX, 158

- Bend flexure, GAS, 626; STRAT, 550, 671, 673; XIII, 558; XVI, 185; XXIV, 114
- Ouachita-Marathon overthrust, and Concho, Muenster, and Electra arches in north-central Texas, structural map on top of San Saba formation showing, XXIV, 107
- subsurface mapping along, XXVI, 211
- Bend formation, III, 34, 47, 70, 81, 92, 130, 134, 139, 147, 151, 163, 173, 176, 217, 237, 290, 296, 334; IV, 83, 161; V, 38, 99, 376, 504, 545, 556, 571; VI, 12, 150, 335, 493; XXI, 1019; XXV, 1075; XXVII, 776
- age, III, 418
- Big Lake field, Texas, STR II, 511
- fauna of, III, 225, 231
- Stephens County, Texas, STR II, 472, 476
- water problems, III, 151
- Bend formation and its correlation, III, 71
- discussion, III, 78
- Bend group, Texas, GAS, 617, 623-625; X, 461; XXIV, 83; XXVI, 210
- Bend high, XXIII, 851
- Bend limestone, XXV, 1077; XXVI, 1047; XXVIII, 837
- Hamilton County, Texas, production from, XXI, 1022
- production in, XXIV, 1049
- productive in Menkins pool, XXIV, 1049
- source of oil in, PROB, 59
- Bend pay zones, XXVIII, 835
- Bend section, XXV, 1072
- Bend series, XXV, 1069
- age of, III, 418
- general discussion of water problems of, III, 151
- Hull-Silk field, STRAT, 671
- of central Texas, III, 217
- of central Texas, discussion, III, 237
- of North-Central Texas, lithologic subsurface correlation in, abstract, V, 99
- of North-Central Texas, Petrolia field, Texas, STR II, 547
- of North-Central Texas, Stephens County, Texas, STR II, 471
- productive in west-central Texas, XXIII, 849
- Seymour pool, STRAT, 763
- Bend structure trends, XXIII, 848
- Benderoff, V. C., XVIII, 860
- Bendian, Carboniferous stratigraphy of the Ouachitas with special study of the, XVIII, 1018
- correlation chart, XXII, 854
- of the Oklahoma salient of Ouachita Mountains, stratigraphy of, XXII, 852
- Bendian section in Ouachita Mountains, XXII, 855
- Bendian series, breaks above and below, XXIX, 1154
- Bendian siliceous shales as criteria for subdivision of, XXII, 912
- Bendian subdivisions, XXII, 853
- Benecke, W., XX, 261
- Benedict and Trees, XXI, 1072; XXII, 658
- (well 428), SBP, 349-379, 410
- Bengal, oil and gas in, XVIII, 311
- Bengalia, boulders of, review, XVII, 1538
- Bengerow, W., XXIV, 1890
- Bennett and Francis, XXI, 1469
- Bennett, Jones, McClanahan, SD, 611
- Bennett, A., Survey, Texas (well 379), SBP, 292-335, 409
- Bennett, Clyde M., memorial of, XIX, 1715
- Bennett, Holly Reed, and Stephenson, Eugene Austin, decline and production of Ranger field, IV, 221
- Bennett, J., II, 71
- Bennett, J. W., XXV, 30
- Bennett, Robert R., XXIX, 900
- Bennett field, XXIII, 841
- type section of Yoakum dolomite in, XXIV, 25
- Bennett pool, Yoakum County, Texas, XXIV, 1036
- Bennington formation, II, 80
- Bennison, Allen, XXVII, 299; XXIX, 958, 979
- Bennview and Toney sands, electric log, XXVIII, 205
- Bennview sands, XXVIII, 203, 204
- Benoist sand, XXII, 653; XXIII, 1366, 1499; XXIV, 217; XXV, 879
- Centralia-Sandoval area, Illinois, STR II, 122, 127-129
- Illinois, XXIII, 807
- Illinois basin, oil found in, XXI, 785
- porosity of, XXIII, 1368
- productive in Salem field, XXIII, 811, 1353, 1368
- Benson, Allan L., story of geology, review, XII, 955
- Benson, Don G., XXIII, 1053
- Benson, W. H., and Keble, R. A., et al., XXV, 653
- Benson sand, II, 131
- Appalachian basin, PROB, 490, 492
- Benthe dome, Germany, SD, 192, 194, 196, 200, 202; IX, 1252, 1254, 1260, 1262
- Benthonic and nekto-benthonic organisms in Blaine and Dog Creek, distribution of, example of adaptation to environment, XXVIII, 1028
- Benthonic creatures, sessile, realm of, XXVI, 1760
- Benthonic faunas, RMS, 369
- Benthonic foraminifera, RMS, 257, 259, 260
- Benthonic organisms, PROB, 361; RMS, 202; XXIV, 1167; XXV, 833
- Benthonic realm, vagrant, XXVI, 1760
- Benthonic soup, XXII, 1139
- Benthos, XXI, 1109
- Bentley, W. P., III, 122
- Bentley, W. P., and Beede, J. W., XVI, 194, 200; XXV, 84
- Benton, L. B., recent discovery in Archer County, Texas, V, 418
- Benton, R. H., VII, 625
- Benton, late, or Frontier time, paleogeography of, in Rocky Mountain region, XXI, 1265
- Benton field, Louisiana, XXIX, 806
- Benton formation, II, 81; III, 357, 359; IV, 97, 250; V, 10; VI, 72, 551; XXVI, 351
- correlations, MEX, 28, 31, 39, 44, 45, 48, 56, 58, 61
- fossils in, XXVI, 352
- Greasewood field, STRAT, 26
- northeastern Colorado, XVII, 415
- Benton group, XXVI, 1523, 1534
- in Dakota basin, XXVI, 1561
- in Nebraska, isopach map, XXVI, 1526
- Benton paleogeography of eastern Colorado, XIII, 850
- Benton pool, PROB, 772; XXV, 1073; XXVI, 1089
- Benton shale, XXI, 993, 1262; XXIX, 1615
- Benton shale in Moffat dome, Colorado, STR II, 103
- (KM) (Cretaceous) SBP, 198, 414
- Benton unit, XXII, 1633
- Bentonite, MEX, 39, 45; RMS, 456, 461, 480, 483, 487, 489; V, 383, 651; XXI, 28
- effect on plasticity of clays, RMS, 481
- effect on strength of clays, RMS, 483
- greenish, in Chalk Bluff formation, XXI, 856
- in Kansas, XII, 1017
- in Santa Ynez Mountains and in Ventura Basin, SC, 92; XX, 1638
- in Upper Cretaceous of Louisiana, VIII, 342
- in Upper San Felipe, MEX, 67
- in Ventura, MSC, 115
- sodium, RMS, 479
- swelling of, XXI, 1489
- Bentonite bed, MSC, 162, 310, 344
- in Ventura, MSC, 115
- in Cacalilao, MEX, 76
- in Tancasque, MEX, 76
- Bentonite beds in Cook Mountain formation, XXIV, 1668
- thin, use of, in mapping structure, Rosencranz area, Kansas and Colorado, XIV, 1065
- Bentonite deposits in Mowry shale in Como Bluff anticline, XXVIII, 1214
- Bentonite key bed, at Kettleman Hills, XVIII, 1569
- Bentonite streaks in Smoky Hill chalk, XIII, 598
- Bentonite zone, Hardin field, STRAT, 567
- Bentonite zones in Byram formation, XXVIII, 1341
- Bentonitic beds, MSC, 102
- of Lloydminster shale, XXIX, 1617
- Bentonitic clay, RMS, 463; XXV, 2171
- effect of sea water on, XXVI, 847
- Bentonitic clay phase of Jackson group, GC, 525; XVII, 1348
- Bentonitic clays, GC, 534, 549; XVII, 532, 547
- Bentonitic formations, expansion of, XVII, 1106
- Bentonitic shales, PROB, 354; XIX, 388, 389, 395; XXV, 79
- Buckeye field, GC, 744, 745, 751; XIX, 388, 389, 395
- Bentz, A., *Geologische Studienreise in Nordamerikanischen Erdölfeldern*, review, XIX, 125
- Bentz, Ivan Vincent, memorial of, XXII, 1127
- Benzene, PROB, 35, 39
- Benzene in oils of Forest sands, XXVII, 1612
- Benzene oil, graph, XXVII, 1605
- in Bernstein field, XXVII, 1602
- in lenticular member of Forest sands, XXVII, 1616
- Benzenes, naphthenes, and paraffines, in light distillates, XV, 620
- Benzoic acid, SBP, 58
- Benzol, GAS, 1118
- Berea-Coldwater break, PROB, 550
- Berea formation, GAS, 904, 936, 1056; PROB, 103; XXII, 397, 404; XXVIII, 185
- Ohio pools, STRAT, 383
- Berea lenticular sand productive in

- (Berea)
West Virginia, XXV, 814
Berea oil and gas pools, West Virginia, map, STR I, 463
Berea pool, Ohio, XI, 954
Berea pools in synclines in eastern Ohio oil fields, STR I, 136
Berea sand, PROB, 460, 490, 492, 494, 495, 500, 501, 506, 845; STRAT, 821; IV, 28, 30, 307; V, 358
Cabin Creek field, West Virginia, STR I, 468, opp. 470; XI, 711
(Cpc), SBP, 351, 353, 357-379
eastern coal field, Kentucky, STR I, 89
eastern Kentucky, XI, 491
map of, in eastern Ohio, STR I, 127
Ohio, STRAT, 821, STR I, 135, 144; XI, 1029
Pennsylvania, PROB, 465, 501
productive in Ohio, XXII, 421
productive of gas in Clayton field, XXIV, 985
Saginaw field, Michigan, STR I, 106, 108; XI, 960
Berea sand belt, XXIX, 1561
Berea sand gas wells, XXVIII, 739
Berea sand trend, West Virginia, example of lenticular reservoirs, XXIX, 1560
Berea sandstone, XXII, 410; XXIV, 1955, 2153; XXVI, 1102; XXVII, 823; XXIX, 17
Big Creek pool, West Virginia, STR II, 572
Buckeye field, XXIV, 1966
Gay - Spencer - Richardson trend, STRAT, 811
Griffithville field, West Virginia, STR II, 571
Michigan, XXV, 729, 731
Michigan, relation of, to Antrim, Bedford, and Sunbury formations, XXV, 731
Mississippian production from, XXII, 418
possible source of oil in Michigan, STR I, 111
Scenery Hill gas field, Pennsylvania, STR II, 446
section from Ames limestone to, in Muskingum County, Ohio, STR I, 133
section from Pomeroy coal to, in Meigs County, Ohio, STR I, 130
Tanner Creek field, West Virginia, STR II, 573
Berea structure compared with surface structure in eastern Ohio, STR I, 130
eastern Ohio, XI, 951
Berek, XXI, 350
Berenda limestone, XXV, 2109
Berg, A. E., XXVII, 1288
Berg, Ernst, RMS, 598
Berg, John, XXVIII, 29, 39
Berg pipette, RMS, 599
Berger, X, 216
Berger, A. R., VI, 321
Berger, W. F., VIII, 446, 450
Berger, Walter Robert, GAS, 488; PROB, 835; V, 123, 287, 548, 559, 561; VII, 113; XVIII, 1316; XXI, 40; XXIV, 196, 197
extent and interpretation of Hog-shooter gas field, III, 212
relation between structure and production in Sallyards field, Kansas, V, 276
Berger, Walter R., and Fash, Ralph H.,
(Berger)¹
relation of water analyses to structure and porosity in West Texas Permian basin, PROB, 869
Bergeron sand, XXVII, 1145
Bergey, D. H., XXVII, 1180
Bergius, XV, 458; XX, 294
Bering portal, CAL, 301, 302
Bering Sea, RMS, 53
shallowness since early Cambrian not consistent with continental drift theory, CD, 111
Bering Stra't, RMS, 117
Berlinger, Carl Christoph, *Geologisches Wörterbuch*, review, XXI, 1498
paleobiology, review, XXIII, 1105
Berlinger, Johann, XXV, 1212
Berrino member of Magdalena formation, XXIV, 168
Berkeley, California, RMS, 454
Berkeley group, CAL, 243
Berkeley Hills, California, CAL, 11, 251; MSC, 65, 227
outcrop section E, SBP, 167-194, 410
Berkey, C. P., XVI, 733; XXV, 1226; XXVI, 1797
Berl, E., SBP, 2; XX, 295; XXI, 1182; XXIV, 878
rôle of carbohydrates in formation of oil and bituminous coals, XXIV, 1865
Berlage, H. P., Gutenberg, B., and Sieberg, A., *Handbuch der Geophysik, Band 4, Erdbeben*, review, XIV, 955
Berle, A. A., Jr., XXVI, 1207
Berlin, Germany, RMS, 622
Berman, Harry, and Larsen, Esper S., XXI, 1293
Bermingham, J. A., SC, x; XX, 1536
Bermuda, RMS, 376
Bermudez, Pedro J., and Palmer, Dorothy, MSC, 211
Bernard, W. E., XI, 659
Bernius, Karl, XXVIII, 1160
Bernoulli's theorem, RMS, 81
Bernstein field, Trinidad, structure contour map, XXVII, 1615
asphaltene distribution map, XXVII, 1611
crude oils of Forest sands of, XXVII, 1601
geological conditions, XXVII, 1601
map of S. W. Trinidad showing Fyzabad anticline, outcrop of upper Forest clay, and location of, XXVII, 1600
migrating oil in, XXVII, 1617
producing sands in, XXVII, 1602
stratigraphy of, XXVII, 1601
study of crude oils of Forest sands of, XXVII, 1595
Toluene distribution map, XXVII, 1609
Xylene distribution map, XXVII, 1610
Bernstein strike fault, XXVII, 1601
a barrier to fluid movement, XXVII, 1616
connection of Toluene oils with, XXVII, 1614
Berquist, S. G., Kelly, W. A., and Hussey, R. C., occasional papers on geology of Michigan, review, XXI, 1597
Berriasian, MEX 15, 17; XXVIII, 1088, 1158
of Mexico and Central America, fossils of, XXVIII, 1089
Berriasian and Neocomian, Oaxaca,
(Berriasian,
XXVIII, 1120
Berriasian fauna in Tarasais formation, XXVIII, 1168
Berry, I., 73; X, 155; XI, 241; XV, 532
Berry, Edward Wilber, CAL, 109, 114, 295; CD, 140; GC, 373, 408; MEX, 100; SD, 219, 266, 285; STRAT, 285, 588; IV, 124, 129; V, 7, 163, VI, 113, 125; VII, 380, 612; IX, 1001; X, 58, 233, 399; XI, 1269; XIII, 1343; XIV, 1284, 1436; XVII, 195, 639; XIX, 1152; XXII, 310; XXIII, 184, 1553, 1555, 1557; XXIV, 1132, 1166, 1174, 1176; XXVI, 819; XXVII, 596; XXIX, 57, 65
comments on the Wegener hypothesis, CD, 194
geology of Calluxion, XX, 628
objections to Wegener's hypothesis, CD, 140, discussed by van der Gracht, CD, 205
paleontology, review, XIII, 1401
Berry, L. W., XIV, 263
Berry pool, XXVII, 809; XXVIII, 772
Berryessa Valley, PROB, 184
Bertagnolli, A. J., Jr., XXVII, 434
geology of southern part of La Barge region, Lincoln County, Wyoming, XXV, 1729
Berthiaume, S. A., XXVII, 1411; XXIX, 1417
Berthoud area, Colorado (well 237), SBP, 194-243, 407
Berthoud structure, PROB, 948
Bertrand, XXIII, 1723
Bertrand, C. E., and Renault, B., VI, 339; XIII, 841
Bertrand, L. and Joleaud, L., SD, 140
Bertrand, Leon, XVI, 1124, 1126
Bertrand, P., XXIV, 293
Berwald, W. B., and Johnson, T. W., GAS, 1017, 1018, 1025, 1048, 1052, 1113
Berwyn anticline, VI, 16
Berwyn conglomerate in Oklahoma, IX, 987
Beryllium glass, to reduce absorption in X-ray studies, RMS, 621
Best, J. Boyd, XVIII, 1345
discussion of origin of Bartlesville shoestring sands, XVIII, 1345
Lopez oil field, Webb and Duval counties, Texas, STRAT, 680
some probable relations of structure to production in Kansas, VII, 75
Best pool, XXV, 1076
production from Simpson limestones in, XXIV, 1052
Beta versus alpha activity, calculated, XXIX, 9
Beta emitters, important terrestrial, XXIX, 3
Beta-ray counter for potassium, calibration of, XXIX, 6
Beta rays, RMS, 621
Bethany field, Texas, IV, 132; V, 298, 309, 343; VI, 180, 190, 195; XXIII, 892
Bethe, H., XXVIII, 941
Bethel, position of, in Mississippian-Pennsylvanian sequence of events in Illinois basin, XXVIII, 120
Bethel detritus, rock types furnishing, XXVIII, 108, 112
Bethel dome, Texas, GC, 167; XII, 535; XIII, 613; XVII, 1518
salt overhang at, GC, 169; XVII, 1520

(Bethel)

- section, PROB, 669
 Bethel formation, subsurface contour maps of Salem field on, and on Devonian limestone, XXIV, 967
 Bethel oil fields, XXVIII, 72
 Bethel oil pools, XXVIII, 65
 Bethel oil-well brine analyses, XXVIII 90
 Ethel sand grains, size, XXVIII, 95
 Bethel sandstone, classification of rock types of, XXVIII, 98
 glauconite abundant in, XXVIII, 119
 in Illinois, XXIII, 1499; XXIV, 217, 826, XXV, 879
 in Kentucky, VI, 27
 leucokene dominant mineral in, XXVIII, 114
 mean size of sand-grain distribution in, XXVIII, 96
 mineralogy of, XXVIII, 71
 of south-central Illinois, petrology of, XXVIII, 63
 origin, XXVIII, 107
 relationship of, to formations above and below, XXVIII, 65
 sorting of, with depth, XXVIII, 96
 source of sediments of, XXVIII, 117
 structural map contoured on top of, XXVIII, 72
 unconformity between Renault formation and, XXVIII, 70
 variations in cementation in, XXVIII, 105
 vertical and lateral variations in, XXVIII, 95
 Bethel sandstone cement, XXVIII, 99
 Bethel sandstone cements, age relationships of, XXVIII, 105
 Bethel sandstone production, XXVI, 1606
 Bethel seas, transportation and deposition of sediments to, XXVIII, 119
 Bethel time, paleogeography during, XXVIII, 118
 Betts, Anson G., IX, 852
 Beulah district, northwestern Black Hills, Wyoming, Minnelusa formation of, XV, 183
 Bevan, Arthur, PROB, 697; XXIX, 72, 904
 Cambrian inlier in northern Illinois, XXIII, 1561
 Bevan, R. L., GAS, 60
 Beverly Hills, SC, 115; XX, 1661
 Beverly Hills field, PROB, 750; GAS, 175, 215; VI, 303
 Bevier, George M., SD, 430, 613; XI, 633; XIV, 721, 730; XV, 1307; XVI, 470; XVII, 1513
 Barbers Hill oil field, Chambers County, Texas, SD, 530; IX, 958
 Damon Mound oil field, Texas, SD, 613; IX, 505
 Bevier coal, XXV, 42, 49, 54
 Bewani geosyncline of British New Guinea, oil and gas seeps, XXVIII, 1453
Bewegungsmechanismus der Erde, review, XII, 1029
 Bexar County, Texas, oil field, III, 299
 structural conditions in oil fields of, III, 299
 Bezell, G., XXV, 2059
 Beyenburg, Edmund, compiler, *Internationaler Geologischer und Mineralogischer Kalender*, review, XXI, 273
 Beyer, W. S., PROB, 1012
 Beyerinck, W. M., PROB, 914; SD, 710; IX, 730; X, 1274; XIV, 143

(Beyerinck)

- discovery of sulphate-reducing bacteria, X, 1274
 Beyerly, P., XX, 872
 Beyrich, E. von, MSC, 181; XXIII, 1561
 Oligocene of, MSC, 175
 terminology of, MSC, 181
 Beyschlag, Franz, SD, 154, 163, 207; IX, 429, 1260; XIX, 806
 editor, geologic map of world, review, XIV, 331
 Beyerschlag-Everding, SD, 163
 Biaxial minerals, RMS, 604
 Bibi Bibat field, XXIII, 955
 Bibhofm Service, XXIII, 1568
 Bibliographic history of Cretaceous of California, XXVII, 252
 Bibliographical summary on reservoir behavior, 1931-1939, XXVI, 107
 Bibliographies, manuscript, review, VI, 488
 Bibliography. (See References)
 American salt-dome problems in the light of Roumanian and German salt domes, SD, 206
 annotated, of economic geology (for 1928), review, XIII, 1487
 applied paleontology, XXIV, 1772-1778
 asphalts in Oregon, XI, 405
 Balcones and Mexia fault zones, Texas, X, 1268
 Bamberg balances, X, 1208
 Belle Isle dome, GC, 1039
 Belle Isle torsion-balance survey, XV, 1349
 biotite-glaucconite transformation, RMS, 515
 Canada, natural gas fields of Ontario, GAS, 87
 Carboniferous-Permian boundary, XXIV, 328
 Cincinnati Arch region, GAS, 879
 Como Bluff anticline, Wyoming, XXVIII, 1215
 continental drift hypothesis, CD, 3, 105
 Corniferous at Irvine, Estill County, Kentucky, XXVIII, 539
 Corpus Christi structural basin, GC, 307; XIX, 354
 correlation of stratigraphic units of Gulf Coast, XXV, 743
 Cretaceous stratigraphy of Vermilion area, XXIX, 1628
 developments in Canada in 1944, XXIX, 663
 developments in Oklahoma in 1943, XXVIII, 788
 Devonian subsurface strata in Kentucky, XXV, 710
 diastrophism in Corpus Christi area, GC, 249; XVII, 961
 East Coast district, New Zealand, X, 1258
 Eastern Interior Coal Basin, GAS, 841; PROB, 568
 electrical - logging publications, XXIII, 1312
 Eocene stratigraphy in Santa Ynez Mountains, XXVII, 19
 estimation of natural gas reserves, GAS, 1052
 Five Islands, Louisiana, IX, 795
 fluid mechanics of salt domes, GC, 107
 foothills structures of Canada, XIX, 1470
 foraminifera, VII, 529

(Bibliography)

- foraminiferal correlations in Eocene, XXIV, 1936
 foreign petroleum resources, VII, 593, 698; VIII, 251, 352, 678, 834; IX, 368, 672, 815, 911
 Freezeout Mountain-Bald Mountain area, XXV, 896
 gas in Washington, Idaho, Oregon, and Utah, GAS, 242
 geochemical exploration, XXIV, 880
 geological extrapolation and pseudabyssal sediments, XXVI, 792
 geology of northeast Mexico, XV, 892
 geology of oil and gas fields of western Pennsylvania, XXVIII, 734
 geology of Polish Carpathian Mountains, XV, 39
 geology of Texas Panhandle field, XXIII, 1053
 geology of Wind River Canyon area, XXIII, 1490-1492
 German salt domes, IX, 1267
 heaving shale in Texas Coastal Plain, XXIII, 217
 heavy-mineral studies in New South Wales, XXIV, 648
 historical development of structural theory, PROB, 21
 hydraulic theory of oil migration, VII, 213-224
 interior salt domes of Louisiana, X, 290
 isopachous studies in Michigan, XXIV, 2162
 Jurassic-Cretaceous in Columbia and Venezuela, XXIV, 1619
 magnetic field balances, X, 1199
 mechanical analysis, RMS, 555
 Mexican fields, MEX, 237
 microorganisms and petroleum hydrocarbons, XXVII, 1191
 micropaleontology, XXV, 1251
 micropaleontology, macropaleontology, and stratigraphy of Mexico, XX, 444
 Miocene paleogeography of California, X, 136
 Mississippi River delta sedimentation, RMS, 174
 Mississippian of Eastern Interior basin, XXIV, 855
 Mississippian formations in New Mexico, XXV, 2158
 natural gas in Bend Arch district, Texas, GAS, 648
 natural gas pools of southern Oklahoma, GAS, 603
 Nemaha Mountains region, Kansas, STR I, 72
 of Association publications by Charles T. Lupton, XX, 515
 of Henry Andrew Buehler, XXVIII, 1244
 of Frederick G. Clapp, XXIX, 405
 of Robert Hamilton Cuyler, XXVIII, 1236
 of foreign literature on problem of petroleum generation, XX, 1237
 of Edgar Wayne Galliher, XXIX, 1682
 of geologic structure maps and cross sections of areas in oil and gas states east of Mississippi River, and some producing states in Mid-Continent region, XXII, 431
 of geological papers on geochemical subjects, XXIV, 1432
 of George Martin Hall, XXV, 1830
 of Eugene Law Ickes, XXV, 1963

Bibliography)

- of Fred H. Kay, XXVII, 1563
 of George C. Matson, XXIV, 608
 of Roy J. Metcalf, XXVI, 1179
 of Sidney Powers (1911-1932), XXVII, 340
 of Wallace E. Pratt, XXIX, 487
 of publications of United States Geological Survey, by Charles T. Lupton, XX, 514
 of George L. Richards, Jr., XXVIII, 890
 of W. W. Scott, XXIV, 947
 of George Otis Smith, XXVIII, 685
 oil and gas possibilities in Atlantic Coastal Plain, XXII, 814
 oil-bearing sands in southwestern Pennsylvania, XXIX, 678
 oil-field waters, annotated, XXVI, 865
 Oklahoma oil geology, XXIX, 719
 or references?, discussion, XIX, 561
 organic matter in sediments, PROB, 33
 origin of oil, SBP, 2
 Ouachita boulder problem, XXIX, 208
 paleoecology of Cretaceous ammonoids, XXIV, 1202
 Paleozoic of Franklin Mountains, XXIV, 171
 Permian of Oklahoma, Kansas, and Texas, XXI, 1573
 Permo-Carboniferous orogeny, XV, 1054
 petroleum and allied substances, for 1919-1920, review, VII, 302
 petroleum geology of Colombia, XXIX, 1140
 physical properties of petroleum in California, PROB, 230
 pre-Cretaceous of Edwards Plateau, XXVI, 386
 pre-Cretaceous sediments in Colombia, XXV, 1795
 present status of carbon-ratio theory, PROB, 91
 Red basin of Szechuan province, China, XXVIII, 1439
 Red Sea depression, XXII, 1223
 relation of micro-organisms to generation of petroleum, PROB, 46
 Reynosa problem and origin of caliche, GC, 582
 rôle of structure in accumulation of petroleum, STR II, 711
 Rumanian salt domes and oil fields, SD, 120, 140; IX, 156, 1198, 1266
 salt-dome cap-rock minerals, GC, 131; XVIII, 224
 salt domes of Louisiana, SD, 342, 395, 436, 468
 salt masses in Germany, SD, 163
 Schuler field, Union County, Arkansas, XXVI, 1515
 Seguin formation of central Texas, XXVII, 621
 selected, of articles describing stratigraphic type oil fields, STRAT, 858
 shadowgraphic contour maps, XXV, 2169
 source beds for petroleum, PROB, 64
 south Arkansas stratigraphy, XXII, 982
 south Louisiana deep-seated domes, XXVIII, 1312
 standard of Cretaceous system, XXVII, 277
 stratigraphy of Atlantic Coastal

(Bibliography)

- Plain, XXIX, 953
 stratigraphy of North Dakota, XXVI, 378
 structure of Cretaceous system in Nebraska, XXVI, 1536
 study group reports, XXIII, 1279
 Sulphur dome, IX, 495
 Terpene in Gulf Coast oil and gas fields, Texas, XVI, 407
 thrust faulting in Arbuckle Mountains, XXIX, 207
 torsion balances, X, 1208
 Transylvanian salt domes, IX, 1267
 Travis Peak formation, XXIII, 640
 Tumey sandstone, Fresno County, California, XXVIII, 974
 Upper Cretaceous of southern California, XXVI, 187
 Upper Paleozoic of Western Australia, XXV, 412
 upthrust of salt masses of Germany, IX, 438
 volumetric methods of finding reserves, XXV, 1325
 water-insoluble residues in rock salt, XXI, 1307
 West Indian geology, XXII, 1460
 Bicarbonate, RMS, 147, 150
 in sea water, RMS, 65, 144
 Bicarbonate ions, concentrations of, in sea, RMS, 144
 Bichloride of mercury for preserving sediments, RMS, 528
 Bichowsky, Francis Ruesel, von, SD, 469
 Bicknell formation, CAL, 72
 Biddison, P. McDonald, GAS, 1111
 estimation of natural gas reserves, GAS, 1035
 Biebesheimer, H., XXIV, 1890
 Big Basin, MSC, 53, 185, 187, 188, 191, 197, 205, 209, 213, 216, 223, 240, 242, 259, 292, 316, 328, 332, 346
 Vaqueros faunules from west of, MSC, Fig. 14 (in pocket)
 Big Basin-Boulder Creek road, MSC, 53
 Big Basin formation of Permian red beds in Kansas, XXIII, 1813
 Big Basin-King Creek, MSC, 2
 Big Basin sandstone, XXI, 425
 Big Belt-Bridger Mountain zone, PROB, 700
 Big Belt Mountains uplift, XXVII, 427, 429
 Big Black River syncline, XXVIII, 29, 39
 Big Blue Hills, CAL, 307
 Big Blue member, CAL, 172, SC, 60; XX, 1606
 breccia of Point Sur district similar to, CAL, 173
 correlation table, CAL, 212, 216
 deposit compared to fanglomerate, CAL, 184
 fossil beds below, CAL, 181
 in Coalinga district, SC, 59; XX, 1605
 in Miocene of Eastside field, columnar sections to show the position of, SC, 62; XX, 1608
 Monterey rather than Temblor, CAL, 215
 north of Coalinga, CAL, 172, 173, 178, 184, 220
 of Vaqueros formation, CAL, 172
 origin and age of, SC, 59-61; XX, 1605, 1607
 Big Blue series, XXI, 505; XXIII, 1678, 1755; XXIV, 271, 319

(B.R.)

- Hugoton field, STRAT, 83-90, 92, 93
 in Nebraska, correlation of, review, XVI, 495
 of Permian, gas producing in Hugoton field, XXIV, 1798
 Big Blue serpentine zone at Kettleman Hills, XVIII, 1568
 Big Blue serpentine member of Middle Miocene, SC, 40; XX, 1586
 Big Cottonwood Canyon, XXIII, 83
 Big Cottonwood Canyon, type section of Park City formation, section eastward along line from, to Ashley Creek, Uinta County, Utah, XXIII, 84
 Big Creek district, West Virginia (well 429), SBP, 349-379, 410
 Big Creek dome, Texas, GAS, 709; VI, 253
 Big Creek field, XXIV, 1027
 Big Creek pool, West Virginia, Berea sandstone in, STR II, 572
 Big Dirty coal bed, VI, 144
 Big Dunkard sand in Scenery Hill gas field, Pennsylvania, STR II, 444
 Big Elk-Shawmut laccolithic uplift, XXVII, 427
 Big gas pay at Hobbs field, XVI, 58, 66
 Big gas sands in Petrolia field, Texas, STR II, 546, 549, 553
 Big gas zone, GAS, 430, 431
 Big Hatchet Peak Quadrangle, New Mexico, XXII, 526
 Big Hill salt dome, Jefferson County, Texas, GAS, 709; SD, 497; I, 47; IX, 590, 593, 711
 Matagorda County, Texas, GAS, 708, SD, 691
 Big Hollow structure, XXIII, 908
 Cloverly water in, XXIV, 1263
 Tensleep and Cloverly waters in, XXIV, 1298
 Big Horn Basin, Wyoming, FOP, 50; PROB, 163, 169, 170, 349, 680, 687, 721, 839, 928, 929, 933, 938; STR II, 578, 580; XXII, 683; XXV, 1482, 2026
 analyses of waters in, XXIV, 1320-1322
 character of waters, XXIV, 1237, 1255, 1285, 1291, 1305
 Dakota group waters in, XXIV, 1256
 Embarras waters in, XXIV, 1288
 Frontier waters in, XXIV, 1238
 low gravity of oil, PROB, 160
 Madison waters in, XXIV, 1306
 map, FOP, 51; XXV, 1483
 references on oil prospects in, FOP, 52; XXV, 1484
 structure section, FOP, 51; XXV, 1483
 Sundance formation in, XXI, 735
 Tensleep waters in, XXIV, 1292
 Big Horn Basin geosyncline, GAS, 289
 Big Horn basin structural province, Wyoming and Montana, gas fields of, GAS, 277
 Big Horn basin syncline, GAS, 279
 Big Horn basin-Yellowstone Valley structural field conference, 1937, XXII, 306
 Big Horn-Casper Mountain uplift of Wyoming, an important regional structure, STR II, 703
 Big Horn County, Wyoming, outcrop section a, SBP, 243-255, 411 (well 203), SBP, 194-243, 406
 Big Horn dolomite, PROB, 725
 Big Horn Mountains, PROB, 275;

- (Big)
STR II, 580, 591; XXVI, 1559, 1567; XXVII, 429
- Big Horn-Pryor-Hailstone arch, PROB, 700, 702
- Big Horn River, Wyoming, outcrop section a, SBP, 243-255, 411
- Big Horn uplift, XXVII, 461
- Big Indian Oil Company (well 396), SBP, 292-335, 410
- Big Injun formation, Ohio pools, STRAT, 383; STR I, 143
- Big Injun gas in Appalachian province, composition of, XXII, 1179
- Big Injun gas, iso-Thv and iso-nitrogen lines for, XXII, 1178
- Big Injun group, PROB, 507
- Big Injun sand, PROB, 490, 492, 495, 501, 506, 511, 828; III, 156; IV, 28, 308; XXV, 801, 802; XXVI, 1115
- (Cpc), SBP, 351, 353
- gas in, XXV, 1141
- highly productive in West Virginia, XXII, 1178
- Scenery Hill gas field, Pennsylvania, STR II, 446
- Tanner Creek field, West Virginia, STR II, 573
- widespread producing horizon for both oil and gas in Appalachian province, XXII, 1175, XXV, 803
- Big Injun sand field, PROB, 465; XXVII, 839
- Big Injun sand gas pool, XXVIII, 727
- Big Injun zone, eastern Kentucky, GAS, 935
- Ohio, GAS, 903
- West Virginia, GAS, 995
- Big Lake field, Reagan County, Texas, GAS, 438; PROB, 61, 352, 360, 413, 415, 577, 702, 716, 764, 772, 881; STR II, 500, 516; XXV, 86; XXVI, 1032; XXVII, 435, 754
- Chazy-Sylvan unconformity at, discussion, XIV, 1227
- Ellenburger productive in, XXVI, 1398
- Ordovician age of producing horizon, XIV, 616
- pre-Pennsylvanian stratigraphy of, XIV, 798
- Silurian at, XIV, 618
- structure map of. Datum: top of Ellenburger, XXVI, 1407, 1408
- subsurface geology, X, 365
- variation of temperature, PROB, 993
- vertical variation of properties of sediments in, SBP, 290-292 (well 304), SBP, 285-292, 408
- Big Lake lime in Big Lake field, Texas, STR II, 512, 514
- in Yates pool, XIII, 1515, 1546
- Big Lake Oil Company, GAS, 444 (well 304), SBP, 285-292, 408
- Big Lake Oil Corporation, GAS, 448
- Big Lake oil field, Montana, FOP, 44; XXV, 1476
- Big Lake pay, GAS, 443
- Big Lake pool, Texas, microscopic study of Texon zone, STR II, 524
- tests of oil in, STR II, 538
- Big Lake structure, XXIII, 922
- Big Lime, PROB, 372, 413, 414, 490, 494, 511, 777, 835; XXIII, 987; XXV, 1687
- eastern Ohio oil fields, STR I, 141, 143
- Hendrick field, XIV, 930
- Kentucky, GAS, 929, 930, 931, 934,
- (Big)
943, 945
- Oklahoma, V, 130, 400
- Panhandle district, XI, 725
- Permian basin, XIII, 1057
- Petrolia field, Texas, STR II, 546
- southwestern Clay County, West Virginia, STR II, 575
- West Texas, XI, 725
- West Texas, stratigraphic position of, XI, 721
- West Virginia, IV, 30
- Westbrook field, Texas, STR I, 283, 288
- western Dial pool, Hutchinson County, Texas, columnar section of, XXIII, 1024
- Yates field, Texas, STR II, 488, 491
- Big lime fossils, STR II, 490
- Big lime helium gas at Cliffs field, Potter County, Texas, GAS, 1054
- Big Medicine Bow anticline, Carbon County, Wyoming, discovery of oil at, XIX, 1238
- Big Moses anticline, GAS, 993
- Big Mountain shale, XXIV, 1984
- Big Muddy field, Wyoming, PROB, 730; IV, 37; V, 51, 200; VI, 515 (well 222), SBP, 194-243, 406
- Big Muddy oil field, Wyoming, Frontier water in, XXIV, 1250
- Lakota water in, XXIV, 1267
- Shannon sandstone waters in, XXIV, 1231
- Sundance water in, XXIV, 1282
- tilt of water-oil contact at, PROB, 838
- Big Panoche Creek, CAL, 109
- Big Pine fault, SC, 67, 94, 95, 99; XX, 1613, 1640, 1641, 1645
- Big Pine Mountain, SC, 89, opp. 90, 96; XX, 1635, opp. 1636, 1642
- Big Pine Mountain ridge, SC, opp. 86; XX, opp. 1632
- Big Piney area, XXIII, 929; XXVII, 855
- Big Prairie pool, XXIX, 699
- Big Saline beds, XXVII, 774; XXIX, 160
- Big Saline group, XXIV, 83; XXV, 1663; XXVI, 211
- Big Saline sand, XXVI, 1046
- Big Sand Draw, Wyoming, XXIX, 1598
- geology and unit operation at, XXIII, 1475
- Big Sand Draw anticline, XII, 1137
- Big Sand Draw field, Fremont County, Wyoming, XII, 1137; XXV, 1152 (well 229), SBP, 194-243, 407
- Big Sand Draw gas field, Frontier water in, XXIV, 1241
- Big Sand Draw line of folding, XXIII, 917
- Big Sandy gas field, Kentucky, XXVIII, 741; XXIX, 682, 683
- Big Sespe Creek, CAL, 57, 128, 192; SC, 98; XX, 1644
- Big Shanty syncline at Bradford field, Pennsylvania and New York, STR II, 431
- Big Sinking field, Lee County, Kentucky, STRAT, 166, 168, 194
- accumulation of oil, STRAT, 194
- analyses of oil and water, STRAT, 206-207
- cost of development, STRAT, 204
- Big Six gas sand, FOP, 138; PROB, 509; XXII, 1541; XXV, 815, 1570
- Big Slough oil field, XXVI, 1263
- Big Snowy anticlinorium, XXVII, 427, 429, 434
- Big Snowy group, XXIII, 1139; XXVI, 1564
- correlation of, XXVII, 1297
- geologic age of, XXVII, 1295
- in central Montana unconformable on Madison limestone, XXIII, 470
- isopach map showing distribution and thickness, XXVII, 1289
- lithology and correlation in Northern Great Plains, XXVII, 1287
- paleogeography of, XXVII, 1301
- Big Snowy group and Amsden formation, sections of, Williston basin, XXVII, 1294, 1295, 1296
- Big Snowy-Judith Mountain anticlinorium, GAS, 253; PROB, 700, 704, 715; XXVI, 1326
- Big Snowy oil zone on Baker-Glendive anticline, XXVI, 1564
- Big Tar Canyon, CAL, 240, MSC, 165
- Big White shale, XXV, 808
- Bigelow, H. B., RMS, 438
- Bigenaria* sp. horizon, XXIV, 2098
- Bigford member of Mount Selman formation, GC, 592, 601; XIX, 1361, 1370; XXIV, 1917
- (Eocene) (Tbf), SBP, 337-349, 415
- Hidalgo section, GC, 608; XIX, 1377
- Bigfork chert, Black Knob Ridge, Oklahoma, XXI, 6, 18; XXV, 1638
- fauna of, XXI, 8
- Bighorn and Wind River basins and their marginal structures, tectonic map of, with cross sections, XXIII, 1442-1443
- Bighorn basin, XXI, 1253; XXIII, 1441
- eastward creep of, XXIII, 1487
- trend northwest-southeast, XXIII, 1487
- Bighorn cliff, XXIII, 1472
- Bighorn district of Wyoming, Chugwater-Sundance contact in, XI, 747
- Bighorn dolomite, XXV, 129; XXVI, 331
- Bighorn dolomite and Mississippian Madison limestone, cliff-forming formations in Wind River Canyon, XXIII, 482
- Bighorn formation, XXV, 1739
- Bighorn limestone, XXV, 1733; XXVI, 345
- Bighorn River, XXIII, 1441
- Bighorn sandstone, IV, 250
- Bignell, L. G. E., XII, 951; XVI, 669; XIX, 818
- Bihoreau, Ch., XXI, 131
- Bilbin method of estimating future oil reserves, XXI, 1089
- Bilin, Czechoslovakia, RMS, 471, 484
- Bilk Creek, section on San Miguel River opposite mouth of, near Telluride, Colorado, showing Entrada sandstone and members of Morrison formation, XXV, 1752
- Bilk Creek sandstone, XXV, 1750, 1754, 1755, 1759
- Bilke, W., RMS, 462
- Billings, M. H., and Gardescu, I. I., use of mechanical sand analyses for correlation purposes, XXI, 1311
- Billings, M. H., et al., geophysical interpretation, XXIV, 372
- Billings, Marland, XXIII, 130
- Billings, Marland P., structural geol-

- (Billings)
ogy, review, XXVII, 1157
Billings anticline, present condition of, XXIV, 2017
Billings area after deposition of Simpson beds and Violalimestone, Section of. Contact with Arbuckle limestone unconformable, XXIV, 2012
at close of Arbuckle limestone deposition, theoretical reconstruction of, XXIV, 2010
history of, XXIV, 2009
Billings dome, faulting at, XXIV, 2015
Oklahoma, flank production in, XX, 526
post-Arbuckle deformation of; inferred amount of uplift, warping, and depth of erosion indicated, XXIV, 2012
post-Mississippian deformation at, XXIV, 2015
post-Viola deformation at; "Dense" limestone and part of "Dolomite" removed from crest of arch, XXIV, 2014
section of, XXIV, 2010
vertical movements indicated at, XXIV, 2007
Billings field, Noble County, Oklahoma, II, 55
Pennsylvanian in, XXIV, 2011
Permian in, XXIV, 2011
structural history of, interpreted in terms of isostasy, XXIV, 2006
Billings fold, truncated, deposition of early Pennsylvanian beds on, XXIV, 2016
Billingsley, J. E., SBP, 357; XXII, 1183
early development of drilling practices in Kanawha County, West Virginia, XXII, 1088
occurrence of oil and gas in West Virginia, eastern Ohio, and eastern Kentucky, PROB, 485
Billingsley, Paul, and Kemp, James F., VII, 264; XXIX, 1267
Billiton Island, RMS, 349, 350
Billy Creek, Wyoming, geology and unit operation at, XVIII, 1477
waters of Shannon sandstone at, XXIV, 1227
Billy Creek anticline, GAS, 299
Billy Creek dome, XXVII, 436
Billy Creek gas field, Johnson County, Wyoming, GAS, 297, XXII, 689; XXIV, 1226; XXV, 1157
Billy Creek section, Wyoming, outcrop sections f, SBP, 243-255, 411
Bilertjst, J., diamond drilling against high gas pressure in Turner Valley, Calgary, Alberta, XI, 91
Bingen formation, XXIII, 295
Arkansas, VI, 353; XXII, 973
Louisiana, V, 305; VI, 181
section, SD, 282
Bingen group, Louisiana, SD, 300; X, 228, 248
Bingham, Dwight H., XIII, 1347
developments in Arkansas-Louisiana-Texas area, 1936-1937, XXI, 1068
Bingham, E. C., XVIII, 1180
Bingham, E. C., and Reiner, Markus, GC, 85; XXVIII, 1181
Bingham Center pool, XXVI, 1120; XXVII, 846
Bingman, Neal J., XX, 780
Binney, Edwin, Jr., memorial of, XIII, 295
Binny, VI, 338
Binomial system of nomenclature, XXVII, 945
Biochemical processes caused by microflora of oil waters and oil-bearing formations, XVII, 52
effective in development of petroleum, PROB, 179, 338
relation to formation of petroleum, XV, 617
Biochemical reductions of sulphates, X, 1272
Biochemical theory, PROB, 836
Biocoenosis, XXVI, 1728
character of, represented by fossil remains in crinoidal sediment, XXVI, 1731
Biocoenotic type, XXVI, 1735
Biogenic component of Indian Ocean sediments, RMS, 401
Biographical sketches of recently elected honorary members, XIX, 922; XX, 1265
Bioherm, fringing, Promontory Range, XXII, 1393
Bioherm and biostrome, XVI, 484
Bioherm area in Sacramento Mountains, XXV, 2126
Bioherm core, high porosity of, XXVII, 586
Bioherm facies, XXV, 2129
Bioherm structure, Lake Valley formation, San Andres Canyon, San Andres Mountains, XXV, 2155
Lake Valley formation, west face of Sacramento Mountains, north of San Andres Canyon, XXV, 2149
typical, XXV, 2128
Bioherm structures in Lake Valley formation, XXV, 2115, 2144
Biohermal domes, XXVII, 576
Biohermal limestones, PROB, 358
Bioherms, XXVI, 1734
in Floyds Knob member, XXIV, 800
Bioherms and biostromes of Traverse time, XXVII, 585
Biologic activity as affected by different gases, RMS, 71
Biologic assemblages, characteristic of, Blaine or Dog Creek, XXVIII, 1027
Biologic effects of stagnation, RMS, 361
Biologic properties of sediments, RMS, 525
Biologic relations in South Atlantic, XXIII, 1667
Biologic studies in Baltic, RMS, 299
Biological oceanography, RMS, 142
references on, RMS, 151
Biology and geology of San Carlos Mountains, Tamaulipas, Mexico, XXII, 318
Biostratigraphic - chronologic section, MSC, 99
Biostratigraphic classification of California Miocene, MSC, 72
of foraminifera in Reliz Canyon section, MSC, 9
Biostratigraphic nomenclature, MSC, 88
Biostratigraphic relations at Denison Dam, north Texas, XXVII, 1065
Biostratigraphic terms, MSC, 97
Biostratigraphic units, MSC, 90
based on foraminifer faunas, MSC, Fig. 14 (in pocket)
in Reliz Canyon section, MSC, 10
Biostratigraphic vs. time-stratigraphic units, XXIV, 2042
Biostratigraphy, MSC, 87
Biostromal limestones, PROB, 358
Biostromes, XXVI, 1734
Biostromes and bioherms of Traverse time, XXVII, 585
Biotite, MEX, 76, 148, RMS, 498, 602, 620, 626, 628, XXII, 560; XXVII, 171, XXVIII, 79
alteration to glauconite, XIX, 1571
effect of alteration of, on lattice structure, RMS, 628
identification of, by X-ray, RMS, 625
Biotite-glauconite transformation, bibliography on, RMS, 515
Biotite-glauconite transformation and associated minerals, RMS, 513
Biotite gneisses in Whittier conglomerates, XXIV, 661
Biotite lenticular gneiss in Quarry conglomerate, XXIV, 657
Biotone, MSC, 97
Biraud, Francois, memorial of, XXI, 138
Birch, Donald, MSC, 77
Birch Creek limestone, XXIV, 728
Birch Lake sandstone, XXIX, 1625
Bird Creek limestone in Osage County field, Oklahoma, STR II, 379
Bird Creek pools, water conditions in, XVI, 886
Bird Island field, XXIII, 868
Bird Spring formation in Las Vegas Quadrangle, XX, 1203
in Nevada, correlation with Wolfcamp formation in Glass Mountains of Texas, XX, 1207
Birds, CAL, 211, 265, 287
of McKittrick asphalt deposits, CAL, 265
Pleistocene, climatic significance of, CAL, 265
Birdseye limestone, XXI, 28, 1010
Birdseye Pass valley, XXIII, 1441
Birdseye-like limestone, XXV, 654
Birdsong formation, XXV, 671
Birefringence of minerals, RMS, 604
Birk, Ralph A., GAS, 583; XI, 1068, 1071, 1073; XVI, 124; XXVIII, 993; XX, 1466
extension of a portion of Pontotoc series around the western end of Arbuckle Mountains, IX, 983
Sayre field, Beckham County, Oklahoma, VIII, 347
Birkinbine, J. S. W., XXVII, 1497
Birth and development of the geological sciences, XXIII, 1099
Bisat, W. G., XIX, 1260, 1297
Bisbee group, XXVIII, 1189
Bischof, Gustave, SD, 395, 708; IX, 728; XXIII, 1298; XXII, 1285
Bischoff, XX, 1396
Bisectrices of clay minerals, RMS, 470
Bisher and Lilley outcrop, XXVIII, 532
Bisher limestone, XXVIII, 531, 535
Bishop, Margaret Stearns, XXV, 714, 729
isopachous studies of Ellsworth to Traverse limestone section of southwestern Michigan, XXIV, 2150
Bishop's Cap member of Magdalena formation, XXIV, 167
Bismarck-Washburn-Sanish syncline, XXVII, 1581, 1582
Bison field, GAS, 471
Biswell, H. L., XXIV, 627
Bissett conglomerate, PTNM, 663; XXVI, 663
age of, discussion, XIX, 1544

- Bissett deposits in Delaware basin, XIX, 270
- Bissex Hill marl and younger sedimentary formations of Barbados, XXIV, 1590
- Bisteneau dome Louisiana, SD, 222, 269, 274, 275, 303-307; X, 252-255
- Bisteneau member, XXIX, 59
- Biswell Hill, XXI, 1410
- Bitkow field, Poland, XV, 25
- Bitter Creek, MSC, 61, 210, 218, 220, 245, 318, 353
- correlation of, with Morales syncline, XXV, 249
- correlation of, with Santa Monica Mountains, XXV, 250
- correspondence of Briones, Cierbo, and lower Neroly at, with these substages at San Pablo Bay, XXV, 249
- greatest echinoid development near, in Monterey time, XXV, 240
- ranges of Monterey strata near, XXV, opp. 240
- Bitter Creek echinoid area, XXV, 245
- Bitter Creek faunal localities, XXV, bet. 240 and 241
- Bitumen, high content of, in Seminole field, Oklahoma, SBP, 69, 283, 284
- in Nonesuch formation of Keweenaw series of northern Michigan, XVI, 737
- in Russia, XI, 504
- occurrence of, in Queen Charlotte Islands, British Columbia, XVI, 797
- transformation of organic matter of oil shales to, XIII, 309
- Bitumen content, SBP, 64-70, 400, 401
- basic data on, SBP, 412
- comparison of, of samples from producing and barren wells in Los Angeles Basin, SBP, 128
- estimation of, by spot plate method, SBP, 79
- Los Angeles Basin sediments, SBP, 126-130
- method of determination, SBP, 67, 68
- relation to loss in reduction number during extraction with carbon tetrachloride, SBP, 68
- relation to nitrogen content of extracted material, SBP, 68
- variation of, among ancient sediments, SBP, 66-69
- Bitumens and geology of the Dead Sea area, Palestine and Transjordan, XX, 881
- Bituminous black shales, GAS, 578; XXIII, 1179
- in Hamilton and Marcellus formations, PROB, 58
- Bituminous coal, SBP, 58
- Bituminous coal seams, map of West Virginia showing probable minable extent of, XXVII, 530
- Bituminous coals, formation of, from carbohydrates, XXIV, 1866
- Bituminous formations of Ontario, GAS, 62
- Bituminous limestone, MEX, 27, 38-40; SBP, 260
- from Nebi Musa, in Dead Sea region, XX, 903
- Seminole field, Oklahoma, SBP, 283
- Bituminous limestones as source beds of petroleum and natural gas, PROB, 51
- Bituminous material, origin, X, 1016
- Bituminous matter, SBP, 321
- Bituminous sands, RMS, 594
- Bituminous shale, Devonian, X, 872
- in Czechoslovakia, XXIV, 392
- in France, XXIV, 392
- Bituminous shales, MEX, 12, 27, 34, 45
- depositional environment of, XV, 174
- in Alagoas series, XXIX, 552
- in Deer Lake and Grand Lake, FOP, 130; XXV, 1562
- Mississippian, GAS, 593
- of Green River formation in Powder Wash area, XXII, 1033
- Ordovician, in Gaspé Peninsula, FOP, 124; XXV, 1556
- Pennsylvanian, GAS, 593
- significance of micro-crystals of carbonates in, XIII, 1377
- upper Devonian, of New York, XXIX, 13
- Bituminous substances, theory that diatoms are source of, XII, 555
- Bivalves, MEX, 12, 15, 25, 43, 134
- Bixby field, PROB, 435
- Bixby zone, PROB, 219
- Bjerknes, V., RMS, 50, 103
- Black, I. A., SBP, 46
- Black, J. F., STRAT, 846
- Black, L. J., XIII, 1125
- Black, M., XXVI, 318
- Black, M. A., RMS, 285
- Black and green shale, MEX, 214
- Black Band ore, chemical analyses of, XXVIII, 1054
- Black Band shale in Tuscarawas County, Ohio, XXVIII, 1052
- Black Bayou, Louisiana, GAS, 711
- Black Bayou salt dome, XXIX, 792
- Black Butte dome, XX, 1176
- Black Canyon, XXVI, 1803
- Black clays in Great Salt Lake, XXII, 1354
- Black Creek formation, XXII, 808; XXIX, 916, 919
- Black flint, MEX, 31
- Black graptolite shales, origin of, XXI, 1147
- Black Hills, FOP, 76; PROB, 275, 815; XXV, 1508; XXVI, 1557, 1567; XXVII, 425
- Jurassic in, XXI, 717
- Kansas City, Marmaton and Cherokee equivalents in, XIV, 1261
- northwestern Wyoming, Minnelusa formation of Beulah district, XV, 183
- oil shale in Minnelusa formation of, XXI, 1247
- paleontology of, XXI, 717
- South Dakota, Minnelusa of, XIV, 619
- stratigraphic section of Sundance formation measured in, XXI, 745
- Black Hills-Mid-Continent correlations, XXV, 435
- Black Hills region, character of waters, XXIV, 1308
- Minnelusa water in, XXIV, 1303
- oil possibilities of, X, 800
- discussion, X, 1177
- Black Hills uplift, PROB, 705, 721
- Black Hills-Wyoming correlations, XXV, 431
- Black Knob Ridge, Oklahoma, areal geologic map of, XXI, 4
- formations exposed east of Ti Valley fault, XXI, 5
- fossils, XXI, 6, 11
- geology of, XXI, 1
- Mississippian and Pennsylvanian strata near, XXI, 13
- (Black)
- overthrust faults in, XXI, 21
- plunging folds of, XXI, 21
- stratigraphic sections, XXI, 23-26
- stratigraphy of, XXI, 2
- structural relation of, to rocks of Arbuckle Mountains, XXI, 22
- structure in, XXI, 20
- Black Lake gas field, Louisiana, II, 69
- Black layers in sandy deposits, RMS, 151
- Black lime, XXIX, 1156
- in Mississippian limestone, XXIX, 1162
- Texas, X, 462
- Black limestone in Pecos Valley, XXI, 870
- in Turner Valley, XXIV, 1633
- Black limestones of Bone Spring formation, PTNM, 620; XXVI, 620
- Black limestones and shales of basal Albian in Sierra Tamaulipais and Pánuco, MEX, 27, 33, opp. 44, 45, 49, 50, 95
- Black Mesa Basin, Arizona, section, FOP, 71; XXV, 1503
- Arizona and Utah, FOP, 70; XXV, 1502
- references on oil prospects in, FOP, 72; XXV, 1504
- Black Mingo formation, XXII, 808
- Black Mountain anticline, XIII, 1286
- Black Mountain field, Wyoming, Embar water in, XXIV, 1289
- Tensleep water in, XXIV, 1293 (well 206), SBP, 194-243, 406
- Black Mountain structure, PROB, 935
- Black muds, RMS, 449
- in Baltic, RMS, 300, 304, 309, 321
- in basins, RMS, 99, 101
- in folds, RMS, 101
- land-locked waters and deposition of, RMS, 356; XXIII, 1184
- origin under conditions of poor circulation, XXIII, 1195, 1196
- Black mudstones, RMS, 203
- Black oil in Wyoming, occurrence of, X, 443
- Black ooze, RMS, 449
- Black Ranch limestone, STRAT, 551
- Black River beds, XXII, 1546
- Black River fauna, XXV, 1638
- Black River group, XXII, 95
- Ontario, GAS, 63, 71, 75
- Tennessee, XXIV, 1645
- Black River group and St. Peter and Lower Magnesian groups in Ohio, unconformity between, XXIV, 684
- Black sand, STRAT, 66
- Black Sea, RMS, 94-96, 261, 358, 362, 363, 367, 368, 444, 448-450, XXIII, 1189
- anomalous instance of landlocked basin, XXI, 1115
- organic sediments in, PROB, 30
- sediments of, RMS, 261, 358-368, 448-450; XXIX, 14
- sulphate reducing organisms, PROB, 917
- Black Sea basin, XI, 494, 497
- Black Sea conditions in Arabian Sea, XXI, 1579
- Black shale, SBP, 285; XXII, 698, 1447; XXVIII, 531
- Devonian, SBP, 351, 354, 357-379
- in Florida, XXIII, 1712
- in Kentucky, GAS, 917, 936, 945, 946
- organic content of, SBP, 360
- Black shale basin, XXV, 630; XXVI, 227

- Black shale deposition in central New York**, XV, 165
- "Black shale" formation in and about Chesapeake Bay**, VIII, 195
- Black shales**, PROB, 79; RMS, 4, 366-369, 447-450
- Appalachian region, XXII, 425
- East Indies, RMS, 354
- environments of origin of**, XXIII, 1178, 1185, 1187
- evolution of, XXIX, 13
- important as source of petroleum, XXIII, 1185, 1178
- Michigan, XXV, 725
- origin of, RMS, 203, 366-369, 447-450; XXIII, 1181, 1187
- possible development in barred basins, XXI, 1143
- references on environments of origin of, XXIII, 1197
- Blackburn, Chester O., IX, 1025
- Blackburn, Chester O., and Van Tuyl, Francis, M., X, 713, 1020; XIII, 308, 311, 320, 327, 328; XVI, 1031
- effect of rock flowage on kerogen of oil shale, IX, 158
- relation of oil shale to petroleum, IX, 1127
- Blackburn, Gerald, STRAT, 565
- Blackburn, W. C., XXVIII, 1356, 1360
- Hilbig oil field, Bastrop County, Texas, XIX, 1023
- Blackburn, W. D., XXIII, 1638
- Blackjack Creek cyclothem, XXV, 42
- Blackjack Creek limestone, XXV, 36, 72
- Blackleaf formation, XXI, 907
- Blackleaf member, FOP, 20; XXV, 1452; XXVII, 855
- Border-Red Coulee field, STRAT, 283
- Blackleaf sandstone, GAS, 29, 30, 273
- Blackleaf sandy member of Colorado shale in Montana, PROB, 698
- Blackstone, D. L., Jr., XXVI, 307, 311; XXIX, 1265
- Blackstone arch, XXV, 78, 89
- Blackstone formation, XVIII, 1391
- Blackwelder, Eliot, CAL, 43, 238, 258, 267; MSC, 6; PROB, 618, 683, 812; V, 577; VII, 50, 371, 634; VIII, 451; X, 1035, 1065, 1078; XI, 924; XIII, 2, 12, 16, 501; XIV, 2; XVI, 2, 15, 16, 36, 642; XVIII, 1655, 1667; XIX, 260; XX, 827, 860, 861, 865, 867; XXII, 1410; XXIII, 87, 95, 96; XXVIII, 1196, 1417
- origin of the central Kansas oil domes**, IV, 89
- Blackwelder, Eliot, and Willis, Bailey, X, 1091, 1093
- Blackwelder, Richard, and Frizzell, Don L., MSC, 26, 79, 101; XX, 222
- Blackwell, J. F., XXIII, 1353
- Blackwell, South Blackwell, Mervine, and Ponca fields, Oklahoma, STR I, 158
- Blackwell field, IV, 178; V, 118, 138, 140, 325
- Blackwell pool, PROB, 294, 319, 770
- Blaine and Dog Creek carbonates, XXVIII, 1017
- Blaine and Dog Creek faunas, XXVIII, 1026
- Blaine and Dog Creek floras and faunas, organic environment indicated by, XXVIII, 1023
- Blaine and Dog Creek formations, gypsum deposits in, XXVIII, 1019
- (Blaine)
- Kansas, Oklahoma, and Texas, geologic section, XXVIII, 1013
- Kansas, Oklahoma, and Texas, map, XXVIII, 1014
- near El Reno, XXI, 1538
- section of, from Oklahoma to Kansas, XXIII, 1796
- Blaine and Dog Creek members, class distribution of species in, XXVIII, 1027
- Blaine and Dog Creek pelecypods, XXVIII, 1029
- Blaine and Dog Creek seas, changes in salinity of, XXVIII, 1025
- paleogeography of, XXVIII, 1021
- Blaine and Dog Creek sequence of strata in northern Oklahoma and southern Kansas, XXIII, 1798
- Blaine and Dog Creek time, paleogeography of, XXVIII, 1024
- Blaine Creek fault in eastern Kentucky, GAS, 924
- Blaine formation, XXI, 428; XXII, 925; XXVI, 232
- anhydrite-gypsum problem of, XXI, 1492
- Grady County, Oklahoma, XXI, 1540
- Hugoton field, STRAT, 84, 86
- indications of both lateral gradation and overlap, XXI, 1566
- Kansas, II, 74
- Kansas, correlated with Cragin's Cave Creek formation, XXIII, 1793
- northwestern Oklahoma, XV, 409; XX, 1468
- Oklahoma, II, 114
- Oklahoma, anhydrite-gypsum problem of, XVIII, 1297
- subdivisions of, in Oklahoma and Kansas, XXIII, 1794
- Texas, I, 103; XXI, 422
- Texas, Wagon Yard gypsum member of, XXI, 462
- Texas, and San Andres of New Mexico correlated with Word formation of Glass Mountains, XXIII, 1699
- West Texas, XIII, 950
- Blaine gypsum, XXIII, 1058; XXIV, 43; XXV, 84
- of Oklahoma, XXI, 1492
- Blaine gypsums, XXIV, 58
- view of, in Comanche County, Kansas, XXIII, 1795
- Blaine time, paleogeography of, XXVI, bet. 224 and 225
- Blair, S. M., and Clark, K. A., XXII, 1134
- Blair coal, XXIII, 1383
- Blairmore conglomerate, STRAT, 301
- Blairmore formation, STRAT, 339; XXVII, 41, 49
- Alberta, ALTA, 4; XV, 1132
- Red Coulee field, Alberta, ALTA, 38; XV, 1166
- Spring Coulee region, Alberta, ALTA, 146; XV, 1274
- Blairmore sands, FOP, 20; XXV, 1452
- Blairmore sandstone, IV, 250
- Blairmore-South Fork areas, Alberta, XI, 241
- Blake, IX, 230
- Blake, G. S., XX, 881, 887, 895, 900, 901, 909
- Blake, W. G., XXIV, 1807
- Blake, W. P., CAL, 9, 22, 23, 121, 183, 189, 199, 237; MSC, 1, 21, 131;
- (Blake)
- SC, 17; VIII, 55; XII, 970, 972, 978, XIII, 743; XVII, 467, 502, 505, 511, 736; XIX, 1509, XX, 1563, XXV, 230, XXVII, 112, 122, 202
- Blake, W. P., and Conrad, XII, 978
- Blake expedition, RMS, 50, 231
- Blake Plateau, RMS, 236
- Blake pool, GAS, 476
- Blakely faunule from Clallam County, Washington, MSC, Fig. 14 (in pocket)
- Blakely foraminifera, MSC, 75
- Blakely formation, MSC, 73, 111, 161, 163, 164, 180, 259, 317, 322, 323, 324, 329, 346, 355
- of Washington, check list of foraminifera from, MSC, 77
- type, MSC, 185, 187, 188, 191, 205, 210, 213, 215, 228
- Blakely horizon, CAL, 148, 155
- Blakely sandstone, XXV, 1638
- Blanchard, Keyte, and Baldwin, XIII, 903
- Blanchard, John, XVI, 755
- Blanchard, W. A., XV, 1030
- Blanchard, W. A., and Davis, M. J., XXIV, 47
- Blanchard, W. G., XXIV, 307
- Blanchard, W. G., and Davis, M. J., XXV, 93
- Blanchard, W. Grant, Jr., XIII, 999, 1016; XVII, 110
- Blanchard, W. Grant, Jr., and Davis, Morgan J., XIII, 1021; XIV, 975, 977, 979; XXI, 870, 875; XXVI, 85, 87, 98
- Permian stratigraphy and structure of parts of southeastern New Mexico and southwestern Texas**, XIII, 957
- Blanch, F. C., PROB, 925
- Blanchenhorn, Max, XI, 148, 516; XX, 881, 885, 889, 895, 897, 900, 901, 906; XXII, 1219
- Blanchenhorn, Max, and Palmer, XX, 886
- Blanco beds, CAL, 303
- Bland Oil Company, GC, 884; XX, 535
- Blaney, H. F., RMS, 643, 644
- Blanford, W. T., XVIII, 288
- Blankenship field, Kansas, V, 276, 422, 424
- Blanpied, B. W., XIX, 1162, 1163; XXIII, 247; XXIV, 1915; XXVII, 1136, 1410, 1468; XXVIII, 29; XXIX, 1417
- Blanpied, B. W., and Hazzard, Roy T., XXVIII, 1345
- compilers, guidebook of the eleventh annual field trip of the Shreveport Geological Society in southeast Mississippi, review, XIX, 571
- correlation of Cockfield and Gosport formations, eastern Mississippi and western Alabama, XXII, 309
- developments in north Louisiana and south Arkansas in 1941**, XXVI, 1250
- developments in north Louisiana and south Arkansas in 1942**, XXVIII, 257, 333, 554
- field and wildcat developments in south Arkansas in 1942, XXVIII, 326
- salt-dome discoveries in north Louisiana in 1942, XXVIII, 561
- Blardone, George, MEX, 176

- Blasdale, W. C., XXVII, 160
 Blastoid, diagnostic Onondaga, XXV, 679
 Blastoids, XXV, 130
 Blatchford, Torrington, X, 1132; XXV, 386
 Blatchley, XXII, 73
 Blatchley, R. S., V, 454; VII, 620
 Blau, L. W., XVIII, 68; XXIV, 502, 1432; XXVII, 1175, 1180, 1188
 papers on applied geophysics, discussion, XVII, 87
 reviews, XVIII, 1374, XIX, 126; XXV, 170
 Blaylock graptolite zone, XX, 309
 Bleaching of red beds, significance of, X, 311
 Bleaching-clay industry, technical basis of, XIX, 1043
 Bleeker, E. S., XV, 230
 Blevins, L. P., XXIX, 25
 Blind stream, XXIII, 83
 Bliss quartzite, IV, 104
 Bliss sandstone, XXIV, 160
 basal Paleozoic formation in northern trans-Pecos Texas and southern New Mexico, XXIV, 155
 in Van Horn region, Texas, XXIV, 153
 unconformable on Van Horn sandstone, XXIV, 154
 Blitt, John E., XXIX, 1265
 Cut Bank oil and gas field, Glacier County, Montana, STRAT, 327
 Block, W., Dahlgren, F., and Lee, Cheng-San, *Kaledonische und variszische Probleme der Westsudeteten*, review, XXIII, 1418
 Block diagrams and other graphic methods used in geology and geography, review, IX, 918
 Block-faulting, examples of, STR II, 689
 in Pleistocene in Great Basin region, XVI, 16
 in Tertiary formations in coastal sections of Ecuador, XIV, 269
 Block Island, RMS, 236-242
 Bloesch, Edward, SD, 44; IX, 874, 1104; XI, 659; XII, 491; XVI, 652, 880, 884; XVIII, 568, 1138; XIX, 503; XX, 612; XXIV, 724, 725
 classification of various forms of oil migration, XX, 612
 discussion of theories of origin of salt domes, SD, 44
 Fort Scott-Wetumka correlation, X, 810
 memorial of Otto Fischer, XXVII, 1283
 north-south correlation of Pennsylvanian in Oklahoma, I, 134
 observations on post-Permian deposits in north-central Oklahoma, I, 136
 oil mining, X, 405
 petroleum investigations in Switzerland, IV, 87
 remarks on subsurface contouring, VI, 317
 reviews, VII, 584; XI, 1237; XII, 773; XIII, 87; XIV, 953, 1234; XVII, 99, 196, 1284
 unconformities in Oklahoma and their importance in petroleum geology, III, 253
 value of oil geology in Mid-Continent field, II, 124
 Blondeau, E. E., XVIII, 118
- Blood of marine invertebrates, RMS, 149
 Blood Creek syncline, VI, 149
 Bloomer, Robert, XXIX, 72
 Bloomer pool, Kansas, XXII, 667, 675
 Bloomingdale field, XXIV, 975
 Bloomington dome, St. George district, Utah, deep tests of, XXIII, 140
 Washington County, Utah, XXIII, 142
 Bloom's Creek, MSC, 53
 Bloom's Mill, MSC, 53
 Blossom sand, PROB, 60; SD, 258, 300, 304, 314, XXVI, 1052, 1264
 Arkansas, VI, 54, 350, 363, 474, 477, 479, 556; X, 50
 Cotton Valley field, Louisiana, XIV, 989
 Louisiana, I, 153; II, 63, IV, 127, V, 309, 632, VI, 142, 181, 196, 247, 251; X, 262, 270
 Blount, A. L., Hoots, H. W., and Jones, P. H., determination of carbon and hydrogen in substances of bituminous or pyrobituminous nature occurring in shales, XIX, 293
 marine oil shale, source of oil in Playa del Rey field, California, XIX, 172
 Blow-out craters of oil and gas wells in White Point and Saxet fields, GC, 213, XVII, 916
 Blowout Mountain sandstone, I, 95, 98, 103; II, 78
 Blow-outs at Conroe field, GC, 825; XX, 772
 Blown sand and desert dunes, physics of, XXVIII, 566
 Bloyd formation, XXIV, 427
 Bloyd limestone, stratigraphic relations of, XXIV, 432
 Boyd shale in Interior Highlands of Arkansas, GAS, 544
 in northwest Arkansas, XIV, 132
 on Hale Mountain, section of, XIV, 133
 Blücher field, XXIII, 867
 Blue, gray, and green muds, XXIII, 1668
 Blue Basin, XXII, 741
 Blue clay, RMS, 390
 Blue Creek pool, West Virginia, XXIX, 681
 Blue Earth formation, XXV, 2171
 Blue Earth silt, pipette analysis of, XXV, 2179
 Blue-green algae, RMS, 145
 Blue Hills shale, II, 81; VI, 72
 Blue lick water in Vance well, XXIV, 686
 Blue Mountains, XXIX, 1379, 1411
 Miocene in, XXIX, 1385
 northeastern part unfavorable for occurrence of oil and gas, XXIX, 1386
 southwestern extension of, XXIX, 1386
 Washington and Oregon, rocks of, XXIX, 1384
 Blue mud, RMS, 381, 386, 387, 393, 396, 397, 405, 411, 414
 in Arabian Sea, RMS, 402
 in East Indies, RMS, 350
 Blue Ridge, Texas, PROB, 905; GAS, 710, I, 46
 Blue Ridge O. & D. Co., SD, 611
 Blue Ridge Oil Company, SD, 612
 Blue Ridge salt dome, Fort Bend County, Texas, SD, 600; IX, 304; XXIX, 789
- (Blue)
 analyses of oil from, IX, 314
 variations of temperature at, PROB, 996
 Blue sands, XVIII, 1574
 Blue shales in southern Tamaulipas, MEX, 68
 Blue Springs gas field, Jackson County, Missouri, XXV, 1405
 geology of, discussion, XVII, 1536
 Blue tourmaline, RMS, 608
 Bluejacket sandstone, V, 548, XXI, 39
 from Brush Creek, Kansas, XXI, 255
 Oklahoma, correlation of, XX, 312
 Bluestone Run, West Virginia (well 424), SBP, 349-379, 410
 Bluff City anticline, XII, 179
 Bluff Creek field, XXI, 1022
 Bluff Creek sand, XXIII, 855
 Bluff sandstone member of Morrison in Utah equivalent to Junction Creek sandstone in Colorado, XXV, 1759
 Blufftown formation, XXII, 790, 1649
 Blum, Anthony, PROB, 437
 Blumer, Ernst, XVIII, 649
 Blummer, E., XVI, 1063
 Blunden, R. L., XXVII, 523
 Bob limestone member of Brownsport formation in Missouri, XXVI, 14
 Bobin, P. L., XXIV, 1534
 Bocas series, XXV, 1790
 Bocas-Alamo structure, MEX, 203
 Bockh, Lees, and Richardson, XXVII, 1507
 Bockh, Hugo, VIII, 202; IX, 808, 1189, 1228, 1246; XVIII, 742, 872
 Bockh, Hugo de, SD, 111, 178, 207
 Bodcaw sand, XXII, 722, 1488, XXIX, 806
 discovery of oil in, Cotton Valley field, Webster Parish, Louisiana, XXII, 1603
 Bode, Francis D., MSC, 70, 155; SC, 40, 60, 82; XX, 1586, 1606, 1628
 Bode, Francis D., and Findlay, W. A., XVII, 732
 Bodega Basin, MSC, 2
Bodenablagerungen und Entwicklungstypen der Seen, review, XII, 867
 Bodenbender, G., XIX, 1735, 1750
Bodenschätze Bolivians, XXV, 333
 Body, J. B., II, 136
 Boehm, G., MEX, 38; XXVIII, 1078
 Boehms, E. F., Bybee, H. P., Butcher, Cary P., Hemphill, H. A., and Green, G. E., detailed cross section from Yates area, Pecos County, Texas, into southeastern New Mexico, XV, 1087
 Boeke, H. E., XXI, 1273
 Boela oil field, XXVIII, 1451
 Boeton, stratigraphy of, XXVIII, 1450
 Bogachev, V. V., XVIII, 607
 Bogdanovich, K., XVIII, 603, 605, 606, 607, 613, 614, 619, 634
 Boggild, O. B., RMS, 377, 383
 Boggs, Frank Shackelford, Jr., memorial of, XXVII, 1029
 Boggs, O. D., XII, 3
 Boggy Creek anticline, PROB, 659, 660, 661; GAS, 665, 677
 Boggy Creek field, Texas, PROB, 276, 330, 579, 639, 669, 780; (well 372), SBP, 292-335, 409
 Boggy Creek salt dome, Anderson and Cherokee counties, Texas, PROB, 315, 579, XII, 528; XIII, 613; XVI, 584; XXVIII, 1640
 Boggy formation, III, 262, 264, 265, 269; V, 34, 124, 283, 549; VI, 13,

- (Boggy)
161; XXII, 1569
Bowlegs field, Oklahoma, STR II, 355
Dora pool, STRAT, 414
Boggy-Savanna zone, XXIII, 226
Boggy shale, XVIII, 1054; XX, 1352
Boghead from Meade River basin, Alaska, XIII, 829, opp. 848
from New South Wales, XIII, opp. 848
Boghead cannell, XXIV, 391
Boghead coals, PROB, 82
Bogoiavlensky, L. M., XXIV, 1533
Bogoiavlensky, L. N., XVIII, 63
Bogota fault, XXIX, 1080
Bogs, RMS, 423
of North Sea, RMS, 333
Bogskar Deep, RMS, 366
Bohart, P. H., MEX, ix
Bohdanowicz, Charles, geology and mining of petroleum in Poland, XVI, 1061
natural gas occurrences in Russia (U.S.S.R.), XVIII, 746
oil fields of Poland, geological and statistical summary, XVII, 1084
review, XVIII, 1713
stratigraphic comparison of Polish crude oils, XXI, 1182
Bohlin camera, RMS, 622
Bohm, J., and de Loriol, P., XXVIII, 1116
Bohmite (bauxite), RMS, 485, 627
Bohn, Francis, VIII, 202
Bohn, J. Lloyd, XXIV, 1531, 1532, 1534
Bohnecke, G., RMS, 104
Boiling, effect of, on dispersion, RMS, 541
Boiling point, CD, 21
raising of, RMS, 65, 66
Bois d'Arc limestone, PROB, 356, 357; V, 34; XXII, 1566; XXIX, 193, 714
Bokchito formation, II, 80
Bokorny, Th., PROB, 41
Boldesti anticline, XVIII, 883
Boldesti field, XXIII, 961
Boles, Thomas, XXII, 916
Boles, Arkansas, conglomerate at, XXII, 895
Bolinas Bay, CAL, 233, 246
Boling dome, effect of character of rim syncline on production at, XX, 1422
Boling field, Texas, GAS, 702
Bolivar fault, XXIX, 1129
Bolivar geosyncline, XXIX, 1075, 1076, 1132
Bolivia, geology of sub-Andean belt of, XXIV, 1685
northwestern, and southeastern Peru, sub-Andean trough of, XXIX, 517
Bolivia, Paraguay, and Argentina, oil possibilities of Paleozoic sedimentary basin of, XXIX, 509
Bolivia, Peru, and Ecuador, northern, sub-Andean trough of, XXIX, 516
Bolivia, review, VI, 384
Bolivia and Argentina, observations on occurrence and origin of petroleum in, X, 853
Bolivina, die *Bodenschätze*, XXV, 333
Bolivina angelina subzone of Repetto, SC, 49; XX, 1595
Bolivina decurtata subzone, MSC, 130
Bolivina goudkoffi subzone, MSC, 130, 131
Bolivina hughesi fauna, SC, 91; XX, 1637
Bolivina hughesi zone, MSC, 130, 156, Figs. 6, 14 (in pocket), XXVII, 1346
Bolivina incrassata zone, XVIII, 1524
Bolivina modelensis zone, MSC, 129, 164, Figs. 6, 14 (in pocket)
Bolivina obliqua zone, MSC, 134, Figs. 6, 14 (in pocket); XXVII, 1350
Bolivina robusta fauna, Middle Pico, of Los Angeles Basin, XXI, 553
Bolivina robusta regression, SC, 49, XX, 1595
Bolivina seminuda zone, MSC, 168, Fig. 14 (in pocket)
Bolivina valvuliverrina zonules, MSC, 17, 18, 123, 160, Figs. 4, 14, and Table I (in pocket)
Bolivinas, Tertiary, MSC, 72
Bolivinita from lower Pliocene, MSC, 79
Bollenbach, H., RMS, 546
Bolsa Chica Oil Company (well 14), SBP, 130-153, 403
Bolsa sand, VI, 313
Bolton, Henry Carrington, SD, 396, 468, XXI, 1270
Bolton Creek anticline, PROB, 166
Bolton Creek field, Dakota water in, XXIV, 1263
Sundance water in, XXIV, 1279
Bonaire, XXIV, 1568
Bonarelli, Guido, XVI, 561, 567; XXIV, 1686; XXVIII, 1457
Bond strength of kaolinite, RMS, 481
Bond zone, XXVIII, 266
Bonding power of clays, RMS, 479, 480
Bone and tooth conglomerate, XXVI, 55
Bone Camp field, Tennessee, STR I, 252, 253
Bone Creek syncline, XXVIII, 1208
Bone Spring arch, XIII, 964
Bone Spring black limestones in Guadalupe Escarpment, XXI, 864
Bone Spring faunas, PTNM, 620; XXVI, 620
Bone Spring flexure, PTNM, 587, 617, 624; XV, 1090; XXV, 77, 93; XXVI, 587, 617, 624
post-Leonard features of, PTNM, 633; XXVI, 633
Bone Spring formation, XXIII, 1677
Bone Spring limestone, PTNM, 560, 586; XXI, 846, 870; XXVI, 560, 586
in Delaware basin area, PTNM, 567; XXVI, 567
in Texas, XIII, 962
in trans-Pecos Texas, PTNM, 566; XXVI, 566
of Leonard series, fossils of, PTNM, 573; XXVI, 573
of marginal area, PTNM, 568; XXVI, 568
of Permian of New Mexico, temperature tests on, XXI, 1194
of shelf area, PTNM, 570; XXVI, 570
Bonebeds, MSC, 93
Bonelli, Signor, XIX, 532
Bonham clay, Texas, southward extension XVI, 205
Bonine, C. A., V, 460; XII, 149, 158; XVI, 2
Bonita discovery, Montague County, Texas, XXIV, 1838
Bonita pool, XXV, 1072, 1073
Bonita production from an anticline discovered by seismograph, XXV, 1073
Bonnacord pool, XXVIII, 772
Bonner, W. D., XXII, 1323
Bonnet Carré, Louisiana, RMS, 169
Bonnet Carré Crevasse, XXIII, 9
sediments carried to Lake Pontchartrain by, XXIII, 3
Bonneville dolomite, XXV, 1632
Bonneville, Captain, XXII, 1308
Bonney, T. G., XX, 892
Bonnieview field, XXIII, 867
Bontz, Conrad K., memorial of, XII, 231
Booth sand, III, 273; V, 126, 290, 404
VI, 320; VII, 57; XIX, 516; XXIII, 226; XXIX, 714
Book Cliffs, Utah, PROB, 334
Book dealers, second-hand, XXVII, 996
Boom pool of Tioga field, XXII, 255
Boone age of Mississippian limestone in Bend Arch district, GAS, 628
Boone, chert, III, 212, 271, 273; IV, 174, V, 121, 151, 344, 404; VI, 321, 375; XXVIII, 1627
Boone dome, XIII, 1284
Boone formation, GAS, 535, 542; STRAT, 445; XXV, 1652
in Oklahoma-Kansas zinc-lead field, XVII, 1439
Boone limestone, XXII, 1591
in Missouri, correlations of zones of Mississippi lime of Kansas with, XXII, 1591
in northwest Arkansas, XIV, 127
Boone limestone-Barnett shale unconformity, Bend Arch district, GAS, 626
Boos, E. J., XXIX, 187
Booth, Conroe, XVII, 1460
Bopp, Anton, XV, 239, 240
Bopp, C. R., VII, 49
Bopp, C. R., Hill, H. B., and Rawlins, E. L., engineering report on Oklahoma City oil field, Oklahoma, review, XXI, 815
Boracite in rock salt, XXI, 1293
Bordas scarp, GC, 557, 560, XVII, 495, 498
Borden, Joseph L., STRAT, 441; XXIV, 717, 719, 721, 725
developments in Oklahoma during 1941, XXVI, 1058
developments in Oklahoma in 1942, XXVII, 790
developments in Oklahoma in 1943, XXVIII, 774
developments in Oklahoma in 1944, XXIX, 708
eleventh annual field conference, Kansas Geological Society, September, 1937, XXII, 100
reviews, XXII, 224; XXIV, 2185; XXV, 1942
Borden, Joseph L., and Brant, Ralph A., East Tuskegee pool, Creek County, Oklahoma, STRAT, 436
Borden, S. B., IV, 118
Borden group, Big Sinking field, STRAT, 180
in Indiana and Kentucky, paleontology of, XXIV, 807
Border area of Wind River Basin, XXIII, 1460
Border province of Mexico adjacent to West Texas, paleogeography of parts of, XX, 417
of northeastern Mexico adjacent to Zapata and Starr counties, Texas, structural geology of, XX, 403

- Border-Red Coulee field, gas sand in, STRAT, 290, 291
- Montana, PROB, 167, 691, 710; GAS, 257; STRAT, 300, 302, 315; XXVIII, 464; XXIX, 1267
- waters in, XXVI, 1370
- Border-Red Coulee nose, PROB, 703
- Border-Red Coulee oil field, accumulation of oil, STRAT, 305, 310
- analyses of gas, STRAT, 308, 315
- analyses of oil, STRAT, 312
- analyses of water, STRAT, 316, 317
- field waters, STRAT, 315-322
- reserves, STRAT, 324-325
- Toole County, Montana, and Alberta, Canada, STRAT, 267
- Bordine, J., Survey, Texas (well 377), SBP, 292-335, 409
- Bore-hole surveying, X, 775
- by orientation from surface, accuracy of, XIV, 579
- deep, and problems, review, XVI, 107
- Bore-holes, RMS, 163
- Boreal facies of foraminiferal faunas, MSC, 81
- Boreal immigration, CAL, 301, 302
- Boreal period, RMS, 332
- Bored rock of Arcola limestone, XXII, 1657
- Borger pool, Hutchinson County, Texas, GAS, 398; XXIII, 1019
- columnar section, XXIII, 1020
- porous dolomite in, XXIII, 1025
- rapid ascent westward of limestone-dolomite contact in, XXIII, 1021
- Borlie region, Wyoming, Pennsylvanian reds in, XXI, 995
- Borings, RMS, 173
- in natural levees, RMS, 167
- of littoral marine organisms, XXVI, 54
- Borislav, XX, 1481
- Borissiak, A., MSC, 173; XI, 494
- Born, A., XXV, 410
- Born, H., and Hahn, O., XXIV, 1533
- Born, Kendall E., XX, 1071; XXII, 1235, 1686; XXVI, 18
- Lower Ordovician sandy zones ("St. Peter") in middle Tennessee, XXIV, 1641
- oil and gas in middle Tennessee, map, review, XXVIII, 278
- Born, Kendall E., and Burwell, H. B., XXIV, 1653
- Born, Kendall E., and Wilson, Charles W., Jr., structure of central Tennessee, XXVII, 1039
- Born, W. T., XXIV, 1456
- future of geophysics, XXV, 1256
- Born, W. T., and Owen, J. E., effect of moisture upon velocity of elastic waves in Amherst sandstone, XIX, 9
- Born, W. T., Weatherby, B. B., and Harding, R. L., XIX, 6
- granite and limestone velocity determinations in Arbuckle Mountains, Oklahoma, XVIII, 106
- Borneman, B. A., and Toumansky, O. G., XXII, 1018
- Borneo, RMS, 349, 350; V, 412
- Apar-Laoet geosyncline in, XXVIII, 1449
- British, oil fields in, XXVIII, 1449
- central Mahakam River Basin in, XXVIII, 1448
- Koetei area in, XXVIII, 1449
- marine Triassic in, XXII, 9
- Melawi River Basin in, XXVIII, 1448
- (Borneo)
- Miocene in, XXVIII, 1447
- northeast, XXVIII, 1449
- oil indications, XXVIII, 1447
- Oligocene and Eocene in, XXVIII, 1449
- production at Samarinda oil fields of lower Mahakam River Basin, XXVIII, 1448
- Upper Mahakam River Basin in, XXVIII, 1448
- Western, Lower Lias transgression in, XXII, 26
- Bornhauser, Max, XXI, 133; XXIV, 2069, XXVII, 1155
- Bornhauser, Max, and Bates, Fred W., XXVIII, 981
- geology of Tepetate oil field, Acadia Parish, Louisiana, XXII, 285
- Bornhauser, Max, and Marshall, Lester R., three new interior salt domes in northeast Louisiana, XXIV, 483
- Bornholdt pool, Kansas, STRAT, 122, 131
- production at top of Mississippian residual chert in, XXIV, 1002
- Bornholm basin, RMS, 305, 311
- Bornholm Island, RMS, 319
- Boron, RMS, 435
- in Pecos River region, XXV, 158
- in sea water, RMS, 143
- occurrences of, XXV, 158
- Borradaile member of Mannville formation, XXIX, 1615
- Borrega Cañon, MEX, 26-28, 30, 34, 45, 57, 162
- Borro, A., CD, 19
- Boruff, C. S., PROB, 39; RMS, 422
- Boryslaw, XV, 14
- Mraznica, Tustanowice fields in Poland, XV, 20; XXI, 1189
- Boryslaw sandstone, XXI, 1190
- high specific gravity of crudes from, XXI, 1190
- in Polish fields, XV, 21
- Boryslaw skiba, XVIII, 897
- Bosco field, Louisiana, vertical variation of properties in, SBP, 348, 349 (well 407), SBP, 335-349, 410
- Bose, Emil, MEX, 17, 22, 23, 25, 34, 46, 47, 53-56, 59, 60, 66-68, 72-74, 84, 85, 92, 160, 161; PTNM, 545, 643, 652, 661, 676; SD, 702; V, 6, 13, 163; XI, 1181, 1184, 1214; XII, 949; XIII, 651; XIV, 1431, 1432; XV, 794, 795, 1030; XVI, 484; XIX, 242; XX, 426; XXI, 1206, 1210; XXII, 1017; XXIV, 307, 309, 321, 1193; XXVI, 545, 643, 652, 661, 676; XXVII, 1487, 1490, 1497; XXVIII, 1078, 1121, 1127, 1141, 1148, 1151, 1153, 1156, 1157, 1160, 1169, 1170, 1171; XXIX, 1466, 1767
- Böse, Emil, and Burckhardt, Carlos, XI, 1210; XX, 425
- Böse, Emil, and Cavins, O. A., PROB, 377; XV, 867; XXVIII, 1096, 1105, 1139, 1145, 1146, 1149, 1150, 1152, 1169, 1171, 1177, 1180, 1184
- Bose, Emil, Adkins, W. S., Baker, C. L., and Sellards, E. H., PROB, 378
- Bose, Emil, Udden, J. A., and Baker, C. L., PROB, 666
- Bosphorus, RMS, 95
- Bossier and Webster parishes, Louisiana, Carterville-Sarepta and Shongaloo fields, XXII, 1473
- Bossier formation, XXVIII, 582
- (Bossier)
- correlated with Kimmeridgian of Mexico, XXVIII, 610
- correlated with middle Kimmeridgian of Mexico, XXVIII, 594
- fossils of, XXVIII, 592
- isopach map of, XXVIII, 584
- lithologic character, XXVIII, 585
- paleontology, XXVIII, 592
- stratigraphic relationships, XXVIII, 592
- type locality in Bellevue oil field, XXVIII, 585
- type section, XXVIII, 591
- Bossier Parish, Louisiana, geology of Bellevue oil field, XXII, 1658
- oil in, XXVIII, 269
- Bossier, X, 399
- Bossier, Robert B., oil fields rejuvenated, review, VII, 304
- Bostick, Francis X., SD, 211, 250, 273, 294; X, 3, 9, 221, 242; XXII, 1185
- Bostick, J. Wallace, III, 312; VI, 195; XXV, 1221
- analysis of Zapata County, Texas, oil, V, 626, review, VI, 155
- Boston Barnett well No. 1, VIII, 525
- Boston Mountain escarpment, XXV, 1653
- Boston Mountains, GAS, 539, 543, 546; V, 561; XXI, 1409, 1420
- Boston pool, PROB, 763; V, 120, 130, 135
- Boswell, P. G. H., RMS, 605; XVIII, 1576; XX, 1094; XXVI, 48, 1233
- on mineralogy of sedimentary rocks, review, XVIII, 267
- Bosworth, T. O., PROB, 435; XII, 10, 12, 24, 29; XIV, 295
- geology of Tertiary and Quaternary periods in northwest part of Peru, review, VII, 443
- Bosworth, T. O., and Kindle, E. M., oil-bearing rocks of Lower Mackenzie River valley, review, V, 524
- Bosworth beds, V, 525
- Bothé, A. Ch. D., XXII, 30
- Bothnian Bay, RMS, 305, 307
- Botset, Holbrook G., XVI, 378; XVII, 720, 729; XIX, 890; XXII, 1242
- Botset, Holbrook G., and Clark, R. W., XVIII, 68; XXIV, 1539
- correlation between radon and heavy mineral content of soils, XVI, 1349
- Botset, Holbrook G., and Reed, D. W., experiment on compressibility of sand, XIX, 1053
- Botset, Holbrook G., and Weaver, Paul, XVIII, 68
- Botset, Holbrook G., and Wyckoff, R. D., XXII, 1241
- Botset, Holbrook G., Wyckoff, R. D., Muskat, M., and Reed, D. W., GAS, 1084; PROB, 808
- measurement of permeability of porous media, XVIII, 161
- Bottles for collecting suspended matter, RMS, 632
- Bottom of streams, influence of, on transport of debris, RMS, 14
- Bottom and edge waters, attitude of, Wasson field, XXVII, 512
- Bottom configuration, RMS, 4, 5, 106, 134, 249, 273, 278
- effect on currents, RMS, 59, 103, 108, 131, 136, 277, 374
- effect on nitrogen content of sediments, RMS, 262, 263
- effect on organic content of sediments, RMS, 445, 450

(Bottom)

- effect on sediments, RMS, 239, 247-248
 effect on sediments, in Indian ocean, RMS, 401
 effect on sediments, in North Sea, RMS, 336
 effect on tides, RMS, 128, 134, 135 of North Sea, RMS, 324-325
 of ocean, RMS, 108
 off Mississippi delta, RMS, 159
 off Southern California, RMS, 246
 Bottom currents, RMS, 236
 in Antarctic, RMS, 404, 406
 Bottom deposits, RMS, 150
 as influenced by currents and waves, RMS, 236
 of Lake Ontario, review, IX, 1121
 types of, in Santa Monica Bay, XXII, 204
 Bottom friction, RMS, 122, 276
 effect on currents, RMS, 78
 Bottom-hole pressure, Cut Bank field, STRAT, 372-373
 East Texas, STRAT, 626, 628-631, 633-635
 gas-oil ratio, number of wells, and accumulated production curves, Goldsmith field, for period of May, 1935, to June, 1938, XXIII, 1549
 Hardin field, STRAT, 591
 Hull-Silk field, STRAT, 678
 in gas wells in Bammel field, XXIX, 262
 Lopez field, STRAT, 693
 Olympic pool, STRAT, 467
 Seymour pool, STRAT, 769
 Wherry pool, STRAT, 128
 Bottom-hole pressure and temperature at Bammel field, surveys of, XXIX, 265
 Bottom-hole pressure data at Goldsmith field, XXIII, 1540
 Bottom-hole pressure map, Wasson field, XXVII, 516
 Bottom-hole pressure measurements and application, XXVI, 108
 Bottom-hole-pressure studies, Amelia field, XXIII, 1655
 Bottom-hole pressures, Eola field, XXV, 1393
 geological application of, XVI, 891
 Goldsmith field, XXIII, 1548
 Greenwich pool, XXIII, 662
 in East Texas oil field, interpretation of, XVI, 907
 Lisbon field, XXIII, 318
 North Cowden field, Ector County, Texas, XXV, 618, 620
 Payton pool, XXVI, 1645
 Wasson field, XXVII, 514
 Bottom-hole temperature, Cut Bank field, STRAT, 373
 Bottom-hole water in Wasson reservoir, XXVII, 510
 Bottom-living animals, RMS, 149, 316, 514
 Bottom load of streams, RMS, 271
 Bottom materials of inorganic origin, in calcareous deposits, RMS, 289-290
 Bottom rock, RMS, 277
 Bottom samplers, RMS, 3, 300, 359
 gear needed for handling, RMS, 635
 Bottom-sampling apparatus, RMS, 631
 references on, RMS, 662
 Bottom sediments of Lake Pontchartrain, Louisiana, XXIII, 1
 Bottom-set beds, RMS, 173
 Bottom velocities, RMS, 236
 Bottom water of north Pacific, RMS, 54

(Bottom)

- oxygen content in, RMS, 266
 Boughton, XII, 904
 Boughton, Charles W., GAS, 496; XII, 3
 Bouguer, XII, 894
 Boulder bed member of Haymond group in Marathon area, XXIV, 109
 Boulder Canyon, XXVI, 1803
 Boulder Creek, MSC, 53
 Boulder Creek-Big Basin road, MSC, 53
 Boulder Creek-Los Gatos road, MSC, 53
 Boulder Dam, Nevada, XXVI, 1801
 faults affecting site of, XXVI, 1807
 foundation features affecting, XXVI, 1807
 geologic map of foundation and abutments after final excavation, XXVI, 1806
 map and section showing formations and geological structures in vicinity of, XXVI, 1805
 section showing formational sequence of rocks in abutments and foundation for, XXVI, 1808
 Boulder Dam and reservoir, Lake Mead, location map, XXVI, 1804
 Boulder-forming orogeny, XVIII, 1007
 Boulder Knoll, GAS, 369
 Boulder Knoll field, Utah, XXI, 1259
 Boulders, RMS, 40, 45, 211, 221, 269
 in Baltic, RMS, 300
 in Johns Valley shale in Compton Cut and at Lamberson Spur, XVIII, 1042
 of Bengalia, review, XVII, 1538
 Boulton, W. T., XVI, 552
 Boundaries between systems, unconformities in relation to, XXIV, 288
 in standard section, XXIV, 284
 of systems, definition of, based on unconformities, paleontologic breaks, and marked changes in lithology, XXIV, 290
 of systems in sections other than standard, XXIV, 291
 Boundary between Carboniferous and Permian in Russia, XXII, 1015
 between Oligocene and Miocene, XXIII, 1560
 natural, between Carboniferous and Permian, indicated by stratigraphic hiatus or faunal change, XXIV, 277
 Boundary Butte anticline, GAS, 370
 Boundary faults, geosynclinal, XX, 910
 Boundary layers, influence of, on turbulence, RMS, 80
 Bourbon formation, XXV, 31
 Bourbon group, Chanute pool, STRAT, 62, 63
 Bourbon High, Crawford County, Missouri, diamond-drill core from, XXVIII, 1386
 Bourcart, J., XVI, 445
 Bourguet, Louis, XXV, 1209, 1212
 Bournien and Martian beds of Crimea, XXII, 1018
 Boutwell, J. M., XXIII, 85, 95
 Bouvier, F. A., XXIX, 1417
 Bouyoucos, George John, RMS, 541, 550; IX, 907
 Bow Creek pool, XXIV, 999
 Bow Island gas field, Alberta, GAS, 28, 30, 35; VII, 152
 Bow Island sand in Bow Island field, GAS, 23
 Bowden, C. F., XXIV, 1466, 1467, 1474

- Bowden pool, Oklahoma, STR I, 211; PROB, 763
 Bowdoin dome, GAS, 258; XXVII, 433, 436
 Bowdoin field, XXVIII, 791
 waters in, XXVI, 1372
 Bowdoin gas field, FOP, 37, 43; XXV, 1469, 1475
 Bowdoin gas zone, GAS, 259-261
 Bowdoin structure, PROB, 939
 Bowen, C. F., PROB, 697; SBP, 196; V, 252, 269; VII, 8, 139, 167, 616; XXV, 884
 Bowen, J. P., XVI, 179
 Marble Falls production in South Bend, Texas, XII, 97
 work in Davenport field, STRAT, 387
 Bowen, J. P., and Gibbs, James F., STRAT, 539, 541, 545
 Bryson field, Jack County, Texas, XVI, 179
 Bowen, N. L., XXIII, 1322
 Bower, T. H., XX, 1163
 Bowers, C. G., review, XII, 1039
 Bowers, E. H., and Rowntree, R. H., GAS, 1012
 Bowers field, Montague County, Texas, XXVII, 20
 gravity of oil in, XXVII, 34
 isopach maps, XXVII, 30, 31, 33
 origin of structure in, XXVII, 36
 producing zones in, XXVII, 29
 production at, XXVII, 20
 sections, XXVII, 23, 27, 28
 structural maps, XXVII, 31-33
 structure in, XXVII, 35
 Bowers pool, XXIII, 1003; XXIV, 1051; XXV, 1075
 Bowers sand, GAS, 431, 434; XXVII, 35
 at Hobbs field, XVI, 58, 64
 Bowes, Glenn H., GAS, 119; SC, 126; XX, 1672; XXIV, 1706
 Bowes, Glenn H., and Barnes, R. M., GAS, 186
 Bowes dome, GAS, 252, 262
 Bowes dome gas field, PROB, 704, 714; XXVII, 459
 Bowie, William, XI, 1233; XII, 1163, 1164, 1165; XIII, 594; XVII, 141, 142; XVIII, 15; XX, 873; XXIII, 1322, 1324
 comments on the Wegener hypothesis, CD, 178
 isostasy, review, XII, 218
 objections to Wegener's hypothesis, CD, 178; discussion by van der Gracht, CD, 212
 Bowie, William, and Hayford, John F., XXI, 333
 Bowie County, XXVII, 788; XXVIII, 849
 Bowie formula for computing theoretical values of gravity at sea-level, XXI, 337
 Bowlegs field, Oklahoma, PROB, 411; STR II, 316-324, 345, 351-358, 360
 Bowler, James W., XXIX, 1070, 1124, 1126
 Bowles, Edgar, XXIX, 927
 Bowles, Oliver, XII, 912
 Bowles, Thomas K., XXIX, 956
 Bowles, W. V., XX, 156
 Bowling, Leslie, and Wendler, Arno P., detailed study of beds commonly known as Catahoula formation, in Fayette County, Texas, with particular reference to their age, GC, 528; XVII, 526
 Bowling Green structure, PROB, 544

- Bowman, Isaiah, XXIX, 517, 518
 Bowman, W. F., SD, 558; XVI, 585; XXV, 1969
 South Dayton salt dome, Liberty County, Texas, SD, 558, IX, 655
 Bowman, W. F., and Baker, Charles L., XV, 1030, 1059, 1061, 1063, 1076
 Bowman field, GAS, 834
 Bownocker, J. A., STRAT, 382, 385; VII, 620; VIII, 720; XXIV, 486
 Bowsher, A. L., and Laudon, L. R., XXVI, 1734; XXVII, 918; XXIX, 136
 Mississippian formations of Sacramento Mountains, New Mexico, XXV, 2107
 Boxelder field, PROB, 704
 faulting at, GAS, 264
 waters in, XXVI, 1372
 Boyadbe graben, Turkey, XIV, 689
 Boyce, John V., XXI, 698
 Boyd, D. R., I, 31
 Boyd, H. E., XX, 1020
 Boyd, W. Baxter, XXVII, 1265
 deepest well in Mid-Continent region, Washita County, Oklahoma, XXIV, 735
 Jesse pool, Pontotoc and Coal counties, Oklahoma, XXII, 1560
 Boyd (well 381), SBP, 292-335, 409
 Boyd Oil Company, GAS, 676
 Boyd pool, XXIX, 687
 Boyer, W. W., XVIII, 1475
 Billy Creek gas field, Johnson County, Wyoming, GAS, 297
 Boyer, W. W., and Lee, W. T., XI, 803
 Boylan, Tom, XXVIII, 1215
 Boyland, E. E., XXI, 233
 Boyle, A. C., Jr., XI, 718
 Boyle, R. W., XXIV, 1532
 Boyle, Walter J., XIII, 1523
 Boyle limestone, XXII, 1447; XXV, 690; XXVIII, 531, 537
 relationship of, to Bisher and Lilley formations near Irvine, XXVIII, 535
 Boyle limestone and Ohio shale, overlapping unconformable relationship of, XXII, 1448
 Boyle outcrop, XXVIII, 532
 Boyles, N. L., STRAT, 846
 Boyle's law, GAS, 1017, 1036; XII, 1096, 1102; XXIX, 1190
 deviation from, GAS, 51, 1040, 1046, 1048, 1052
 Boyles limestone, XXV, 810
 Boynton field, V, 343
 Boynton sand, V, 290
 Boysen Dam, view of east side of Wind River Canyon showing normal fault at, XXIII, 485
 Boysen fault in Wind River Canyon, XXIII, 1464, 1466, 1467, 1470, 1473, 1488
 Boysen formation, XXIII, 1447
 Braccacini, O. I., XXVIII, 1456, 1467
 Brace, Orval L., PROB, 402; STRAT, 565, 566; XIX, 1389; XXII, 570
 factors governing accumulation of oil and gas in Miranda and Pettus districts, Gulf Coastal Texas, and their application to other areas, XV, 755
 factors governing estimation of recoverable oil reserves in sand fields, XVIII, 343; discussion, XVIII, 1078
 Gulf Coastal developments in 1936, XXI, 1050
 Gulf Coastal developments in 1937, (Brace)
 XXII, 736
 Hardin dome, Liberty County, Texas, XX, 1122
 interrelationship of geology and geophysics, XXI, 197
 review of developments in 1938, Gulf Coast of southeast Texas and Louisiana, XXIII, 871
 review of developments in 1939, Gulf Coast of upper Texas and Louisiana, XXIV, 1079
 review of developments in 1940, Gulf Coast of upper Texas and Louisiana, XXV, 1004
 review of developments in 1941, Gulf Coast of upper Texas and Louisiana, XXVI, 983
 Brace, Orval L., and Rettger, Robert E., minutes of business committee, March, 1944, XXVIII, 677
 Brachopod, XXVII, 638
 characteristic of Leonard series, XXV, 100
 Brachopod-bearing Kungur beds, XXI, 1451
 Brachopod fauna, XXIV, 244, 801
 in Exline limestone in Iowa, XXV, 65
 Brachopods, MEX, 25, 134; PTNM, 574, 603, 654, RMS, 258; VII, 185; XXII, 94, 908; XXIII, 229; XXIV, 176, 178, 341, 792, 798, XXV, 97, 127, 128, 130, 132, 377, 388, 653, 656, 688, 1226, 2113, XXVI, 15, 574, 603, 654
 distinctive of Virgil and lower Cisco series found in New Mexico, XXIV, 178
 from Kulaura samples, XXIV, 643
 in Bigfork chert, XXI, 8
 in Getaway limestone member, PTNM, 600; XXVI, 600
 linguloid, XXIV, 155
 Permian, XXIII, 1675
 Upper Carboniferous, of Urals and Timan region, XXIV, 250
 useful in determining age of salt series, GC, xul
 Brachopods and trilobites, Ordovician, in Cascade Mountains, XXIX, 1391
 Brackish and non-marine Miocene in southeastern Texas, XXVIII, 977
 Brackish water, RMS, 360, 361
 in basins, effect of, on life, RMS, 99
 mollusks in, RMS, 161
 sediments of, RMS, 360
 Brackish-water deposit (Tulillo facies), MEX, 84
 Brackish-water fauna of Catahoula formation, GC, 536; XVII, 534
 Brad group, Cross Cut-Blake district, STRAT, 549
 Bradford, H. H., XXIII, 1680; XXIX, 166
 Bradford, R., RMS, 540
 Bradford, Sidney, SD, 358; IX, 758
 Bradford, Pennsylvania, safety of water-flooding pressures at, XIX, 793, 1239
 Bradford Agricultural Society (Penn-United Gas Co.) (well 414), SBP, 349-379, 410
 Bradford anticline, Bradford field, Pennsylvania and New York, STR II, 431
 Bradford County, Pennsylvania (well 414), SBP, 349-379, 410
 Bradford field, PROB, 13, 316, 340, 475, 480, 481, 839, 841, 842, 844, (Bradford)
 851; V, 360, XXII, 429; XXV, 1139; XXVI, 1116; XXVII, 842; XXVIII, 723, 730
 New York, XXIX, 670
 Pennsylvania, XXIX, 670, 674
 Pennsylvania, graywackes and the petrology of, discussion, XXV, 2071
 Pennsylvania, oil and gas sands in, XXII, 420
 Pennsylvania and New York, STR II, 407
 Pennsylvania and New York, Bradford sand in, STR II, 425
 Pennsylvania and New York, geology and oil resources of, XXI, 1354
 Bradford First sand, STRAT, -95, 496
 Bradford sand, PROB, 285, 458, 475, 476, 478, 481, 828, 831; STR II, 429; V, 366; VI, 46; XXV, 1141
 analysis of connate water from, STR II, 435
 anticlinal occurrence of oil, STR II, 679
 Bradford field, Pennsylvania, physical characteristics of, and relation to production of oil, XVIII, 191
 Bradford field, Pennsylvania and New York, STR II, 425
 continuity, STR II, 428
 Scenery Hill gas field, Pennsylvania, STR II, 449
 Bradford sand gas pool, XXV, 1141
 Bradford Third sand, petroleum and genesis of, XXV, 1413
 Bradford water, PROB, 286
 Bradfordian series, demise of, discussion, XIX, 912, 1546-1548
 Bradish, B. B., XXVI, 123
 Bradley, W. F., RMS, 457, 467, 473
 Bradley, W. H., CAL, 200; GAS, 342; SBP, 356; XIX, 174, 190, 537, 867, 1499; XXI, 34, 258; XXII, 1026, 1033, 1307, 1385; XXIII, 581; XXV, 141, 297, 826; XXIX, 1709
 anticlines between Hiawatha gas field and Bagges, Wyoming, XIX, 537
 origin of Green River formation and its oil shale, IX, 247
 Bradley, W. H., and Sears, J. D., GAS, 353; XIV, 1015, 1026, 1027; XXII, 1030
 Bradley, Walter W., STRAT, 1; XIV, 1352
 Bradley sand, XXII, 75
 Bradley well in Illinois, XXI, 785
 Bradshaw, L. J., and Uren, L. C., XIX, 882, 888
 Brady, F. Howard, XVII, 111; XXIV, 312
 Minnelusa formation of Beulah district, northwestern Black Hills, Wyoming, XV, 183
 Brady, H. B., MSC, 11, 15, 261, 263; XIV, 1334; XXIV, 1577; XXV, 1225
 Brady, H. B., Parker, W. K., and Jones, T. R., MSC, 11
 Brady field, gravity of oil at, XXVIII, 792
 Bragdon formation, CAL, 63
 Bragg, W. H., XXVIII, 934
 Bragg, W. L., RMS, 618, 623, 624
 Bragg's equation, RMS, 618
 Braiding streams, XXIII, 1199
 Brainerd, A. E., X, 1019, 1020; XVI, 775; XVII, 110, 365, 369, 375, 397; XVIII, 539; XX, 1196; XXII, 1235

- (Brainerd)
discussion of Frontier-Niobrara contact of Wyoming, XX, 1196
memorial of Cecil Earl Schoenfelt, XXVIII, 1413
- Brainerd, A. E., and Johnson, J. Harlan, Mississippian of Colorado, XVIII, 531
- Brainerd, A. E., and Keyte, L. A., PROB, 684; XI, 1235; XXI, 719, 748, 751
some problems of Chugwater-Sundance contact of Bighorn district of Wyoming, XI, 747
- Brainerd, A. E., and Lavington, Charles S., developments in Rocky Mountain region in 1936, XXI, 986
- Brainerd, A. E., Baldwin, H., and Keyte, I. A., XVIII, 540
- Brainerd, A. E., Baldwin, H. L., Jr., and Keyte, I. A., pre-Pennsylvanian stratigraphy of Front Range in Colorado, XVII, 375
- Brallier shale, XXIV, 1992
- Bramen pools, PROB, 770
- Bramkamp, R. A., XX, 491
- Bramlette, M. N., CAL, 194; MSC, 1, 5, 36, 37, 177, 299; SD, 227; X, 1070, XII, 179, 1019; XIV, 1474; XVIII, 435, 468; XIX, 1406; XX, 126; XXIII, 38; XXIV, 1645; XXVI, 1610
- bentonite in Upper Cretaceous of Louisiana, VIII, 342
- heavy mineral studies on correlation of sands at Kettleman Hills, California, XVIII, 1559
- pseudo-stratification in core recoveries, XII, 1167
- volcanic rocks in Cretaceous of Louisiana, VIII, 344
- Bramlette, M. N., and Kleinpell, R. M., MSC, 47, 65
- Bramlette, M. N., and Lohman, K. E., MSC, 47, 61, 105
- Bramlette, M. N., Lohman, K. E., and Kleinpell, R. M., MSC, 31, 45, Fig. 6 (in pocket)
- Bramlette, M. N., Woodring, W. P., and Kleinpell, R. M., MSC, 77, 200, 206, 207, 209, 211, 212, 218, 221-223, 225, 230, 231, 237, 238, 244, 245, 247-249, 251-253, 255-257, 259, 261-268, 270-274, 276-279, 281-286, 288, 289, 294, 295, 297-300, 303, 304, 307-310, 312-314, 317, 319, 320, 324, 326-328, 330-332, 334, 335, 337-342, 344, 347, 348, 350, 354, Fig. 14 (in pocket)
- Miocene stratigraphy and paleontology of Palos Verdes Hills, California, XX, 125
- Bramlette, M. N., Woodring, W. P., and Lohman, K. E., stratigraphy and paleontology of Santa Maria district, California, XXVII, 1335
- Branch field, Louisiana, XXIX, 797, 800
- Branchworks versus networks, XXIII, 1220
- Brand, Erich, XXV, 133
- Brandenthaler, R. R., GAS, 1017, 1025
memorial of, XIV, 256
- Brandenthaler, R. R., Slater, K. C., and Kent, H. M., STRAT, 394, 395
crude oil, STRAT, 403-407
oil-field waters, STRAT, 403
- Brandenthaler, R. R., Williams, I. B., and Walker, Morgan, GAS, 1021
- Brandt, K., RMS, 50, 438, 441, 442
- Brankstone, Hugh R., Gealy, W. B., and Smith, W. O., XVI, 863
improved technique for determination of densities and porosities, XVI, 915
- Branner, XI, 34
- Branner, George C., GAS, 533, 568, XVIII, 989, 1011, 1012
list of Arkansas oil and gas wells, review, XXII, 112
- sandstone porosities in Paleozoic region in Arkansas, XXI, 67
- Branner, J. C., CAL, vi; MSC, 22, 300; I, 22, 26; XII, 977; XIV, 127; XVIII, 982, 1134, 1137, XXI, 53, 55, 79, 299, 301, 303, 304, 308; XXII, 977, XXIII, 577, 579, 580; XXIV, 427; XXVII, 255
- Branner, J. C., and Newsom, J. F., XXVII, 117
- Branner, Newsom, and Arnold, CAL, 205
- Bransky, III, 355
- Branson, Carl C., XII, 201; XVII, 268; XVIII, 1658, 1660, 1662, 1663, 1665, 1691; XXIII, 86, 90, 95, 474; XXIV, 311, 769, XXV, 131; XXVI, 309; XXVII, 1293; XXIX, 1151, 1153
age of abyssal deposits of East Indian Archipelago, XXV, 320
- Branson, E. B., XI, 750; XII, 201; XVIII, 1298, 1662; XIX, 1114, 1115, 1231; XXIV, 311; XXV, 2112, 2113; XXIX, 221
- Branson, E. B., and Branson, C. C., geology of Wind River Mountains, Wyoming, XXV, 120
- Branson, E. B., and Greger, D. K., XXV, 131
- Branson, E. B., and Mehl, M. G., XX, 1334; XXIV, 777, 779
- Branson, E. B., and Tarr, W. A., XXV, 128
introduction to geology, review, XIX, 1240
- Branson, E. B., and Westgate, L. G., XXV, 146
- Brant, Ralph A., STRAT, 473; XVII, 389
- Brant, Ralph A., and Borden, Joseph L., East Tuskegee pool, Creek County, Oklahoma, STRAT, 436
- Brantford area, Ontario, natural gas in, XXV, 1950
- Brantly, John Edward, MEX, 23; XVII, 192; XXIV, 2031
geology of Gulf Coastal Plain, VIII, 21
review, XXV, 327
rotary drilling handbook, review, XX, 1498
- Branton sandstone, XXIV, 638
- Brasil, geologia do, XXIX, 289
- Brasil meridional, rochas Gondwanicas e geologia do petroleo do, review, XIX, 1701
- Brass core barrel for collecting sediment samples, XXIII, 12
- Brassfield beds in east-central United States, XXII, 1533
in Michigan, Ohio, eastern Kentucky, eastern Tennessee, and eastern Indiana, XXII, 1533
- Brassfield fauna, XXVI, 15
- Brassfield formation, XXV, 1148
- Brassfield-Fossil Iron Ore zone, XXV, 821
- Brassfield limestone, XXV, 1644
- (Brassfield)
Big Sinking field, STRAT, 179
- Brassfield oolitic limestone, XXV, 815
- Braisted, Fred, Jr., XIV, 37
- Brauchli, R., IX, 984, XVI, 1024; XX, 619
- Brauchli, R. W., PROB, 355
migration of oil in Oklahoma City field, XIX, 699; XX, 619
reviews, XVI, 947; XX, 1504
- Braun, G., RMS, 410, 412
- Braunstein, Jules, XXVII, 1410; XXVIII, 579, XXIX, 1417
- Bravaisite, RMS, 469
- Bravinder, Kenneth M., Los Angeles basin earthquake of October 21, 1941, and its effect on certain producing wells in Dominguez field, Los Angeles County, California, XXVI, 388
- Bray, R. H., RMS, 457, 467, 473, 486
- Brazer, correlations of, with other formations in west, XXIX, 1151
- Brazer (Mississippian) and lower Wells (Pennsylvanian) section at Dry Lake, Logan Quadrangle, Utah, XXIX, 1143
references, XXIX, 1155
- Brazer formation, XXIX, 1143
at Dry Lake correlated with Paradise, Sacajawea and Amsden formations, XXIX, 1151
faunal zones in, XXIX, 1145
- Brazer formation and Big Snowy group, relationship between, XXIX, 1151
- Brazer fossils, distribution of, XXIX, 1146
- Brazer-Wells boundary, XXIX, 1145
- Brazil, RMS, 212, 225, 376
- Alagôas series (Lower Tertiary) in, XXI, 300
- algal sediments on, XXI, 121
- Campos district, review, VI, 388
- Devonian in, XXIX, 544
- eastern, prospective petroliferous basins of, XXIX, 542
- geological exploration, XXI, 1347
- geology little related to that of Africa, CD, 125
- geology of Alagôas, XXI, 301
- geology of coast of state of Alagôas, XXI, 299
- Jurassic in, XXIX, 549
- Juruá area a part of potentially oil-bearing structural belt, XXI, 110
- northeastern, coastal plain of, XXIX, 548
- northeastern, graben faulting in coastal plain of, XXIX, 549
- oil shale, review, VI, 388
- Pernambuco beds of, XV, 160
- petroleum geology of the state of São Paulo, XXVI, 1163
- Pleistocene fault block, XXI, 122
- prospects for oil production, XXIX, 539
- pyrobituminous sediments of, XXI, 120
- Riacho district, XXI, 307
- review of publication on oil resources, VI, 261
- Serra da Baliza, review, VI, 385
- Serra do Moa range, XXI, 110
- Southern, geological map of, XIX, 1775
- Southern, petroleum geology of Gondwana rocks of, XIX, 1725
- Southern, petroleum geology and

- (Brazil)
 Gondwana rocks of, discussion, XX, 819, 984
 state of São Paulo, XIII, 1215
 stone reefs of, XXIII, 563, 577
 Sungarú sandstones in, XXI, 104
 upper Jurúá River, and middle Ucayali River, Peru, geological exploration between, XXI, 97
 Uruguay and Paraguay, geology of Devonian areas of Paraná Basin in, XX, 1208
 Brazil and other areas of South America, correlation of Devonian in, XX, 1234
 Brazil and Peru, Cruziero redbeds in, XXI, 105
 reconnaissance work of Victor Oppenheim in, XXI, 100
 Brazil anticline, GAS, 518
 Brazil basin, RMS, 379, XXIII, 1667
 Brazil coast, RMS, 375
 Brazilian algal deposits, XXI, 122
 Brazilian Cretaceous formations, XXI, 1211
 Brazilian shield, XXIX, 539
 Brazoria County, Texas, Bryan Heights salt dome, SD, 678
 Hoskins Mound salt dome, GC, 833; XX, 155
 recent shoreline process, XXIV, 731
 Stratton Ridge salt dome, SD, 644
 well spacing and production interference in West Columbia field, XXVI, 1441
 West Columbia field, V, 212
 Brazos and Colorado rivers, distribution of Beaumont sediments by, Coastal Plain of Texas, XXIV, 698
 Brazos and Grimes counties, Texas, application of name "Ferguson Crossing dome," XXIII, 1092
 Brazos River Gas Company, XXVI, 216
 Brazos sandstone, III, 138
 Brazos-Trinity delta, XVIII, 1252
 Brea Canyon Oil Company, GAS, 210
 Brea Canyon-Olinda fields, GAS, 209, 213; PROB, 215, 751; VI, 303
 water analyses, PROB, 983
 Brea trapping, PROB, 746, 748, 753, 756
 Break theory, PROB, 7
 Breakage, selective, of minerals during transport, RMS, 610
 Breaks in deposition of Upper Cretaceous in eastern Gulf region, XXII, 1641
 Breakwaters, RMS, 204, 272, 276, 330
 Breaux sand, XXVII, 1131, 1145, 1153
 Breau series, XXVII, 1125, 1145
 Breccia, SD, 68, 69, 78, 106, 113, 115, 118
 in Seven Rivers section, XXVI, 95
 near base of Marmolejo formation, XXVIII, 466
 plant-bearing clays separated from, by a fault near Lamberts Station, Alabama, XXIII, 1554
 tectonic salt masses in Carpathian Flysch, IX, 1185
 Breccia conglomerate, MEX, 40, 48, 205, 207, 224
 Brecciated limestone, MEX, 166
 Brecciated rock in Pánuco area, MEX, 176
 Brecciation in cap rock, SD, 77, 79; IX, 69
 Brecciation and flowage, SD, 58
 Brecciation and metamorphism as re-
- (Brecciation)
 sult of igneous intrusion, MEX, 156
 Breckinridge, Meade, and Hardin counties, Kentucky, Chester rocks of, XXII, 267
 Breckenridge field, III, 165; IV, 160-163; V, 545; XXV, 1677
 helium in, GAS, 1055
 Stephens County, Texas, relation of initial production to ultimate production of wells completed in Smithwick (Gray) limestone in, XXV, 1589
 Breckenridge formation, III, 138; VI, 396
 Breckenridge limestone, Seymour pool, STRAT, 762
 Smith-Elis field, Texas, STR II, 558
 Stephens County, Texas, STR II, 471
 Breckenridge pool, Stephens County, Texas, PROB, 353
 relation of accumulation of oil to structure, STR II, 478
 Breckenburg, XI, 557
 Breedsville field, Michigan, XXVIII, 763; XXIX, 698
 Breitenstein, August J., and Hutchinson, W. Spencer, GAS, 1148
 Breitenstein, Robert S., XXVI, 794
 Breithaupt geologists' compass, V, 511
 Breittkreutz well in Greenwood County, Kansas, example of a schist well, XI, 822
 Bretung, C. A., and Belchic, George, XXII, 1474
 gas production from Spring Hill-Sarepta gas field, Webster and Bossier parishes, Louisiana, VII, 555
 Breitung, Dil, GAS, 511
 Bremer, Bernard, and Twenhofel, W. H., extension of Rose dome intrusives, Kansas, XII, 757
 Bremner, Carl St. John, MSC, 114, 115; SC, 105-107, 122; XX, 154, 1651-1653, 1668
 memorial of, XXIX, 120
 Bremond, P., XVII, 1226
 Brendel, S. J., *et al.* (wells 410, 411), SBP, 349-379, 410
 Breneke sand, XXVII, 774
 Brenham Oil Company, GC, 781; XIX, 1331
 Brenham salt dome, Washington and Austin Counties, Texas, SD, 39
 effect of character of rim syncline on production at, XX, 1422
 section of, GC, 784; XIX, 1334
 subsurface map of, GC, 782; XIX, 1332
 structural features of, GC, 780; XIX, 1330
 Brenneman, O. C., XXIX, 72
 Brenner *et al.* (well 398), SBP, 292-335, 410
 Brentwood limestone, grain residue of, XXIV, 429
 insoluble residues of, XXIV, 428
 on Hale Mountain, section of, XIV, 136
 Brentwood member of Bloyd formation, XXIV, 427
 Breton limestone, XXIII, 1380; XXVI, 1591
 Bretznitz, A., XXI, 1274, 1306
 Breton Island, RMS, 169
 Breton Sound, RMS, 160, 165, 169, 171
 Bretz, J. H., XXVI, 62
 Breunnerite, RMS, 385
- Brewer, Charles, J., RMS, 215, SBP, 356; STRAT, 819, 820
 genetic relationship of oil reservoirs to shoreline deposits, XII, 597
 memorial of, XXVIII, 1553
 Brewer, W. H., SC, 1; XX, 1547
 Brewer field, IV, 163
 Brewster, Eugene B., and Giles, Albert W., XXIV, 418, 430
 Hale Mountain section in northwest Arkansas, XIV, 121
 Brewster, F. M., XIX, 884
 Brewster County, Texas, algal reefs in Cretaceous Austin chalk of Terlingua district, XXVIII, 123
 Briartown dome, GAS, 531
 Briceland, MSC, 26, 212, 223, 231, 249, 256, 258, 266, 274, 288, 289, 320, 324, 328, 333, 335
 faunule, MSC, Fig. 14 (in pocket)
 Bridge, Josiah, XII, 188; XXVIII, 996, 997; XX, 303, 491, 1255, XXI, 2, XXIII, 598; XXIV, 143, 154, 155, 156, XXV, 654, 1621, 1627, 1631, 1635, 1638
 memorial of Charles Laurence Dake, XIX, 144
 position of Cambrian-Ordovician boundary in section of Arbuckle limestone exposed on highway 77, Murray County, Oklahoma, discussion, XX, 980
 statement concerning fossils from erratic boulders near Boles, Arkansas, XVIII, 997
 Bridge, Josiah, and Dake, C. L., XVIII, 1249; XXII, 1411, XXIV, 71, 74, XXV, 1635; XXVI, 1399
 buried and resurrected hills of central Ozarks, XVI, 629
 initial dips peripheral to resurrected hills, review, XII, 1171
 Bridge, Josiah, and King, Philip B., XXIV, 6
 Bridge, Josiah, Hendricks, T. A., and Knechtel, M. M., geology of Black Knob Ridge, Oklahoma, XXI, 1
 Bridge, Samuel D., Jr., memorial of, V, 433
 Bridge Creek formation, CAL, 154, 299
 Bridger Basin, GAS, 332
 Bridger formation, XXII, 1034; XXV, 141
 Bridger horizon, CAL, 303
 Bridger Mountains, XXVII, 429
 Bridger-Owl Creek Range an asymmetrical anticline broken by faults, XXIII, 484
 Bridger pre-Cambrian rocks, XXIII, 1485
 Bridger uplift, XXIII, 1441
 Bridgeport storage pool, XXVIII, 1571
 Bridwell Oil Company, XXIII, 1237
 Briggs, H. B., XII, 798
 Briggs, Henry, Owen, A. L. S., and Wilson, John, PROB, 998
 Briggs, Lyman J., RMS, 547; IX, 450
 Briggs dome, Kentucky, VI, 31
 Briggs electrical method of surveying bore holes, XIII, 1146
 Brighton, T. A., XXII, 1307
 Brightwell, Thomas, XII, 970
 Brill, Kenneth G., Jr., PTNM, 708; XXVI, 708
 late Paleozoic stratigraphy of Gore area, Colorado, XXVI, 1375
 Brill, Kenneth G., Newell, Norman D., Knight, J. Brookes, and Moore, Raymond C., XXIII, 1811

- Brill, V. A., XVIII, 1702; XXIII, 625
 Brill, V. A., and Bell, Douglas E., active faulting in Lavaca County, Texas, XXII, 104
 Brine fields in Szechuan province, XXVIII, 1434
 Brine shrimp at Great Salt Lake, XXII, 1401
 Brine shrimp *Estheria*, XXIII, 1769
 Brines, barium in, STRAT, 810
 chemical analyses of four, Eddy County, New Mexico, XXV, 154
 in Vance well, XXIV, 673
 Brinkmeier, IX, 441
 Briones-Cierbo, regressive and transgressive aspects of, MSC, 89
 Briones formation, CAL, 163, 193, 217, 219; MSC, 47, 66, 89, 92, 130, 156, 167, Fig. 14 (in pocket)
 Briones Hills, CAL, 307
 Briones-Rodeo contact, MSC, 65
 Briones sandstone, California, outcrop section F, SBP, 167-194, 411
 Bristol Mountains, CAL, 60
 Bristow district, Oklahoma, heavy Dutcher oil in, XV, 211
 Bristow formation in Dewey area, Oklahoma, STR II, 366
 Bristow pool, XXIX, 691
 Britain, Germany's gasoline difficulties involved in all-out air attacks on, XXV, 1280
 British-American Company, XXIV, 1053
 British American Oil Company, XXVIII, 796
 British-American Oil Producing Company, XXVI, 1646
 British Borneo, oil fields in, XXVIII, 1449
 British Columbia, CAL, 76, 302; RMS, 456
 fiords, RMS, 97
 foraminifera from, MSC, 12
 occurrence of bitumen in Queen Charlotte Islands, XVI, 797
 oil geology, VI, 112
 petroleum geology of part of western Peace River district, VI, 112
 southeastern, occurrence of *Baculites onatus* zone of Upper Alberta shales in, XIX, 295; discussion, XIX, 703
 British East Indies, reserves in, XXIII, 964
 British expeditions on the Discovery II, RMS, 51
 British Honduras, geology of, review, XII, 956
 British India, reserves in, XXIII, 964
 British Isles, MSC, 15
 British New Guinea, geology, XXVIII, 1452
 British Recent foraminifera, MSC, 11
 British Somaliland, oil found in shallow basins, XXI, 295
 British spilites, CAL, 97
 B.T.U. and gasoline content, Bend Arch gases, GAS, 644
 British West Indies, geology and oil resources of Trinidad, IX, 1000
 Brittany, RMS, 344
 Brittleness, effect of, on rounding, RMS, 45
 Britton, J., XXIX, 15
 Britton area, XXI, 1012
 Broad nose, definition, PROB, 434
 Broadhead, XII, 884
 Broadhead, G. C. I 23, 24
 Broadview dome, XXIII, 923
 Brock anticline, VI, 18
 Brock field, XXV, 21
 Brock pool, GAS, 585; XXVII, 801
 Brock shale, CAL, 67
 Brockway, E. R., IX, 989
 review, XXII, 112
 Brockway, E. R., and Owens, H. J., IX, 984
 Brod, I. O., geological terminology in classification of oil and gas accumulations, XXIX, 1738
 Brogger, XXIV, 501
 Brokaw, XII, 993
 Broken Arrow coal and associated strata, western Rogers, Wagoner, and southeastern Tulsa counties, Oklahoma, XXVIII, 1036
 Broken Jug limestone, XXII, 531
 Broken Red Fork sand, STRAT, 481
 Broken shells, RMS, 215, 221, 258
 Brokenoff Mountains, XXI, 842
 Bromide formation, XI, 970; XXI, 1003; XXV, 655, 657, 659, 662, 663, 664, 666, 1638; XXIX, 192, 198
 at Fitts pool, XX, 956
 productive in Jesse pool, XXII, 1561, 1565, 1577
 Bromide limestone, XXVII, 800
 Bromide sand, XXV, 1099; XXVI, 1069; XXVII, 802
 Bromide upper Simpson graptolite zone, XX, 305
 Bromides, RMS, 61
 in sea water, RMS, 65
 Bromine, PROB, 241; RMS, 61
 in sea water, RMS, 143
 Bromoform, RMS, 529, 595, 602
 use of, in mineral analysis, RMS, 595-598
 Brongmartian usage, MSC, 88
 Bronn, CAL, 157
 Bronson group, Bush City field, STRAT, 44, 45
 Chanute pool, 62, 63
 Brookfield coal, V, 368
 Brookhaven field, XXVIII, 802
 Brookite, RMS, 602; XXIV, 643
 Brooks, Benjamin T., PROB, 144, 452; SBP, 2; XVI, 784; XVII, 1252, 1258; XIX, 604; XXII, 777; XXIV, 1543; XXVII, 1175; XXVIII, 927; XXIX, 13, 1135
 chemical considerations regarding origin of petroleum, XV, 611
 origins of petroleum: chemical and geochemical aspects, XX, 280
 review, XXVII, 652
 Brooks, Benjamin T., and Snider, L. C., probable petroleum shortage in United States and methods for its alleviation, XX, 15
 Brooks, Benjamin T., Dunstan, A. E., Nash, A. W., and Tizard, H. T., editors, science of petroleum, review, XXII, 777
 Brooks, C. E., XIV, 1280, 1288
 Brooks, C. E. P., RMS, 411; XXV, 409
 climate through the ages, review, XIX, 567
 grave difficulties of continental drift theory, CD, 223
 Brooks, Charles F., and Flitton, Edith M., PROB, 1006
 Brooks, Elisha, XXII, 1089
 Brooks, Jack, XXIX, 51
 Brooks, McCloud, and Clarida leases in Young County, XXIX, 763
 Brooks, S., Survey, Texas (well 329), SBP, 292-335, 408
 Brooks dome, Texas, SD, 212, 222, 237-
 (Brooks)
 243; VI, 58; X, 29-35
 Brooks field, GAS, 25, 29, 30
 Brooks gas sand, GAS, 36
 Broomfield gas area, XXVI, 1103
 Broomfield high, Michigan, GAS, 797
 Broomfield oil and gas field, Michigan, XXII, 150
 Broomfield pool, Michigan, GAS, 805
 Broué, Albert Edward, X, 1119, 1136, 1258; XI, 55
 Broughton, M. N., XXIII, 247
 Broussingault, XIX, 485
 Brouwer, H. A., VII, 4; XI, 159; XIX, 1811; XXII, 2
 Brouwer, H. A., Andree, K., and Bucher, W. H., editors, regional geology of the earth, review, XXII, 929
 Brower, C. D., XIII, 826
 Brown and McClatchey, XVI, 1263
 Brown, A. P., and Pilsbry, H. A., VII, 519, 522
 Brown, Arthur B., and Kew, W. S. W., occurrence of oil in metamorphic rocks of San Gabriel Mountains, Los Angeles County, California, XVI, 777
 Brown, Augustus Bart, Bowers field, Montague County, Texas, XXVII, 20
 Brown, Barbara F., XXVII, 1175
 Brown, Barnum, XI, 248; XXVIII, 1196, 1215
 Brown, Barnum, and O'Connell, Marjorie, XVI, 537; XIX, 116
 Brown, Charles Barrington, XIV, 263; XXIX, 538
 Brown, Claude C., GAS, 119, 123, 135, 1094, 1111
 Brown, E. Call, VII, 612, 614; X, 1234; XXV, 1227
 Brown, George H., XI, 734
 Brown, H. Y. L., XI, 78
 Brown, Harry J., IX, 626
 Brown, Ira Otho, review, XX, 829
 Brown, Ira Otho, and Hager, D. S., Minerva oil field, Milam County, Texas, VIII, 632
 Brown, J. Earle, XIII, 594
 memorial of Charles Stirling Huntley, X, 1322
 memorial of William C. Steubing, XXVIII, 693
 Brown, John S., CAL, 24; XIX, 328, 329, 349, 350; XXII, 96; XXIV, 500
 natural gas, salt, and gypsum in pre-Cambrian rocks at Edwards, New York, XVI, 727
 Brown, J. S., and Dake, C. L., interpretation of topographic and geologic maps, review, X, 906
 Brown, Joseph F., XX, 1210
 Brown, Levi S., PROB, 650, 666; XX, 167, 168, 171, 821, 826; XXI, 1269; XXIII, 194
 age of Gulf Border salt deposits, XXVIII, 1227
 cap-rock petrography, XV, 509
 climatology of Brown's hypothesis on origin of Gulf Border salt deposits, discussion, XX, 824
 Brown, N. H., XXV, 138
 Brown, N. P., XXIV, 1807
 Brown, O. P., XXV, 884
 Brown, Otto E., XIV, 37, 55; XXI, 1514, 1554, 1561, 1564, 1565, 1566, 1567, 1571; XXIII, 1754, 1777, 1788, 1802

- (Brown)
 unconformity at base of Whitehorse formation, Oklahoma, XXI, 1534; XXIII, 698
- Brown, P. F., XXVII, 523; XXVIII, 628
- Brown, Robert Wesley, XII, 1026, 1095; XIII, 628, 639, 1455; XX, 1319, 1320, 1324, 1328
 discussion of tension faulting, XIII, 639
 experiments relating to factors causing localization of folds, XII, 617
 experiments relating to results of horizontal faulting, XII, 715
 identification of fossil leaves of Denver Basin as of Laramie age, XX, 1319
 occurrence of folds of Osage type, discussion, XII, 675
 origin of folds of Osage County, Oklahoma, XII, 501
 review, XV, 850
 valuation of oil and gas lands, review, IX, 356
- Brown, Roland W., review, XXIV, 750
- Brown, S. M., RMS, 457, 486
- Brown, Walter F., XVIII, 1459
- Brown anhydritic dolomite in Goldsmith field, XXIII, 1531
- Brown Canyon, MSC, 127
- Brown County, Texas, XXIV, 90
 Cross Cut-Blake district, STRAT, 548
- Brown lime, GAS, 425, 430; PROB, 414, 415
 Hobbs field, XVI, 58, 62
 Yates field, Texas, STR II, 488, 490, 495
- Brown limestone, XXIII, 226
- Brown pool, Illinois, STR II, 130
- Brown shale, MSC, 128, 131; PROB, 490, 494, 507
 Kentucky, GAS, 917, 930, 931, 943
 productive in Kentucky, West Virginia, and Ohio, XXV, 807
- Brown type of gravity apparatus developed by the Coast and Geodetic Survey, description of, XXI, 333
- Brown zone, PROB, 218
 Long Beach field, California, STR II, 63, 65, 66, 68
- Browne, R. E., CAL, 132
- Browne, Spencer C., SD, 712; IX, 713, 732; XX, 157, 173
- Browne, W. R., XXV, 375
- Browne, W. R., and Carey, S. W., XXV, 407
- Brownian motion, XXIX, 17
- Browning, I., and Hudnall, J. S., GAS, 924
- Browning pool, Kansas, STR II, 157
- Brownlee, Roy Hutchinson, SD, 468
- Brown's hypothesis of origin of Gulf Border salt deposits, climatology of, discussion, XX, 821
- Browns Mountain anticline, XXIV, 1984, 1990
- Brown's Park formation, XXII, 1023, 1034
 in northwestern Colorado, STR II, 99
- Brown's Saline, SD, 272
- Brownspout facies, undifferentiated, of Missouri, Illinois, and Arkansas, XXVI, 15
- Brownspout formation, XXVI, 13
 in Missouri, XXVI, 17
- Brownstown marl, Arkansas, VI, 352, 363
- (Brownstown)
 Louisiana, II, 62; IV, 128; V, 305, 477, VI, 181, 195
 Brownstown clay, Bellevue field, Louisiana, STR II, 240
 Brownstown formation, XXII, 1480; XXIII, 296; XXVIII, 525
 Arkansas, correlation of, XIII, 683
 Irma field, Arkansas, STR I, 6
 south Arkansas, XXII, 975
 Brownstown marl, Arkansas, age of, discussion, XIII, 1073
 Homer field, Louisiana, STR II, 208, 209
 Stephens field, Arkansas, STR II, 5
 Brownstown marl and Tokio formation, Homer field, Louisiana, section, STR II, 205
 Brownstown-Tokio beds at Bellevue field, XXII, 1668
 Brownstown-Tokio formation, XXII, 1509
- Brownsville Mississippian field, XXVIII, 837
- Brownstown formation, VI, 350
- Brownville limestone, XXI, 1518
- Brownwood formation, III, 142
- Bruce, William J., XXIX, 414
- Bruch und Fließ-Formen der technischen Mechanik und ihre Anwendung auf Geologie und Bergbau*, review, XV, 291
- Brucite, RMS, 474, 477
- Bruckner and Penck, XX, 868
- Bruckner, E., RMS, 411
- Brucks, Ernest W., PROB, 419, 781; SBP, 296; VIII, 776, IX, 653; XI, 851; XIX, 1069; XXIII, 1712
- Buckeye field, Matagorda County, Texas, GC, 734; XIX, 378
 geology of San Marcos quadrangle, Texas, XI, 825
- Gideon well No. 3, Luling field, Caldwell County, Texas, XVI, 206
- Luling oil field, Caldwell and Guadalupe Counties, Texas, STR I, 256; IX, 632
- Bruckmann, XXV, 1209
- Bruggen, J., RMS, 411
- Bruinsburg dome, XXIX, 828
- Bruinsburg field, Mississippi, XXIX, 826
- Brun, A., XI, 1297, 1303
- Brunei, reserves in, XXIII, 964
- Bruner fault, Texas, sections across, XIV, 1184
- Bruner field, Texas, XIV, 1177
- Bruner pool, Oklahoma, STR I, 213-215, 217, 218; PROB, 763; XI, 935
- Bruno-O'Hern section of Cole field, XXI, 1423
- Brunt, D., XIV, 1280
- Brunton compass attachment for measurement of horizontal magnetic intensity, XV, 1391
- Brushy Canyon formation, PTNM, 577, 586; XXV, 93; XXVI, 577, 586
- Brushy Mountain field, XIX, 518
- Bryan, Frank, XII, 54
 evidence of recent movements along faults of Balcones system in central Texas, XX, 1357
 recent movements on a fault of Balcones system, McLennan County, Texas, XVII, 439
- Bryan, H., RMS, 547
- Bryan, Kirk, CAL, 20; X, 831, XIII, 1419; XVII, 949; XIX, 258, 259, (Bryan)
 260, XXVI, 85, 97, 1797
- Bryan, Kirk, and Albritton, C. C., Jr., XXVI, 1016
- Bryan, Kirk, Meinzer, O. E., and Renick, B. C., XXI, 860
- Bryan Heights salt dome, Brazoria County, Texas, GAS, 709, SD, 678; I, 44, III, 87; IX, 613
 Sulphur and gypsum at, SD, 684
- Bryant and Hughes, XXI, 345
- Bryant, Howard S., GAS, 481; STRAT, 104; XIV, 1537; XXI, 517; XXIII, 1753
 review, XIII, 525
- Bryant, Howard S., and Rutledge, Richard B., Cunningham field, Kingman and Pratt counties, Kansas, XXI, 500
- Bryant, W. E., X, 1086
- Bryant, W. L., XIX, 1738
- Brychan, XIX, 833
- Bryner-Jackson core in Bradford field, Pennsylvania and New York, STR II, 430
- Bryozoa, MEX, 16, 99, 110, 111; RMS, 235, 258, 287, 289; VII, 185, XXIII, 1500; XXIV, 1554; XXV, 383, 388, 1218, 1232; XXVIII, 1681; XXIX, 920
 of Jackson formation, GC, 401; XVII, 632
 of Vicksburg, GC, 404, XVII, 634
- Tertiary, XXVI, 1196
 value in correlation, VIII, 544
- Bryozoa and corals, XXV, 1217
- Bryozoa sand, RMS, 259
- Bryozoans, XXII, 1635; XXIV, 798, 800, 829; XXV, 656, 688, 723, 1226
 abundant in Keokuk fauna, XXIV, 807
 fauna of Glen Dean formation rich in, XXIV, 835
- Bryson, R. P., XXV, 2023; XXVII, 1335
- Bryson field, Big Horn County, Wyoming, Sundance production in, XXI, 766
- Bryson oil field, Jack County, Texas, STRAT, 539, 541, 545; XVI, 179
 accumulation of oil, STRAT, 546, 547
 cost of drilling, STRAT, 547
- Bryson sand, Bryson field, STRAT, 541, 542; XXIII, 852
- Bubnoff, S. von, SC, 136; XX, 1682, 1687, XXI, 1595
- Bucatunna clay in Wayne County, Mississippi, XXVIII, 1337
- Bucatunna clay member, XXVIII, 1316
 in Alabama, XXVIII, 1340
 of Byram marl, GC, 360, 361; XIX, 1164, 1165
- Bucatunna clay member and marl member of Byram formation, XXVIII, 1332
- Bucatunna clays, XXVIII, 60
- Buch, K., RMS, 101, 150
- Buchanan, George S., GAS, 465; XII, 183; XIV, 1548; XVIII, 1135, 1148, 1156; XX, 91
 discovery of Valentine (LaRose) dome, Louisiana, by reflection seismograph, GC, 1040; XVIII, 543
 distribution and correlation of Mississippian of Oklahoma, XI, 1307
 early Pennsylvanian redbeds in Mid-Continent region, IX, 814
 minutes of business committee,

- (Buchanan)
Tulsa, March, 1945, XXIX, 609
remarks made at opening of twenty-sixth annual meeting, XXV, 1201
Buchanan, George S., and Rettger, Robert E., recommendations of business committee, XXIX, 597
Buchanan J. V., RMS, 518, 519
Buchanan, R. E., RMS, 422
Buchanan, R. E., and Fulmer, E. I., PROB, 41
Buchanan field, Texas, XVI, 758
Buchanan sounding tube and water bottle, RMS, 647
Bucher, Eric, XX, 1163
Bucher, Walter H., GAS, 915, MSC, 159; PTNM, 728, RMS, 16, 18, SC, ix; XII, 150, XXVIII, 1049; XIX, 1254, 1255; XX, 855, 863, 864, 866, 873, 1163, 1535, 1687; XXII, 267, 1263; XXIII, 147, 202, 209, 1488, 1581, 1583; XXIV, 1191, 1198, XXV, 161, 419, 1206, 2022, 2031, 2036; XXVI, 728; XXIX, 1325, 1338
deformation of the earth's crust, review, XVIII, 1093
reviews, XVIII, 824; XXVI, 287, 1294
Bucher, Walter H., and others, catalogue of small scale geological maps, review, XVIII, 1208
Bucher, Walter H., Andree, K., and Brouwer, H. A., editors, regional geology of the earth, review, XXII, 929
Bucher, Walter H., Chamberlin, R. T., and Thom, W. T., Jr., GAS 248; XXII, 307; XXIII, 1445
results of structural research work in Beartooth-Bighorn region, Montana and Wyoming, XVII, 680
Buck, XIV, 55
Buck, C. E., SD, 7, 395
Buck, E. O., and Michaux, Frank W., Jr., XX, 985
Conroe oil field, Montgomery County, Texas, GC, 789; XX, 736
Buck Creek formation in Cushing field, Oklahoma, STR II, 398
Buck Creek Oil Company, XXI, 993
Buck Snag field, XXVII, 733
Buck Springs structure, Wyoming, STR II, 665; X, 115
Buckbee shale, Santa Fe Springs field, low bitumen content of, SBP, 69
Buckbee zone, Santa Fe Springs field, GAS, 203; PROB, 226
Buckeye area, Mich., Pleistocene in, XXIV, 1969
Buckeye area, Texas, XXII, 742
Buckeye field, Matagorda County, Texas, GC, 734; XIX, 378
Fleming formation in, GC, 743; XIX, 387
fossils in, GC, 749, XIX, 393
section, GC, 741
Buckeye oil field, Gladwin County, Michigan, XXII, 407; XXIV, 1950, 1954
acid treatment at, XXIV, 1981
character of crude oil of, XXIV, 1979
Devonian rocks in, XXIV, 1961
Dundee limestone productive at, XXIV, 1959
drilling methods at, XXIV, 1981
generalized well log, XXIV, 1960
geology of, XXIV, 1959
history of, XXIV, 1957
lenticular zones at, XXIV, 1959
- (Buckeye)
on an anticlinal fold, XXIV, 1959
porosity of rocks in, XXIV, 1969
porous lenticular beds productive in, XXIV, 1962
production in, XXIV, 1980
stratigraphy of, XXIV, 1961
subsurface work plus trend projection from previously developed structures responsible for discovery of, XXIV, 1957
water disposal at, XXIV, 1981
Buckeye structural trend, XXII, 659
Buckeye structure, X, 114
Buckley, H., XXI, 1273
Buckley, E. R., I, 23, 24; VIII, 719, 728
Buckman, S. S., MSC, 80; XXIX, 1022
Buckner formation, XXII, 724, XXVII, 1230, 1414, 1451; XXVIII, 592
Alabama, section, XXVII, 1455
correlated with La Casita formation, XXVII, 1456
correlated with lower Kimmeridgian, XXVII, 1456
Louisiana, sections, XXVII, 1453, 1454
origin of, XXVII, 1457
south Arkansas, XXII, 966
Buckner oil field, XXII, 721, 724; XXV, 1036
Buckrange formation, XXII, 1509
Buckrange sand, XXII, 1484, 1492
Bellevue field, Louisiana, STR II, 240; XXII, 1669
productive in Carterville-Sarepta field, XXII, 1493
productive in Shongaloo and Sarepta oil area, XXII, 1480, 1486
reservoir pressure of, XXII, 1496
southwestern Arkansas, XIV, 843
Stephens field, Arkansas, STR II, 7, 10
Buckstaff, Schweer, and Moore, XXV, 84
Buckstaff, Sherwood, XIV, 37, 55; XV, 434; XVI, 133
discussion of lower Permian correlations, XVI, 133
discussion of Permian beds of northwestern Oklahoma, XV, 434
Buckhorn Escarpment, XXI, 834
Buda, Luling field, Texas, STR I, 273
Buda age, fossils from limestone of, in Denton County, Texas, XXVIII, 1538
of limestone in Southern fields, MEX, 17, 27, 29, 36, 41, 48
Buda formation, III, 301, 302; V, 7, 381, VI, 475; XXII, 730
Buda limestone, FOP, 105; PROB, 383, 393; XXII, 1431; XXV, 1537; XXIX, 172, 175
Cenomanian age of XXIX, 1426
Buda limestone and Maness shale, map showing distribution of, XXIX, 174
Budafai-Pusztai field, Hungary, production from, in 1937, XXIII, 966
Buddenhagen, H. J., XIII, 509
Buddenhagen, H. J., Hill, Mason L., Hudson, Frank S., and Woodford, A. O., type locality of a fault, XIV, 797
Buddington, A. F., XIX, 206; XXIV, 500
Budge, E. A. W., XIX, 473
Buehler, Henry Andrew, I, 24; XVII, 1003, 1436; XXVI, 18
- (Buehler)
bibliography of, XXVIII, 1244
memorial of, XXVIII, 1240
memorial of Edwin Martin Shepard, XIX, 142
Buell Run sandstone in Ohio, GAS, 901
Buena Park, XXVII, 869
Buena Vista fault, economic aspects of, XVII, 711
Buena Vista Hills, XXIX, 651
Buena Vista anticline, GAS, 149
Buena Vista Hills field, Kern County, California, PROB, 200, 229, 747, 785, 802, 840, 962; GAS, 148; V, 458
current movement on an active fault in, XVII, 694
Buena Vista pool, MEX, 176
Buena Vista, Rancho, MEX, 164, 170, 178
Buena Vista-Borrega Cañon, MEX, 29, 162
Buess, H., XXIV, 1550
Bueyeros field, New Mexico, FOP, 60; XXV, 1492
Buffalo area, Texas, GAS, 668; XXIII, 892
Buffalo Creek Canyon flexure, XXIII, 1464, 1484
Buffalo dome, GAS, 669; III, 410
Buffalo field, Leon County, Texas, XXIV, 1064; XXV, 1085
Buffalo Hills sandstone, I, 100
Buffalo River series in Tennessee, XXIV, 1650
Buffalo Wallow beds, XXIV, 840
Buffon, M. A., XXIV, 1550
Bufkin field, XXV, 1122
Buhl advance of ice, RMS, 411
Buhler pool, Kansas, XXIII, 805
Building of Mississippi delta, XIV, 867
Building stone, XXVII, 260
Bujalski, B., XV, 2
Bulcher field, XXI, 1019
Bulcher pool, XXIII, 848
Bulgadoo series, XXV, 381
Bulimina jacksonensis zone, GC, 473, 477; XIV, 227; XVII, 1297, 1301
Bulimina pulchella zone, XXIII, 56
Bulimina subacuminata fauna, SC, 48; XX, 1594
Bulimina uvigerinaformis zone, MSC, 129, Figs. 6, 14 (in pocket)
Bulminella elegantissima zone, XXII, 43
Bulminella zone, MSC, 288, 344
Bulminella zonule, MSC, 18, Figs. 4, 14 and Table I (in pocket)
Bull Bayou field, IV, 127; VI, 195
Bull Creek, XV, 1157
Bull Creek field, waters in, XXVI, 1373
Bull Creek limestone, II, 121
Bull Creek sand, XXVII, 851
Bull Mountain, Colorado, stratigraphic section of Sundance formation measured on, XXI, 744
Bull Mountain syncline, XXVII, 427
Bullard, Bess Mills, PROB, 763, 773; STRAT, 437
oil sands, STRAT, 482
Bullard, E. C., XXI, 114
Bullard E. T., XIII, 946
Bullard, Fred M., STRAT, 85, 793; XI, 1068; XII, 1086; XVII, 526; XXIII, 625; XXV, 1693; XXIX, 1707
distinguished lecture tour, 1943, XXVIII, 171
memorial of Robert Hamilton Cuyler, XXVIII, 1233

- Bullard, Fred M., and Bybee, Hal P., STRAT, 781; XIX, 1516
- Bullard, Jesse L., review, XVIII, 1213
- Bullard dome, Texas, PROB, 673; XII, 540; XIII, 613
- Bullbrook, J. A., XXIV, 2119, 2125
- Bulldog sampler, RMS, 658
- Bullhead Mountain formation, VI, 116
- Bull seam in New South Wales coal basin, XVII, 1099
- Bullwagon dolomite, I, 97; XXIV, 42
- Bully Camp field, Louisiana, XXIX, 796
- Bulman, O. M. B., and Fearnside, W. G., geology in the service of man, review, XXIX, 230
- Bulnes, A. C., and Fitting, R. U., Jr., introductory discussion of reservoir performance of limestone formations, review, XXIX, 461
- Bundenbach, Germany, RMS, 203
- Bunger field, V, 637
- Bunger limestone, III, 138; V, 504
- Bunker Hill anticline, GAS, 319
- Bunker Hill dome, Carbon County, Wyoming, STR II, 653; XXII, 684
- Bunn and Risen, XIV, 548
- Bunn, John R., PROB, 776; XV, 1015; XVI, 959
- Bunn, John R., *et al.*, XXIII, 891
- Bunte, Arnold S., review, XXIX, 1783
- subsurface study of Greenwich pool, Sedgwick County, Kansas, XXIII, 643
- Bunte, Arnold S., and Fortier, Leo R., Nikkel pool, McPherson and Harvey Counties, Kansas, STRAT, 105
- Bunting, E. N., and Washburn, E. W., VIII, 729, 731
- Buntsandstein, Germany, RMS, 331, 335; IX, 424
- Buoyancy of gas and oil, relation to migration, PROB, 254, 256
- Buoyant effect of water, RMS, 42
- Burbank, W. S., XI, 1229; XVII, 354, 369; XVIII, 537; XIX, 1670, 1677; XXV, 1750
- Burbank, W. S., and Butler, B. S., PROB, 538
- Burbank, Oklahoma, porosity of sand at, STR I, 225
- (wells 263-284) SBP, 255-285, 407, 408
- Burbank and Bartlesville sands, composition and physical character of, XXI, 39, 48, 254
- cross sections of, XXI, 46
- in northeastern Oklahoma and southeastern Kansas, physical characteristics of, XXI, 246
- Oklahoma and Kansas, XXI, 31, 247, 249, 359
- Oklahoma and Kansas, oil and gas fields in, XXI, 32
- Burbank and Bartlesville shoestring oil sands in parts of Oklahoma and Kansas, origin and distribution of, XXI, 30
- Burbank and South Burbank oil fields, Osage and Kay Counties, Oklahoma, map showing initial daily yields of wells, XXV, 1176
- significance of initial daily production of wells in, XXV, 1175
- Burbank field, Osage County, Oklahoma, STR I, 220; PROB, 270, 278, 292, 301, 323, 439, 592, 593; V, 502; VIII, 584; XI, 1045
- (Burbank)
- geothermal variations at, PROB, 991
- lenticular sand reservoir at, XXIX, 1538
- water conditions in, XVI, 886
- Burbank field production, XXI, 33
- Burbank oil field, Oklahoma, XXI, 31
- Burbank pay sand at South Burbank pool, map, XXI, 569
- Burbank pool, PROB, 401, 775
- South, Osage County, Oklahoma, XXI, 560
- Burbank sand, PROB, 401, 774; XXV, 1807
- Burbank field, Oklahoma, STR I, 221; XI, 1046; XXI, 250
- curves showing similarity of crude oils from, and from Bartlesville sand, XXV, 1806
- gas from, XXI, 1008
- isopach map on, XXI, 568
- Madison oil field, Greenwood County, Kansas, XXI, 252
- Mervine field, Oklahoma, STR I, 163
- possibly laid down by an aggrading river, XXI, 35
- Quincy oil field, Greenwood County, Kansas, XXI, 256
- Rainbow Bend oil field, Cowley County, Kansas, XXI, 255
- two possible interpretations of distribution of, XXI, 36
- two theories of origin, XXI, 35
- western Osage County, Oklahoma, XXI, 564
- Burbank sand pools, Cowley County, Kansas, XXIV, 999
- Kansas and Oklahoma, XXV, 1802
- Burbank sandy shale, isopach map on, XXI, 567
- Burbridge, I., XXI, 301
- Burchard, XIII, 1356
- Burchard, E. F., and Grant, U. S., XXVI, 43
- Burchfield syncline, PROB, 492
- Burckhardt, Carl, MEX, vii, ix, 9, 11-17, 19, 22, 23, 27, 31, 37-39, 43, 45, 54, 67, 73, 92, 94, 95, 97, 160; PROB, 380; V, 6
- étude synthétique sur le Mésozoïque mexicain*, review, XV, 92
- Burckhardt, Carlos, XX, 421, 422, 444; XXIII, 626; XXIV, 1193, 1618; XXVII, 1233, 1483, 1485, 1493, 1494, 1495, 1497-1502, 1504, 1511, 1513, 1514, 1517; XXVIII, 307, 1078, 1090, 1103, 1121, 1123, 1124, 1126-1130, 1140, 1141, 1143, 1144, 1145, 1150, 1152, 1155, 1156, 1157, 1158, 1167, 1168, 1169, 1171, 1172, 1180, 1184, 1187
- Burckhardt, Carlos, and Böse, Emil, XI, 1210; XX, 425
- Burdett Knob, XXIII, 1847
- Burdette Wells fault, XI, 837
- Burdigalian age, MSC, 175
- Burdigalian formation, Europe, VI, 526
- uppermost, MSC, 176
- Bureau of Chemistry and Soils of Department of Agriculture, SBP, 7
- Bureau of Mines, composition of oil shales, VII, 296
- Bureau of Mines reports on Oklahoma oil fields, review, V, 426
- Bureau of Reclamation, XXVI, 1798
- Burford, Selwyn O., XVII, 1294
- structural features of Brenham salt dome, Washington and Austin Counties, Texas, GC, 780; XIX, 1330
- Burford, Selwyn O., and Olcott, Perry, XVII, 1294; XXVIII, 1365
- Burford, S. O., McCollum, L. F., and Cunningham, C. J., PROB, 328, 354, 419
- Salt Flat oil field, Caldwell County, Texas, XIV, 1401
- Burgen sandstone, IV, 181; V, 121, 148, 406; XI, 972
- Osage County field, Oklahoma, STR II, 381
- Burgener and Lewis, XXI, 260
- Burger, Charles R., Jr., STRAT, 21
- Burger, R. W., MSC, 119; SC, 13, 121; XVIII, 1348, 1353, XX, 1559, 1666, 1667, 1668
- Burger, R. W., and Hobson, H. D., SC, 120; XX, 1666
- Burgess sand, PROB, 773, 774; III, 212; V, 342, 404; XXVIII, 772
- Osage County field, Oklahoma, STR II, 381, 386
- Burgess sandstone, eastern Kansas, GAS, 490
- Burgoon formation, Scenery Hill gas field, Pennsylvania, STR II, 446
- Burial of islands of Paleozoic and pre-Cambrian rock by Pleistocene and Recent sediments in Great Salt Lake, XXII, 1409
- Buried and resurrected hills of central Ozarks, XVI, 629
- Buried Amarillo Mountains, GAS, 393
- Buried anticline, Eldorado field, Kansas, STR II, 160
- Buried elements of Ouachita system, XV, 1044
- Buried fault-block theory of Appalachian region, XX, 934
- Buried geological conditions, XX, 527
- Buried granite in Kansas, relation of, to oil production, IV, 255
- Buried Granite mountains, XXIII, 986
- Buried Granite ridge, XXIII, 986; XXIV, 1789; XXV, 820
- Buried hill, Big Lake field, Texas, STR II, 516
- Cushing field, Oklahoma, STR II, 406
- Healdton field, Oklahoma, earliest recognized example of, STR II, 694
- Nemaha Mountain range, granite ridge, best-known example in the United States, STR I, 63; STR II, 693, XXII, 1589
- Buried hill structure in basin of Great Salt Lake, XXII, 1410
- Buried hills, PTNM, 629; PROB, 7, 410, 520, 577, 771, 862; XXVI, 629
- an important accumulation factor in Burbank sand of Mervine field, Oklahoma, STR II, 679
- anticlinal occurrence influenced by, STR II, 679
- Blackwell field, Oklahoma, STR I, 160
- Caddo field, Louisiana, STR II, 184
- Coffeyville field, Kansas, STR I, 50
- compaction and closure over, PROB, 820; XIV, 16
- Crinerville field, Oklahoma, STR I, 197
- examples, STR II, 693
- Fairport field, Kansas, STR I, 39
- fields formed by differential settlement of sediments over, XXV, 20
- Garber field, Oklahoma, STR I, 180
- Glenn pool, Oklahoma, STR I, 237
- Hewitt field, Oklahoma, STR II, 293, 295

- (Buried)
 Homer field, Louisiana, STR II, 221
 Illinois oil field region, STR II, 120
 in Mississippi lime sand of Ponca field, Oklahoma, STR II, 679
 in relation to unconformities, X, 1036, 1065
 Kay County fields, Oklahoma, anticlinal occurrence influenced by, STR II, 679
 Madison shoestring pool, Kansas, STR II, 150
 Mervine field, Oklahoma, STR I, 160
 Mississippi lime, in shoestring pools of Greenwood County, Kansas, STR II, 159
 Morrison field, Oklahoma, STR I, 154
 near Mannsville, Oklahoma, X, 138
 northern Texas, STR II, 694
 of Ozarks, persistence of structure upward, XVI, 648
 origin, X, 425
 Osage County, Oklahoma, STR II, 389
 Petrolia field, Texas, STR II, 547, 548, 550, 554
 Ponca field, Oklahoma, STR I, 160
 Rainbow Bend field, Kansas, STR I, 54
 reflected, in oil fields of Persia, Egypt, and Mexico, X, 422
 rôle of, STR II, 693
 South Blackwell field, Oklahoma, STR I, 160
 South Vernon field, Texas, STR I, 299
 Turkey Mountain lime pool, Oklahoma, STR I, 217
 Buried hills and petroleum accumulation, STR II, 554
 Buried intruded laccolith at Pine Island field, Louisiana, STR II, 176
 Buried middens on downthrown side of faults of Balcones system, XX, 1361
 Buried mountain range of early Permian age, probable, east of present Rocky Mountains in New Mexico and Colorado, V, 605
 Buried Ouachita system front, XXI, 1016
 Buried platforms, criteria for locating, XXVIII, 323
 reflected in lithology and structure of overlying strata, XXVIII, 325
 Buried reef, GAS, 424
 Buried ridge, XXVII, 35
 across Mississippi embayment, XVIII, 1259
 Southern oil fields, MEX, 162, 205, 212
 Buried ridges in West Texas, XI, 1109
 Buried river channel in Delaware Extension pool, Oklahoma, STR II, 364
 Buried sand body, structural expression of, at Seely pool, XXII, 829
 Buried sand lens beneath "Old Field," structure section at Montebello field showing, XXIV, 1124
 Buried soil profiles, XXVI, 52
 Buried topography, reservoir due to, XXIX, 1748
 Buried uplift, Kansas, XXII, 1597
 Burk, R. E., XVII, 1255, 1256
 Burkburnett, Texas, some paleontological evidence on age of oil-bearing horizon at, V, 154
 Burkburnett and Electra fields, Cisco (Burkburnett)
 formation productive in, XXV, 1677
 Burkburnett maps, notice, V, 427
 Burkburnett oil field, Texas, III, 49, 171; IV, 121, V, 154, 324, 427, 515; VI, 260, XXV, 21
 petroleum engineering in, review, VI, 260
 Burke anticline, STR I, 318
 Burke dome, Kentucky, XXIX, 683
 Burke pool, Texas, STR I, 317
 Burke-Greis and Deep Rock companies, XXVIII, 783
 Burkes dome, XXVIII, 741
 Burkett pool, Kansas, STR II, 157
 Burkett-Seeley pool, Greenwood County, Kansas, VII, 482
 Burkeville exposures, stratigraphic evaluation of, based on fossil fauna and stratigraphic relationship of beds, XXVIII, 997
 Burkhardt, XX, 906
 Burkhart, C., XI, 1181
 Burkhead, W. Z., and Harvey, C. J., Fairbanks and Satsuma fields, Harris County, Texas, XXIII, 686
 Burkitt, M. C., MSC, 82
 Burks, Dana, Jr., and Smith, J. P., XIII, 315, 325
 Burlington equivalent in La Presa Cañon, MEX, 7
 Burlington formation, IV, 45; V, 151
 fossils from, XVIII, 1146-1153; XXIV, 794
 Burlington-Keokuk formations of Missouri correlated with middle zone of Mississippi lime of Kansas, XXII, 1594
 of southern Illinois and western Kentucky, XXIV, 795
 Burlington limestone, XXIV, 794
 crinoids of, XXIV, 806
 fauna in, XXI, 1160
 in Missouri and Iowa, XXI, 1160
 in Missouri and Iowa, stratigraphy of northern extension of, XXI, 1158
 life zones in, XXI, 1161
 Burlington limestone overlap, XXI, 1167
 Burma, Eocene in, XI, 562
 geology of oil fields of, XI, 557
 Indaw field, XI, 567
 mud volcanoes in, XVIII, 323
 natural gas fields of, XVIII, 315
 oil fields of, XVIII, 321
 Peguan-Irrawaddian in, XI, 563
 physiographic and geological divisions of, XXII, 66
 production, XI, 558
 reserves in, XXIII, 964
 Singu field, XI, 568
 Tertiary in, XI, 559
 Yenangyat field, XI, 568
 Yenangyang dome, XI, 569
 Burmah Oil Company, RMS, 607; XXIV, 639
 Burmese India and Dutch East Indies, oil production in, IX, 1097
 Burnett, T. J., XXVII, 920
 Burnett, T. J., and Alexander, C. I., developments in East Texas in 1943, XXVIII, 841
 Burnett, T. J., and Trowbridge, R. M., developments in East Texas in 1942, XXVII, 282
 Burnett pool, Kansas, XXII, 674; XXIV, 999
 Burnett pool, Texas, XXIII, 1012
 Burnett south pool, Kansas, XXIII, 803
 Burning Springs anticline in Appalachian region, PROB, 7, 106; XXV, 785, 824
 in eastern Ohio, STR I, 141
 in Oklahoma, GAS, 529
 in West Virginia, GAS, 993
 Burning Springs arch, XXVII, 852
 Burning Springs area in West Virginia, early oil field, XXII, 1095
 Burning Springs Run, first oil well in West Virginia to be pumped for oil yield alone, XXII, 1095
 Burning Springs-Volcano anticline, XI, 1026
 Burns-Browning field, XXIV, 1050
 Burns dome, Kansas, STR I, 63; PROB, 319; XI, 922
 Burns, L. T., pool, XXV, 1070
 Burnsville gas field, V, 84
 Burnt Gulch conglomerate, XXV, 143
 Burpee, G. E., and Wilgus, W. L., XX, 1089
 Burrell, G. A., and Jones, G. W., GAS, 1018, 1025
 Burrell, G. A., and Oberfell, G. G., XI, 191
 Burrell, G. A., and Robertson, I. W., GAS, 1018, 1025, 1046; X, 903
 Burrell, G. A., and Seibert, F. M., GAS, 1076
 Burrell, I. G., XXIII, 1446
 Burris dome, water in Shannon sandstone at, XXIV, 1227
 Burro Mountain, XXVII, 156
 Burroughs, E. H., bibliography of petroleum and allied substances for 1919-1920, review, VII, 302
 Burrowing animals, RMS, 202
 Burrows, C. A., VIII, 67
 Burrows, R. H., MEX, 44; XX, 425; XXI, 1208; XXVIII, 1088, 1185
 Burrton field, Kansas, GAS, 476; XXIV, 1794
 Buret, O. E., XXI, 1534
 Burton, E. F., XXIV, 1532, 1534
 Burton, George Edgar, PROB, 596, 597, 775, 776; I, 32; VI, 5
 correspondence on Permian in Cement oil field, III, 444
 design for logmeter, III, 332
 Hewitt oil field, Carter County, Oklahoma, STR II, 290
 new development for oil and gas in Oklahoma during the past year (1917) and its geological significance, II, 53
 relation of base of redbeds to oil pools in southern Oklahoma, V, 173, 326
 Burton, Joseph, XXIX, 221
 Burton, Richard F., XXII, 1220
 Burt, John, III, 137
 Burwell, H. B., XXVII, 1041
 Burwell, H. B., and Born, K. E., XXIV, 1653
 Busby, C. E., XVIII, 1605
 Busch, D. A., and Matteson, L. S., XXIX, 678
 Buscher, F. J., XXIX, 1265
 Bush, Frederic A., STR I, 179; XIII, 442, 1391; XIV, 798; XVIII, 251, 1049, 1134, 1158; XX, 303, 305; XXI, 1379; XXIII, 465
 developments in Oklahoma in 1936, XXI, 1006
 memorial of Merrill Evans Lake, XXIII, 1115

- (Bush)
 memorial of Robert Massie White-
 side, XXI, 287
- Bush, J. Burchard, MSC, 11, 21, 26,
 206, 227, 247, 251, 269, 290, 308,
 310, 313, 314, 324, 341, Fig. 14 (in
 pocket)
- Bush, M. H., XXVIII, 1503
- Bush, R. D., XXIV, 1706
- Bush, W. W., GAS, 175
- Bush City oil field, Anderson County,
 Kansas, STRAT, 43
 accumulation of oil, STRAT, 49, 52
 analyses of oil, STRAT, 53, 54
 cost of drilling, STRAT, 56
- Bush dome, Texas, GAS, 394, 403;
 XXIII, 1052
- helium in, XIII, 805
- Bushnell, L. D., XXVII, 1176
- Bushnell, L. D., and Haas, H. F.,
 XXVII, 1181, 1182
- Bushong, I., 26
- Busk and Mayo, X, 428
- Busk, H. G., XIII, 685; XVIII, 1487,
 XX, 52; XXI, 345; XXIX, 536
 earth flexures, review, XIII, 694
- Busk method of measuring thickness of
 concentrically folded beds, XXII,
 483
- Bussem, RMS, 622
- Bustenari field, Europe, VI, 526
- Buswell, A. M., PROB, 39, 925, RMS,
 422, XX, 1411
 studies on formation of methane from
 anaerobic fermentation, XX, 1411
- Buswell, A. M., and Neave, S. L.,
 PROB, 91; XV, 445, 449, 452
- Butane, GAS, 1075, 1118, 1122, 1149
- Butanes and propanes, XXVI, 1006
- Butano formation, CAL, 148
 foraminifera from, MSC, 161
- Butcher, Cary P., XVI, 189; XXVII,
 752
 abstract, XXII, 1706
 memorial of Wilson Keyes, XX, 1272
- Butcher, Cary P., Bybee, H. A.,
 Boehms, E. F., Hemphill, H. A.,
 and Green, G. E., detailed cross
 section from Yates area, Pecos
 County, Texas, into southeastern
 New Mexico, XV, 1087
- Butler, SD, 266
- Butler, B. S., XI, 129; XVII, 353
- Butler, B. S., and Burbank, W. S.,
 PROB, 538
- Butler, John W., XXIV, 1589, XXIX,
 1080, 1081, 1103, 1104, 1105
- Butler, John W., Jr., geology of Honda
 district, Colombia, XXVI, 793
- Butler, Samuel, GAS, 609
- Butler and Greenwood counties,
 Kansas, origin of Bartlesville shoe-
 string sands, XVIII, 1313
- Butler County, Kansas, oil fields, V,
 142, 276, 325, 358, 421, 509
 (wells 259-261), SBP, 255-285, 407
- Butler County, Pennsylvania (wells
 216, 217), SBP, 349-379, 410
- Butler dome, Texas, SD, 222, 255, 262-
 265, 267; VI, 58, 329; X, 55, 57
- Butt, W. H., XIX, 770
- Butt, W. H., and Dickerson, Roy E.,
 XXVII, 1517
- Cuban Jurassic, XIX, 116
- Butte County, CAL, 111
- Butterfly formation, XXV, 1631
- Buttermilk Slough, Matagorda County,
 Texas, XXIV, 1086
- Butters, Roy M., XV, 1097; XVII, 122,
 123; XXIII, 1158
- Buttes gas field, California, XXIX, 992
- Buttes Oil Fields, Inc (well 3), SBP,
 130-153, 403
- Buttes volcanics, XXIX, 1002
- Buttner, Hans, PROB, 265, 919; XIV,
 146; XXVII, 1176, 1181
- Button Bed, CAL, 217, 220, MSC, 38,
 39, 45, 50, 68, 85, 105, 162, 202,
 214, 230, 244, 248, 251, 288, 305,
 309, 345, 353
 on Chico Martinez Creek, Temblor
 faunule from below, MSC, Fig. 14
 (in pocket)
- Button Bed sandstone, MSC, Figs. 6,
 14 (in pocket)
- Button beds, XXVII, 1370
- Buttonwillow, Kern County, Cali-
 fornia, oil and gas prospects in
 vicinity of, VI, 57, XII, 658
- Buttonwillow field, GAS, 139, VI, 57
- Buttonwillow Ridge, California, GAS,
 139
 ground-water contours, XVI, 345
- Buttram, Frank, III, 259; VI, 320; VII,
 620; XX, 1460
- Buttressing of sands, short-distance
 variation in reservoir conditions
 through, XXII, 568
- Buttressing and overlap of Miocene in
 Santa Maria oil field, sections to
 illustrate, XXIII, 76
- Butts, Charles, GAS, 934, STRAT,
 494; STR II, 415; V, 650; VIII,
 155; XI, 589, 757, 912, XII, 149,
 150, 152, 153, 155, 158; XVI, 236,
 XVII, 49, 51, XVIII, 1587, 1588;
 XIX, 872, 915, 1119; XX, 929,
 1079; XXI, 315; XXII, 271, 273,
 275, 276-278, 280, 282, 284; XXIV,
 845, 1644, 1652; XXV, 161, 687,
 688, 800; XXVIII, 108
- Butts, Charles, oil and gas possibilities
 at Early Grove, Scott County,
 Virginia, review, XI, 998
- Butts, Charles, and Kindle, E. M.,
 XXV, 688
- Butts, Charles, and Moore, Elwood S.,
 XXII, 1109
- Butts, Charles, Adams, George I.,
 Stephenson, L. W., and Cooke,
 Wythe, PROB, 666
- Butyric acids, PROB, 39; RMS, 422
- Buwalda, J. P., CAL, 13, 212, 257,
 SC, 74, 133; XVI, 25; XXVII, 695;
 XVIII, 788; XX, 1620, 1679; XXI,
 213
- Buwalda, J. P., and Gutenberg, Beno,
 SC, 133; XX, 1679
- Buwalda, J. P., and Stock, Chester,
 XXVI, 165
- Buwalda, J. P., and Wood, H. O., XXV,
 211
- Buwalda, J. P., Gazin, C. L., and
 Sutherland, J. C., XXIII, 518, 552
- Buzzards Bay, RMS, 645
- Byars or Chism pool, McClain County,
 Oklahoma, XXIV, 1022
- Bybee, Hal P., PTNM, 728; XVI, 189;
 XIX, 236; XXIV, 18, 29; XXVI,
 728; XXIX, 1775
 possible nature of limestone reser-
 vairs in the Permian basin, XXII,
 915
 some recent notes on Thrall oil field
 of Williamson County, Texas, V,
 657
- Bybee, Hal P., and Bullard, Fred M.,
 STRAT, 781; XIX, 1516
- Bybee, Hal P., and Haigh, Berte R.,
 developments in West Texas and
- (Bybee)
 southeastern New Mexico in 1936,
 XXI, 1034
- Bybee, Hal P., and Short, R. T., XVI,
 755, 756
- Bybee, Hal P., and Udden, J. A., X,
 958, 962, XVI, 746, 747, XXI,
 1490
- Bybee, Hal P., Boehms, E. F., Butcher,
 Cary P., Hemphill, H. A., and
 Green, G. E., detailed cross section
 from Yates area, Pecos County,
 Texas, into southeastern New
 Mexico, XV, 1087
- Bybee, Hal P., Haigh, Berte R., and
 Cole, Taylor, developments in
 West Texas and southeastern
 New Mexico in 1937, XXII, 694
- Bybee, Hal P., Haigh, Berte R., and
 Taylor, Surce John, developments
 in West Texas and southeastern
 New Mexico during 1938, XXIII,
 836
- Bybee, Hal P., Sellards, E. H., and
 Hemphill, H. A., GAS, 439, 440,
 442, 443, PROB, 352
- Byerly, P., XXVII, 214
- Byers, H. G., SBP, 22
- Byles, Axtell J., XVIII, 1460; XXIII,
 780
- By-passing, PROB, 273, 274, 306, 809,
 839
- By-passing of sediments, RMS, 228, 276
- By-passing and discontinuous deposi-
 tion of sedimentary materials,
 XIII, 713
- By-product markets for natural gas,
 GAS, 1136
- By-products of natural gas, GAS, 1114
- Byram formation, XXVIII, 1316, 1329
- bentonite zones in, XXVIII, 1341
 marl member and Bucatunna clay
 member of, XXVIII, 1332
 relationships of members of, XXVIII,
 1343
- Byram marl, GC, 347, 360; XIX, 1164,
 1657
 abundantly fossiliferous, XXVIII, 60
 in Mississippi, GC, 364, 372, XIX,
 1151, 1168
 unconformity of Tampa limestone on,
 in Florida, GC, 406, XVII, 636
- Byram marl age of beds at Alazán,
 MEX, 123, 131
- Byrd dome, XXIX, 829
- Byrd *et al.* (well 332), SBP, 292-335,
 409
- Byrd-Gulf (well 334), SBP, 292-335,
 409
- Byrd pool, XXVII, 755
- Byro series, XXV, 381
- Byron field, Wyoming, GAS, 291;
 PROB, 928
- Embar water in, XXIV, 1285
- Tensleep water in, XXIV, 1291
 (well 203), SBP, 194-243, 406
- Byron-Garland field, Big Horn County,
 Wyoming, XXI, 993; XXII, 688
- Byron pool, PROB, 163, 350
 gas in, PROB, 165

C

- Caballero fauna, correlations of, XXV,
 2125
- Caballero formation, XXV, 2109, 2114,
 2116
- Deadman Canyon, type section of,
 XXV, 2117
- fossils of, XXV, 2123
- thickness of, XXV, 2122

- Caballos beds, XXVII, 628
 Caballos disturbance, XIII, 912
 Caballos novaculite, XXIX, 1343
 New Mexico, probable lower Mississippian age of, XXIV, 1679
 of Marathon uplift, XV, 1077
 Cabell County, West Virginia (wells 426, 427), SBP, 349-379, 410
 Cabilan Range of California Coast ranges, XXI, 1341
 Cabin Creek field, West Virginia, STR I, 462; IV, 10, 28, 30, V, 81; XI, 705
 Cable, burial of, by sand, RMS, 337
 ships, RMS, 388
 Cable-tool drilling logs, interpretation of, XXVII, 997
 Cable-tool samples, SBP, 15
 Cable tools, interpretations from well drilled by, XXIV, 1370
 Cabo Blanco beds of central Venezuela, discussion, XXIII, 1853
 Cabo Blanco sandstones in Peru, XII, 14
 Caborn field, XXVI, 1094
 Caborn pool, XXVIII, 758
 Cabot Strait earthquake zone, sea-bottom samples from, MSC, 13
 Cabrera La Rosa, A., XXI, 1350; XXIX, 512
 Cabullona area of northeastern Sonora, Cretaceous section in, XXVIII, 1187
 Cacalilao, MEX, 28, 32, 49, 50, 52, 64-66, 70, 91, 141, 155, 162-164, 172, 175, 186, 187, 201, Figs 9, 22 (in pocket)
 Cacalilao area, Méndez shales in, MEX, 70
 Cacalilao-Chapacao anticline, pools on flank of, MEX, 185, 192
 Cacalilao field, Mexico, GAS, 999; MEX, 164, 182, 183, 191; PROB, 385, 388, 389, opp 390, 392; XX, 1303
 Cacalilao gas, GAS, 1001, 1006
 Cache Creek, CAL, 308
 Cache Creek section of Upper Cretaceous, Yolo County, XXVII, 290
 Cache Creek series, XXIV, 272
 Cache Valley, XXII, 1308
 Cacheonian stage, XXIX, 993, 1006
 lower, XXIX, 992
 upper, rich and diversified foraminiferal assemblage, XXIX, 991
 Cacheuta, Argentina, XI, 263
 Cacheuta bituminous shale, XXIX, 499
 Cacheuta black bituminous shales in northern Mendoza, XXVIII, 1463
 Cacheuta field, XXVIII, 1458
 Cacheuta shale, XXIX, opp. 508
Cacocernus proboscidealis zone, XXI, 1162
 Cactus granite, XXIV, 665
 Caddell formation, XXI, 1429; XXIII, 162
 Edna gas field, XXV, 112
 Texas, GC, 475; XVII, 1298
 Caddo anticline, VI, 15; XXIII, 834
 Caddo County, Oklahoma, Apache pool, XXV, 2194; XXIX, 100
 section extending from Port Lavaca, Texas, to, XXI, 1085
 Caddo Creek group, Cross Cut-Blake district, STRAT, 549
 Caddo field, Louisiana, PROB, 60, 780, 897; II, 64; III, 96, 165; IV, 127, 160; V, 309, 452; VI, 184, 192, 195, 353, 363, 477; XIV, 175, 743; XXIII, 896
 (Caddo)
 helium in, GAS, 1055
 section of formations in, STR II, 188
 structure of, STR II, 183
 Caddo field, Marion County, Texas, XXIV, 1064; XXV, 1085, 1677, XXVII, 785
 Caddo field, Texas and Louisiana, XXVI, 1052
 Caddo formation, Oklahoma, II, 80
 Texas, III, 142
 Caddo gas field, VI, 188, 250
 Caddo limestone, GAS, 634; PROB, 354; STRAT, 557; XXVI, 205, 1043, 1046; XXVII, 775, 777, 781
 Bend Arch district, GAS, 627
 Bryson field, STRAT, 541, 542
 Cross Cut-Blake district, STRAT, 557-559
 Hull-Silk pool, STRAT, 671
 porosity of, XXVI, 211
 production from, XXI, 1022
 productive in Clay County, XXV, 1072
 Seymour pool, STRAT, 763
 Stephens County, Texas, STR II, 471-473
 Caddo Parish, Louisiana, cores from deep well at Rodessa, XXII, 764
 Dixie oil pool, XIV, 743
 Shreveport field, XXII, 1277
 Caddo pay zone, XXVII, 772
 Caddo pool, XXIX, 763
 on Caddo anticline, XXVII, 802
 Caddo pool formation, XXIV, 86
 Caddo production, XXVIII, 837
 Caddo-Shreveport uplift, Louisiana, magnetometer study of, XIV, 175; discussion, XIV, 327
 Cadell, H. M., XII, 844, 850
 Cadell clay (Eocene) (Tcd), SBP, 337, 338-349, 415
 Cadena field, XXVII, 744
 Cadene, J. B., Survey, Texas (well 343), SBP, 292-335, 409
 Cadix, CAL, 60
 Cadiz gas-and-condensate well, XXVII, 744
 Cadle, Austin, XII, 658
 California oil industry in 1927, XII, 651
 Cadman, XXVII, 918
 Cadman, W. H., XX, 172
 Cadman, W. K., PROB, 323, 400; XII, 607; XVIII, 1343
 Golden Lanes of Greenwood County, Kansas, XI, 1151; XII, 99
 photograph model, X, 1300
 world records in oil production, XII, 549
Cadoceras zone, XXIX, 1025
Cadoceras zone, unconformity at base of, XXIX, 1022
 Cady, I, 26
 Cady, Gilbert H., PROB, 560; XVI, 150
 significant uncertainties in Pennsylvanian correlation in Illinois coal basin, XXIII, 1507
 Cady, H. P., VII, 619
 Cady, H. P., and McFarland, D. F., GAS, 1072; XI, 188
 Cady Petroleum Company, SD, 329, 340, 342
 Caernarvon shell road, RMS, 169
 Caesar pool, XXVI, 1001
 Caesium, RMS, 538
 in sea water, RMS, 143
 relative exchange power of, RMS, 535
 Cahuayotes, MEX, 30, 37, 52, 64, 114, Figs. 10, 22 (in pocket)
 to Valasco, correlations, MEX, Fig. 10 (in pocket)
 Cahuenga surface in Santa Monica Mountains, XI, 419
 Cahulla, Lake, CAL, 23
 Cailleux, A., RMS, 347
 Cain, James Walker, Jr., memorial of, XVI, 516
 Canines, D. D., XVIII, 1388, 1390; XIX, 296, XXVII, 41
 Cairo, Illinois, RMS, 45
 Cairo oil discovery, XXIV, 999
 Catfish Peninsula, RMS, 334
 Cajon Pass, CAL, 31, 33, 39, 308
 Calababas, MSC, 47
 Calahan, L. W., XXVIII, 599
 Calais, RMS, 343, 344
 Calavera pool, MEX, 191
 Calaveras, MEX, 164
 Calaveras County, CAL, 101, 308
 Calaveras group, CAL, 62, 64, 85, 95
 Calc-alkaline facies of igneous rock, MEX, 148
 Calcareous algae, RMS, 235, 240, 259, 286, 287, 288
 Calcareous beds, *Brucarkia barkeriana* in, MSC, Fig. 14 (in pocket)
 Calcareous bottom-living animals in Baltic, RMS, 316
 Calcareous bottoms, RMS, 231
 Calcareous cement, RMS, 594
 Calcareous clay, RMS, 387, 449
 Calcareous concretions in Temporal beds, MEX, 109
 white, of clay beds near Burkeville, Texas, XXVIII, 987
 Calcareous constituents of sediments, in Bahama area, table of, RMS, 287
 Calcareous deposits, RMS, 221, 231, 248, 249, 257, 259, 436, 600
 in Florida and Bahamas, RMS, 283-297
 organic content of, RMS, 450
 Calcareous facies of San Felipe on top of anticlines, MEX, 172
 Calcareous organisms, distribution of, in sea water, RMS, 377
 of Atlantic sediments, RMS, 374
 Calcareous sandstone, RMS, 593
 Calcareous shale, XXV, 2171
 Calcareous shells, RMS, 397, 413
 solution of, RMS, 377
 Calcareous silt, XXV, 2171
 Calcareous sinter, MEX, 169
 Calcareous skeletons, RMS, 145, 149
 Calcareous well cuttings, XII, 1147
 Calcasieu Lake dome, XXIX, 801
 Calcasieu Parish, Louisiana, Hackberry foraminiferal zonation at Starks field, XXIII, 1835
 (well 406), SBP, 335-349, 410
Calceospongia stage, XXV, 382
 Calciferous sandstone, V, 614
 Calciferous series, Scotland, VI, 376
 Calcite, RMS, 499, 530, 602, 620, 623, 626; SD, 51, 53, 55, 78; XXVIII, 73
 Big Hill dome, SD, 698; IX, 718
 in rock salt, XXI, 1288
 in zeolite-opal rock, XXV, 292
 Calcite-banded anhydrite in Castile formation, XXVIII, 1604
 in Salado section of south-central Delaware basin, XXVIII, 1622
 Calcite cap, SD, 50, 76, 77, 80, 82; IX, 42, 68, 72, 74; XV, 516

- Calcite crystals, oil and gas in, MEX, 166
- Calcite distribution in sandstones, variations of, XXV, 1861
- Calcite-dolomite differentiation, staining drill cuttings for, XXI, 949
- Calcite geodes, asphaltite in, MEX, 39
- Calcite veins, restricting permeability, MEX, 234
- Calcutic limestone, red, in Rocky Arroyo, XXVI, 92
- Calcium, RMS, 147, 455, 529
- in glauconite, RMS, 504
- in sea water, RMS, 65, 143
- precipitation of, RMS, 423
- quantity of, in muds, RMS, 510
- relative exchange power of, RMS, 536
- Calcium and magnesium carbonate precipitation in Great Salt Lake, XXII, 1323
- Calcium bicarbonate, RMS, 455
- Calcium carbonate, MEX, 42; RMS, 64, 147, 234, 248, 283-297, 384, 385; XXVIII, 1619
- as influenced by pressure, RMS, 64
- deposition of, RMS, 4
- deposition of, as cause of oil accumulation, PROB, 473
- equilibrium constant of, in sea water, RMS, 316
- in marine sediments, RMS, 258, 260, 376, 377
- in Verden sandstone, origin of, XXIII, 579
- precipitation of, RMS, 144, 285
- rate of deposition of, RMS, 260
- removal of, in mechanical analysis, RMS, 539
- solubility of, in sodium chloride and sodium sulphate solutions, XXII, 1327
- variations of, in sediments of glacial and interglacial stages, RMS, 390
- Calcium carbonate content, RMS, 374, 376; SBP, 77-80, 394, 397, 401
- basic data on, SBP, 412
- California outcrop samples, SBP, 103, 106, 132, 133, 171, 173
- central California, SBP, 132, 133
- Los Angeles Basin, SBP, 103, 106
- methods of determination of, SBP, 78, 79
- of beach sands, RMS, 122
- of ocean waters, RMS, 369
- Calcium carbonate content of sediments, RMS, 352
- as an index of climatic changes, RMS, 393
- factors influencing areal distribution of, RMS, 377
- from continental shelf, RMS, 235
- in Baltic Sea, RMS, 307, 315-319
- in basins, RMS, 96, 101
- in Black Sea, RMS, 449
- in East Indies, RMS, 350-354
- in foids, RMS, 351-354
- in Indian Ocean, RMS, 400-401
- relation of, to salinity, RMS, 261
- wind-borne material in, RMS, 500, 501
- Calcium carbonate content of shells, RMS, 288
- Rocky Mountains, SBP, 203-207, 210, 245
- use of, in regional studies, SBP, 81
- Calcium carbonate precipitation in Great Salt Lake, XXII, 1343
- Calcium chloride ratio in rivers, RMS, 149
- Calcium chloride waters, connate and diagenetic, XI, 1283
- (Calcium)
- from certain oil fields in Ventura County, California, IX, 1071
- Calcium clays, RMS, 457, 538
- Calcium concentration of sea water in Baltic, RMS, 317
- Calcium deposits, RMS, 149
- Calcium ions, RMS, 482, 483, 540
- coagulating effect of, RMS, 539
- hydration of, in clays, RMS, 478
- Calcium-magnesium relationship in Great Salt Lake clays, XXII, 1353
- Calcium sulphate in Castile formation, XXVIII, 1618
- of Ochoa series, hydration and solution of, XXVIII, 1624
- Calcium sulphate deposits in Blaine and Dog Creek time, XXVIII, 1019
- Calculation of oil recoverable from a reservoir, formula for, XXV, 1303
- of true thickness of a folded bed, XXVI, 1827; XXVII, 874
- of stratigraphic thickness in parallel folds, XXVIII, 1376
- Calder, W., XI, 494
- Caldwell, L. T., RMS, 179, 193
- Caldwell, L. T., and Krumbein, W. C., STRAT, 484, 488
- areal variation of organic carbon content of Barataria Bay sediments, Louisiana, XXIII, 582
- Caldwell County, Texas (wells 397, 398), SBP, 292-335, 410
- Caldwell Knob member, XXVII, 616
- Caldwell Knob member and Solomon Creek member of Segun formation, cumulative curves of mechanical analyses and grain-size constants for, XXVII, 619
- Caldwell Knob oyster bed, XXVII, 608
- Caldwell Parish, section from, to southern Evangeline Parish including logs from Eola and Ville Platte field wells showing down-dip extent of Sparta and Wilcox sand development, XXIV, 1902
- Caledonian (Acadian) revolution, GAS, 100, 105
- Caledonian disturbance, XXVIII, 1422
- Caledonian era, XX, 852
- Caledonian Mountains, RMS, 331, 332, 334
- Caledonides, CD, 124
- Calera limestone, CAL, 81, 89
- Caley, J. F., natural gas in Brantford area, Ontario, review, XXV, 1950
- Calgary-Great Falls arch, PROB, 702; XXVII, 432
- Calhoun, Harold, XVIII, 1507
- Calhoun, Jackson, and Roane counties, West Virginia, Gay-Spencer-Richardson oil and gas trend, STRAT, 806
- Calhoun County, Illinois, RMS, 471
- Calhoun field, Columbia County, Arkansas, XXIX, 459, 806
- Calhoun pool, XXIX, 687
- Caliche, GC, 553; XVII, 491
- calcareous, development of, GC, 565; XVII, 503
- climatic distribution in South Texas, GC, 575; XVII, 513
- confusing to stratigraphic interpretation, GC, 579; XVII, 517
- criterion of unconformities, GC, 577; XVII, 515
- formation of, as soil mineral, GC, 570; XVII, 508
- in Pliocene Goliad formation, XXIX, 1716
- (Caliche)
- lithology of, GC, 563; XVII, 501
- origin of, GC, 564; XVII, 502
- protective agent in weathering and erosion, GC, 579; XVII, 517
- Reynosa problem of South Texas, and origin of, GC, 253, 550 XVII, 488, 1196, 1277, 1281, 1534; discussion, XVII, 1277
- varieties of, GC, 562; XVII, 500
- variations with texture of soil, GC, 575; XVII, 513
- Caliche and pseudo-anticlines, IX, 1009
- Caliche beds, difficulties caused by, in gravity and elastic-wave surveys, GC, 580; XVII, 518
- near Aldama and Hacienda Azufrosa, MEX, 141
- Caliche limestone at Driscoll Ranch, GC, 622; XVII, 818
- Caliche origin, opposing hypotheses of, GC, 573; XVII, 511
- Caliche zones, XXVI, 46
- Caliente Mountain, MSC, 109, 120, 123, 124, 154; XX, 1624; XXV, bet. 216 and 217
- Miocene section, SC, opp. 82, XX, opp. 1628
- structure section across, SC, 81; XX, 1627
- Caliente Mountain region, SC, 75; XX, 1621
- columnar sections of, SC, 78; XX, 1624
- compared with Coalinga district, SC, 85, XX, 1631
- map of, SC, 76; XX, 1622
- summary of characteristics, SC, 82; XX, 1628
- Caliente Mountain Ridge, SC, opp. 80; XX, opp. 1626
- Caliente Mountain shale correlated with Whiteaker marine member of Miocene, SC, 80; XX, 1626
- Caliente Mountain thrust fault, XXV, 218, 259
- Caliente Range, CAL, 167, 219, MSC, 32, 187, 191, 192, 194, 202, 230, 290, 291, 353; SC, 35; XX, 1581
- Cretaceous in, XXV, 213
- Cuyama valley, and Carrizo plain, California, map, XXV, 204
- ecologic features of megafaunas of, XXV, 251
- Eocene in, XXV, 214
- faulting in, XXV, 259
- faunal belts in, XXV, 207
- lower Miocene in, XXV, 216
- major faunal transitions of, XXV, 234
- marine sequences of, XXV, 213
- materials for, mainly from a north-eastern source, XXV, 209
- Miocene in, XXV, 215
- Miocene fossils of, XXV, 220, bet. 256 and 257
- nomenclature of, XXV, 211
- Oligocene in, XXV, 214
- paleogeographic maps of, XXV, bet. 216 and 217
- paleogeography of, XXV, 208
- stratigraphy of, XXV, 211
- structural history of, XXV, 200
- Tembler of, XXV, 224
- Tembler-Monterey transition in, XXV, 234
- thrust faulting in, XXV, 243
- Vaqueros in, XXV, 216
- Vaqueros-Tembler transition in, XXV, 234

- Caliente Range and environs, California, Miocene of, XXV, 193** ■
prospects for occurrence of oil and gas in commercial amounts in, XXV, 261
- Caliente scarp, XXV, bet 216 and 217**
Caliente trough, SC, 36, 39, 85; XX, 1582, 1585, 1631
faunal transitional horizon in, XXV, 233
geologic events in, SC, 137; XX, 1683
marine deposition in, in Oligocene and Miocene, XXV, 196, 215
problem of origin, SC, 84; XX, 1630
California, PROB, 25, 30, 57, 110, 142, 149, 155, 278, 312, 338, 340, 404-406, 431, 891, 991, 992, 994, 1006; RMS, 48, 115, 126, 209, 215, 219, 227, 228, 245, 246, 254, 261, 267, 268, 271, 433, 434, 446, 513, 515, 632, 643; V, 684
additions to oil reserves in, during 1938, XXIII, 932
aeromaps of Elk Hills, STR II, 47
age of diatom-bearing shales at Malaga Cove, Los Angeles County, discussion, XII, 1109
age of oil in Miocene shales in Ventura district, XI, 88
age of producing horizon at Kettleman Hills, XV, 839; discussion, XVI, 417, 611
age and correlation of Kreyenhagen shale in, IX, 990
age and correlation of schist-bearing clastics, Venice and Del Rey fields, XX, 150
alluvium and stream gravels in Santa Maria oil field, XXIII, 53
analysis of some torsion-balance results in, XV, 1419
Arroyo Grande (Pismo), STRAT, 867
average annual oil discoveries by successive five-year periods in, XXI, 698
- Baldwin Hills, Pliocene and Pleistocene history, X, 502**
beaches, RMS, 208
bibliographic history of Cretaceous of, XXVII, 252
bibliography on Tumey sandstone, Fresno County, XXVIII, 974
Brea-Olinda field, GAS, 209
Buena Vista Hills, STRAT, 861
Buttonwillow field, GAS, 139
Cenozoic diastrophism in central coast region of, CAL, 59
central, areal variation of nitrogen-reduction ratio and volatility of sediments of, SBP, 142
central, areal variation of organic content and volatility of sediments of, SBP, 134
central, map showing oil and gas fields of, XXVII, 868
central, and Los Angeles Basin, logs and oil zones of wells in, SBP, 92
central Temblor Range, stratigraphic section, XXVI, 1611
chart of discoveries of oil in, by years, XXII, 715
clastic facies and faunas of Monterey formation, XVII, 1009
coal in Eocene near Bakersfield, XXIV, 1676
Coalinga, Eastside, STRAT, 861
Coalinga, Eocene, STRAT, 862
Coalinga, Oil City, STRAT, 862
Coalinga, Westside, STRAT, 862
coastal, Quaternary revolution in, (California)
XXIII, 551
Coles Levee, STRAT, 862
Coles Levee field, XXIV, 1118
colophane from Miocene brown shales of, XV, 257
compaction of sediments in Channel Islands, XV, 275
comparison of oil fields in, PROB, 229, 758
conservation of oil and gas resources of, IV, 17
contribution to geology of Los Angeles Basin, X, 753
core drilling with rotary tools in, VII, 250
correlation of reflection seismograph records in, XVII, 257
correlation of strata by use of heavy-mineral zones, XI, 359, 369
correlations in Eocene north of Coalinga, Fresno County, XXIV, 1724
Cretaceous: east side Sacramento Valley, Shasta and Butte counties, XXVII, 306
Cretaceous in, XXIII, 943; XXIV, 1732, 1941; XXVI, 1141, 1816. (See Cretaceous)
Cretaceous in Santa Maria field, XXIII, 68
Cretaceous and Paleocene of Santa Lucia Range, XXVIII, 449
Cretaceous-Eocene contact north of Coalinga, XV, 697
Crocker Flat landslide area, Temblor Range, XXVI, 1608
cross-faulted anticlines in Santa Maria district, STR II, 18
current movement on an active fault in Buena Vista Hills field, Kern County, XVII, 694
decline of oil wells in, V, 178
deep-well record of fossil mammal remains in, XIX, 1064
department of oil and gas, establishment of, VIII, 75
developments in 1943, XXVIII, 743
developments in 1944, XXIX, 646
Devonian in. (See Devonian)
diatomaceous shales, X, 899
discoveries in 1936, XXI, 977
discoveries in 1941, XXVI, 1137
discoveries of oil in, by years, XXIII, 944
discoveries and additions to oil reserves in, during 1937, XXII, 701
distribution of Eocene rocks in Santa Lucia Mountains, XX, 491
Dominguez field, GAS, 180; XXIV, 1123
dry-hole record in, XXIV, 1716
dynamics of oil-field structure in southern, VIII, 576
early oil development in, VIII, 61
early use of seismograph for gas-field discoveries in, XXIV, 1714
earthquake of March 10, 1933, Long Beach, XVII, 732
East Coyote field, GAS, 206
economics control of exploration and results in, XXIV, 1720
Edison oil field and vicinity, Kern County, STRAT, 1, 863
effect of thrust and normal faults on accumulation at Dominguez field, XXIV, 1123
El Segundo, STRAT, 868
Elk Hills field, STR II, 44; GAS, 143; STRAT, 863
- (California)
Elwood field, GAS, 166
Eocene in, XXIII, 937, 943, XXIV, 1113, 1732; XXVI, 175, 1145; XXVII, 873 (See Eocene)
Eocene in Ridge Basin, XXIII, 531
Eocene and Cretaceous formations near Coalinga, XXIV, 1732
Eocene exploration in, XXIV, 1940
Eocene foraminifera from the type Lodo formation, Fresno County XXVII, 1269
Eocene fossils in, IX, 992
Eocene sandstone in Coalinga region, XIV, 415
Eocene stratigraphy in western Santa Ynez Mountains, Santa Barbara County, XXVII, 1
Eocene stratigraphy of Chico Martinez Creek area, Kern County, XXVII, 1361
Eocene Yokut sandstone north of Coalinga, XXIV, 1722
equipment used in 1941, XXVI, 1136
Etchegoin formation in, STR I, 19
exploration problem in, XXV, 1165
exploratory wells in, completed in first quarter of 1944, XXVIII, 1045
exploratory work in 1939, XXIV, 1125
extensions of known fields in, during 1939, XXIV, 1118
faults, importance in relation to oil accumulation in McKittrick field, STR I, 21
Fernando group, X, 759
first oil-field discoveries made in, by reflection survey, in 1936, XXI, 977
foraminifera. (See Foraminifera)
foraminiferal correlations of Eocene in San Joaquin valley, XXIV, 1923, 2049
foraminiferal section along Adams Canyon, Ventura County, XII, 753
fossils. (See Fossils)
fracturing of fractured shale in Santa Maria basin, and origin of radiolarians, XXVII, 1622
Friant Dam, XXVI, 1820
Fruitvale field, STRAT, 864
further evidence for age of volcanism, Pinnacles national monument, XXI, 1341
gas on Marysville Buttes, Sutter County, XVII, 443
gas fields discovered in 1943, XXVIII, 743
Gatchell oil sand productive in Northeast Coalinga field, XXIV, 1113
generalized geologic map of Santa Maria district, XXVII, 1336
geologic age of Modelo formation, XIII, 509
geologic formations and economic development of oil and gas fields of, XXVII, 1393
geologic map of Canada de Santa Anita and vicinity, Santa Barbara County, XXVII, 4
geologic units of Cretaceous of, XXVII, 251
geological activity in, 1920 to 1939, XXIV, 1708
geology of Del Valle oil field, Los Angeles County, XXVI, 188
geology of Huntington Beach oil field, XVIII, 327

(California)

geology of Kettleman Hills field, XVII, 1161
 geology of McKittrick oil field and vicinity, Kern County, XVII, 1
 geology of San Joaquin Valley, XI, 611
 geology of: some corrections, XIX, 1819
 geology of Ventura County, VIII, 791
 geology and status of development of Seal Beach and Alamitos area, XI, 870
 geophysical activity in, XXIV, 1710
 geothermal variations in Coalinga area, Fresno County, XV, 829
 geothermal variations in oil fields of Los Angeles basin, XIV, 997
 granitic rocks, X, 755
 gravity of oil at Dominguez field, XXIV, 1123
 gravity of oil at Greeley field, XXIV, 1119
 gravity of oil at Montebello field, XXIV, 1119
 gravity of oil at Rosecrans field, XXIV, 1123
 Greeley field, STRAT, 864
 Gulf of, similar to ancient San Joaquin and Salinas embayments, XXVI, 157
 heavy-mineral studies on correlation of sands at Kettleman Hills, XVIII, 1559
 high-gravity fields in, XXVII, 865
 Humboldt County, GAS, 120
 Huntington Beach oil field, GAS, 188; VIII, 16, 41
 importance of unconformities to oil production in San Joaquin Valley, PROB, 785
 influence of speed of migration of oil on water encroachment at Casmalia, XVII, 1133
 Inglewood field, GAS, 173
 introduction to Cretaceous of, XXVII, 249
 isopach map of Cretaceous of, XXVII, 259
 Jurassic in, XXVI, 1818; XXVII, 254. (See Jurassic)
 Jurassic in Santa Maria field, XXIII, 68
 Kern Front, STRAT, 864
 Kern Front oil field, Kern County, STRAT, 9
 Kern River, STRAT, 864
 Kern River series, X, 492
 Kettleman Hills, GAS, 128
 Kettleman Hills oil field, XIII, 1479
 Kreyenhagen shale at type locality, Fresno County, XIV, 1321
 Kreyenhagen shale, bibliography, footnotes, IX, 990-998
 Lawndale, STRAT, 868
 location of wells and outcrop sections in, SBP, 88
 Lompoc field, GAS, 158
 Long Beach field, STR II, 62; GAS, 183; VIII, 403
 Los Angeles Basin, X, 130, 755, 898
 Los Angeles basin earthquake of October 21, 1941, and its effect on certain producing wells in Dominguez field, Los Angeles County, XXVI, 388
 Los Angeles City fields, STRAT, 868
 Los Angeles County, GAS, 177, 196
 Lost Hills field, STRAT, 865
 Lower, XX, 1279

(California)

Lower, Pleistocene fauna of Magdalena Bay, XXI, 532
 Lower, review, VI, 60
 lower Miocene in, XXIV, 1119, XXVI, 1613
 lower Pliocene in eastern end of Puente Hills, San Bernardino County, XIV, 1445
 lower Pliocene in Santa Maria district, XVI, 135; XVII, 201
 magnetic iron sulphide of Pliocene of Ventura Basin, XXI, 627
 magnetic vectors in, XVI, 1199
 map of principal oil and gas fields of, XXVI, 1138
 map of vicinity of Los Angeles, showing location of Cretaceous exposures, XXVI, 164
 map showing boundaries of producing areas and areas underlain by Eocene sediments, XXIV, 1942
 map showing Franciscan and Knoxville, XXVII, 123
 map showing general features of coastal embayment areas in, FOP, 30, XXV, 1462
 map showing location of Eocene sections, XXIV, 1924
 map showing surface exposures of Cretaceous-Knoxville and stratigraphic thicknesses, XXVII, 259
 Marcopa shale in, STR I, 19
 marine oil shale, source of oil in Playa del Rey field, XIX, 172
 Marysville Buttes development in 1941, XXVI, 852, 1155
 McKittrick Front (North area), STRAT, 865
 McKittrick oil field, STR I, 18; XI, 657
 McLure shale of Coalinga region, Fresno and Kings counties, XIV, 403
 microscopic subsurface work in, XV, 741
 middle Miocene in, XXV, 224
 middle Pliocene in, XXIV, 1118
 Midway-Sunset area, GAS, 147
 Midway-Sunset field, STRAT, 865
 minerals of Sespe formation, and their bearing on its origin, XII, 747
 minor oil fields of Kern County, review, VIII, 832
 Miocene in, STRAT, 3; STR I, 19; XII, 969; XXII, 1056; XXIII, 25, 51, 61, 522, 532; XXV, 195; XXVI, 157, 1141, 1610, 1616; XXVII, 869, XXVIII, 745. (See Miocene)
 Miocene in Elk Hills field, STR II, 33, 49, 70
 Miocene in Newport Beach field, XII, 273
 Miocene in South Mountain, XII, 744
 Miocene in Temblor Range, XXV, 1329
 Miocene of Caliente Range and environs, XXV, 193
 Miocene and Eocene production in Fresno area, XXVII, 865
 Miocene production in 1940, XXV, 1163
 Miocene shales in, XII, 976
 Miocene stratigraphy and paleontology of Palos Verdes Hills, XX, 125
 models of Kettleman Hills North Dome, XXIV, 740
 Montebello field, GAS, 198

(California)

Monterey group, X, 756, 898
 Monterey (Salinas) shales in Pine Canyon, Monterey County, VIII, 55
 Monterey shale of, PROB, 57
 Monterey shale of, at its type locality with a summary of its fauna and flora, XII, 969
 Mountain View, STRAT, 866
 natural gas resources of, GAS, 113
 Neogene basins, MSC, 2
 new fields discovered in 1938, XXIII, 935
 new oil fields discovered in 1939, XXIV, 1112
 new oil fields of Los Angeles Basin, VI, 303
 new pools and extensions in 1943, XXVIII, 746
 new productive horizon in, XV, 201
 Newhall (Tunnel area), STRAT, 867
 North Belridge field, GAS, 137
 northern, Oregon, and Washington, MSC, Fig. 14 (in pocket)
 notes on foraminifera from Marysville Buttes, XXIV, 2051
 occurrence of oil in metamorphic rocks of San Gabriel Mountains, Los Angeles County, XVI, 777
 oil and gas prospects in vicinity of Buttonwillow, Kern County, review, VI, 57
 oil development, VIII, 61
 oil development activities in 1942, XXVII, 862
 oil fields discovered in, by five-year periods, XXI, 699
 oil field waters in, PROB, 953, 955, 958
 oil fields of, PROB, 180, 182, SBP, 403
 oil fields of Ventura County, VIII, 789
 oil possibilities of area northeast of Petaluma, Sonoma County, XI, 425
 oil producing locations in, SBP, 403
 oil production and reserves, VIII, 212
 oil reserves, VI, 44; to close of 1921, VIII, 233
 oil shale, faecal pellets of, RMS, 520, 522
 oil shale in Santa Barbara County, VIII, 459
 Oligocene in, XXV, 195; XXVI, 1613; XXVIII, 745, 954. (See Oligocene)
 Oligocene in Temblor Range, XXV, 1329
 Oligocene flora in, XXVIII, 969
 Oligocene Tumey formation of, XIX, 1192
 Orange County, GAS, 190
 organic shales in southern end of San Joaquin Valley, IX, 228
 origin of oil in, XXI, 270
 origin of Sespe formation of South Mountain, XII, 743
 overthrust fault in McKittrick field, STR I, 19
 overturned plunge on overturned folds in Sespe-Piru Creek district, XVI, 209
 Oxnard, STRAT, 867
 paleogeographic map of, at or near close of Cretaceous, XXVIII, 518
 paleogeographic map of, during Refugian time, XXVIII, 967
 paleogeographic maps of middle and

(California)

- southern, showing regional features in Oligocene and Miocene, XXV, 195
- Paloma oil field, Kern County, STRAT, 866; XXIV, 742, 1113
- Paso Robles formation in, STR I, 19
- petroleum production statistics for, 1920-1939, XXIV, 1713
- petroliferous provinces and major structural features of, PROB, 739, 740
- physical properties of petroleum in, PROB, 177
- physiography of Los Angeles coastal belt, XI, 417
- Placenta Canyon (lower area), STRAT, 867
- Playa del Rey field, GAS, 191; STRAT, 868
- Pleistocene in, XXII, 1053; XXIII, 532. (See Pleistocene)
- Pleistocene in Caliente Range, XXV, 255
- Pleistocene in Ridge Basin, XXIII, 544
- Pleistocene in Santa Maria oil field, XXIII, 53
- Pleistocene orogeny of, XX, 867
- Pliocene in, CAL, 248, STRAT 11; STR I, 19; STR II, 49, 55, 70; XXII, 1056, XXIII, 37, 51, 532, 536, 939, XXVI, 1141; XXVIII, 745. (See Pliocene)
- Pliocene in Caliente Range, XXV, 253
- Pliocene in Santa Maria oil field, XXIII, 53
- Pliocene in South Mountain, XII, 744
- Pliocene in Ventura area, XII, 756
- Pliocene in Ventura Avenue field, XII, 235
- Potrero Hills gas field, Solano County, XXIII, 1230
- pre-Cambrian in, XXVI, 1816
- preliminary study of source beds in late Mesozoic rocks on west side of Sacramento Valley, XVIII, 1346
- principal oil and gas fields of, XXVII, 866
- problems of new production in, XX, 27
- production and consumption, VI, 309; VIII, 18, 19, 45, 227
- progress of stratigraphic studies in, XXVI, 153
- properties of sediments in Dominguez field, SBP, 153
- proportion of geologists in, V, 463
- proportion of organic matter converted into oil in Santa Fe Springs field, XX, 245
- Recent in Santa Maria oil field, XXIII, 53
- recent discoveries and present oil supply in, XX, 939
- references on Crocker Flat landslide area, XXVI, 1631
- references on geology and oil resources of, SBP, 92
- references on oil prospects in, FOP, 31; XXV, 1463
- refraction-seismograph work in, XXIV, 1710
- regularity of decline of oil wells in, V, 178
- relation of oil accumulation to structure in Santa Maria district, STR II, 18

(California)

- relief map showing location and relief of Santa Lucia Range, XXVIII, 452
- resources, review, VI, 263-265, 389
- results of elastic-wave surveys in, and elsewhere, XIV, 1557
- results of exploration drilling in 1920-1939, XXIV, 1712, 1714
- Richfield, GAS, 213
- Ridge Basin, XXIII, 517, 1098
- Rio Bravo oil field, Kern County, XXIV, 1330
- rôle of geologist in development of oil fields, VIII, 73
- Rosecrans field, GAS, 177
- rotary drilling in, VIII, 135
- Sacramento County, GAS, 120
- Salt Lake field, STRAT, 869
- San Joaquin clay, XVIII, 476
- San Joaquin Valley, GAS, 120
- Santa Barbara County, GAS, 154
- Santa Fe Springs field, GAS, 201; VIII, 10, 178
- Santa Margarita sandstone in, STR I, 21
- Santa Maria district, GAS, 154
- Santa Maria Valley field, STRAT, 868
- Seal Beach field, GAS, 186
- section in Reliz Canyon, Monterey County, MSC, Fig. 4 (in pocket)
- section of Monterey (Salinas) shales in Pine Canyon, Monterey County, VIII, 55
- sedimentation of Pico formation in Ventura quadrangle, XII, 235
- sediments of Santa Monica Bay, XXII, 201
- seismic velocity variations in San Joaquin Valley, XXV, 1343
- seismograph explorations in 1941, XXVI, 1137
- Sespe formation, XIII, 489
- Shasta Dam, XXVI, 1816
- Signal Hill field, VIII, 14
- significant developments in 1939, XXIV, 1112
- small *en echelon* fractures in Santa Barbara County, XIV, 320
- some Eocene localities in Salinas valley district, XVII, 81
- some results of magnetometer surveys in, XV, 1351
- source beds in, PROB, 61
- South Belridge, STRAT, 867
- Southeast Mt. View field, XXIV, 1118
- southern, MSC, 168. (See Southern California)
- Southern, as a structural type, XXI, 549
- southern, bibliography on Upper Cretaceous of, XXVI, 187
- southern, classification of Pliocene formations and faunas of, CAL, 230
- southern, correlation of Upper Cretaceous of, XXVI, 186
- southern, development in, since 1923, XII, 625
- southern, divisions and duration of Pleistocene in, XII, 111
- southern, dynamics of oil field structure in, VIII, 576
- southern, geologic formations of part of, and their correlation, VII, 411
- southern, map showing principal oil and gas fields of, XXV, 1160
- southern, map showing topographic and structural features, SC, opp.

(California)

- ui; XX, opp 1529
- southern, Miocene in, XII, 646; XXVI, 189
- southern, Miocene fishes in well cores from Torrance, XXIV, 2182; XXV, 319
- southern, Miocene marine invertebrate fauna in, XXIII, 533
- southern, new development problems and their solution in oil fields, VIII, 135
- southern, petrology of Whittier conglomerates, XXIV, 649
- southern, Pleistocene of, discussion, XII, 559
- southern, Pliocene in, XXVI, 189
- southern, stratigraphic distribution of Upper Cretaceous mollusks of, XXVI, 178
- southern, stratigraphic features of Reef Ridge shale in, XXIII, 24
- southern, structural evolution of, SC, ui; XX, 1529
- southern, summary and conclusions on structural evolution of, SC, 136; XX, 1682
- southern, tectonic map, SC (in pocket)
- southern, topographic map of oil and gas fields, GAS, 115
- southern, Upper Cretaceous faunas of, XXVI, 176
- southern, Upper Cretaceous formations and faunas of, XXVI, 162
- Strand field, XXIV, 1118
- Strand oil field, Kern County, XXIV, 1333
- stratigraphic relations of outcrop sections in, SBP, 168
- stratigraphic relations of Upper Cretaceous in Great Valley, XXIX, 956
- stratigraphic units sampled in Coast Ranges, SBP, 93
- stratigraphy of easternmost Ventura basin, XXIV, 1841
- stratigraphy and paleontology of Santa Maria district, XXVII, 1335
- structural and commercial oil and gas possibilities of central valley region, XVI, 361
- structural features of east side of San Joaquin valley, XIII, 101
- structural influence on accumulation of petroleum in, PROB, 735
- structure of southeastern part of Tejon Quadrangle, XXI, 212
- subsurface stratigraphy of Kettleman Hills oil field, XVIII, 435
- subsurface stratigraphy of Santa Maria Valley oil field and adjacent parts of Santa Maria Valley, XXIII, 45
- Summerland, STRAT, 868
- Sunset-Midway oil region, micropaleontological divisions, Etchegoin formation, X, 487-489
- Taylor's genesis of petroleum and coal as applied to Fruitvale field, discussion, XV, 709
- tectonic history of, XX, 860
- tectonics of Valle Grande, XIII, 199
- Tejon Ranch, STRAT, 867
- tentative foraminiferal correlation of Eocene formations in, XXIV, 1929
- Tertiary, X, 892
- Tertiary sediments northeast of Morgan Hill, XXVII, 640

- (California)
 thrust faulting and coarse clastics in Temblor Range, XXV, 1327
 topographic relief map of, PROB, fol. p. 735
 Torrance, STRAT, 869
 Torrance field, GAS, 195
 truncation of Maricopa sandstone members, Maricopa Flat, Kern County, XV, 689
 Tumey sandstone, Tertiary, Fresno County, XXVIII, 953
 twenty years of petroleum geology in, XXIV, 1705
 unconformities in, VI, 306; VII, 414-420; VIII, 792, 793, 795, 796, 798, 802; IX, 233, 997, 998; X, 488, 502, 507, 719, 755, 759, 762, 897, 898
 unconformity in Cat Canyon field, STR II, 20
 unproved areas, VI, 481
 Upper Cretaceous deposits of northern Santa Ana Mountains, Orange County, map, XXVI, 168
 Upper Cretaceous stratigraphy of west side of Sacramento Valley south of Willows, Glenn County, XXVII, 279
 upwelling off, RMS, 126, 127
 Vedder sand productive in Greeley field, XXIV, 1119
 Ventura Avenue oil field, Ventura County, STR II, 23; GAS, 162; VIII, 821; XII, 721
 Ventura County, GAS, 160
 Ventura County, calcium chloride waters from certain oil fields in, IX, 1071
 volcanic tuffs of Santa Lucia Range and Miocene paleogeography of Salinas Valley, XXI, 1340
 Wasco field, Kern County, XXIII, 1564
 wells in, SBP, 403
 West Coyote field, GAS, 204
 what is the Vaqueros formation of, and is it Oligocene? XIX, 521
 Wheeler Ridge field, X, 495
 wildcat drilling in 1943, XXVIII, 743
 Wilmington oil field, Los Angeles County, XXII, 1048
 Yolo County, GAS, 120
 California and Colorado examples of important faulting, STR II, 687
 California and East Indies, correlation of structural evolution of, XXI, 559
 California and Europe, Middle Tertiary correlation between, MSC, 173
 California and southern Oregon, map, XXVII, 113
 California Academy of Sciences, XXVII, 254
 California Arabian Standard Oil Company, XXIII, 964
 California chert, organic content of, SBP, 189-190
 California coast, sediments off, RMS, 245
 sediments off, references on, RMS, 281
 submarine topography off: canyons and tectonic interpretation, XXV, 1940
 California Coast Ranges, XXI, 550
 Jurassic in, XXVII, 186
 California Company, XI, 468; XXI, 993, 997, 998; XXII, 680; XXIII, 906; XXIV, 1088; XXV, 322, 1842
 California conservation laws, VI, 56
 California core data, XXV, 870
 California current, RMS, 104, 117
 California discovery statistics in 1943, XXVIII, 749
 California drilling practice, XIV, 567
 California Eocene stratigraphy, classification of, SC, 17; XX, 1563
 California example of accumulation due to lenticularity of producing formation, STR II, 699
 California exploration and development in 1940, XXV, 1159
 in 1941, XXVI, 1135
 California fields having important gas reserves, summary of data, GAS, 216
 most active in 1942, XXVII, 864
 production in 1941, XXVI, 1136
 California Fish and Game Commission, RMS, 280
 California foraminifera, ecology of, XXV, 253
 California fossils, IX, 234; X, 697, 761. (See Fossils)
 for the field geologist, XXIV, 2186
 California geologic formations and their correlation, VII, 411
 California geology, the name "Lillis formation" in, XVII, 81
 California Institute of Technology, RMS, 632
 California institutions and companies engaged in micropaleontologic work, XXV, 1228
 California laboratories of micropaleontology, XXV, 1228
 California Mesozoic, Knoxville series in, XXI, 1344
 California Middle Tertiary formations, correlations of, MSC, Fig. 6 (in pocket)
 California Middle Tertiary stages and zones, columnar sections at type localities, MSC, Fig. 6 (in pocket)
 California Natural Gas Company, GAS, 148
 California oil, PROB, 62
 were diatoms chief source of? X, 709
 California Oil Company, XXIX, 797
 California oil developments hampered by war conditions, XXVII, 865
 California oil field practice, notes on, VII, 114
 California oil-field waters, sulphate-reducing bacteria from, X, 1293
 California oil fields, III, 293; V, 179, 454, 455, 463, 525, 623
 fossils, X, 899
 of Santa Maria district, STR II, 19, 21
 oil-producing horizons, X, 893
 production of older, VIII, 2
 reservoir rocks, X, 895
 rôle of geologist in development of, VIII, 73
 southern, new development problems and their solution in, VIII, 135
 tabulation, X, 893
 Ventura County, VIII, 789
 California oil industry in 1927, XII, 651
 California oil production and reserves, VII, 212
 California oil reserves, XXII, 714; XXIII, 947
 estimated in January, 1939, for beginning of each preceding year, XXIII, 933
 California oil shale, XVI, 1029
 California oil situation, 1923, VIII, 1
 present, study of, VIII, 1
 California outcrop and well samples, comparison of properties of, SBP, 186
 California outcrop samples, carbon content of, SBP, 172
 carbon-nitrogen ratio of, SBP, 184
 key to productivity of, SBP, 190
 nitrogen content of, SBP, 176
 nitrogen-reduction ratio of, SBP, 180
 summary of properties of, SBP, 185
 California outcrop sections A-V, SBP, 167-194, 382, 411, 521
 assay number, SBP, 177, 178
 calcium carbonate content, SBP, 171, 173
 carbon content, SBP, 172, 173, 175
 carbon-nitrogen ratio, SBP, 184, 185
 nitrogen content, SBP, 176, 177
 nitrogen-reduction ratio, SBP, 180-183
 organic content, SBP, 185-189
 oxidation factor, SBP, 182, 183
 productivity classification, SBP, 190, 191
 productivity parameter, SBP, 191, 382
 reduction number, SBP, 174-176
 relation of properties of, to oil zones, SBP, 191-194, 382
 relative volatility, SBP, 179, 181
 stratigraphic relations, SBP, 168, 169
 texture, SBP, 169, 170, 173
 volatility, SBP, 177, 178
 weathering, SBP, 168, 169
 California petroleum, chemical characteristics of, VIII, 560
 relation of foraminifera to origin of, X, 697
 California Petroleum Corporation, GAS, 214
 California petroleum, chemical characteristics of, VIII, 560
 California Province, MSC, 78, 183, Fig. 14 (in pocket)
 California provinces, comparison of, with southern Oklahoma provinces, XXV, 6
 California Redwood Park, MSC, 53
 California reserves of heavy oil, survey of, XXVII, 862
 of light oil, survey of, XXVII, 862
 California samples, summary of properties of all, SBP, 145
 variation of nitrogen-reduction ratio of, with respect to distance from oil zones, SBP, 152
 California sandstones, occurrence of feldspar in, discussion, XII, 1023
 California shut-in production, XX, 947
 California stage sequence, age of, with respect to European Tertiary column, MSC, 168
 California State Division of Mines, development of geological survey by, XIV, 1352
 California State Mining Bureau, GAS, 118; SC, vii; VIII, 75; XX, 1533
 conservation methods, IV, 17
 California State Railroad Commission, GAS, 118, 123, 135
 California succession of tectonic events compared with those of other countries, SC, 143; XX, 1689
 California trough, XXVIII, 324
 California vertebrates, MSC, 153
 California Well Drilling Company (well 79), SBP, 87-165, 404
 California well samples, calcium carbonate content, SBP, 80
 carbon content, SBP, 27-31

- (California)
 carbon-nitrogen ratio, SBP, 34, 35
 color, SBP, 75
 location, SBP, 87-89
 relation of, to oil zones, SBP, 381-392
 stratigraphic relations, SBP, 89-100
 (wells 1-197), SBP, 87-167, 403-406. (See also Los Angeles Basin and central California samples)
 California wells, cost of drilling and completing during 1940, XXV, 1162
 Californian and East Indian subprovinces, comparison of Tertiary history of, XXI, 557
 Californian and Latin American foraminiferal faunas, relationship, MSC, 176
 Calkins, F. C., and Emmons, W. H., VII, 2
 Call, R. Ellsworth, XIV, 847
 Call field, Texas, XXII, 739
 Callaghan, Eugene, XXIV, 622
 Callaghan, Eugene, and Gianella, V. R., XVII, 737
 Callaghan, Eugene, and Rubey, W. W., XXI, 1338, 1344
 Callahan County, Texas, XXIII, 856
 Callender oil zones at Dominguez field, GAS, 181
 Callender zone, PROB, 217
 Callham, Thomas W., XVII, 816
 Callham sand, GC, 492; XVII, 1315
 Callixylon, geology of, XX, 628
 Callon, XVIII, 1501
 Callon, J., XIV, 319
 Callovian beds, correlations of, XXVII, 1504
 Callovian-Divesian unconformity, XXIX, 1263
 Callovian formation, CAL, 76
 Callovian fossils, XXIX, 1023
 Callovian marine beds, XXVII, 1502
 Callovian stage, XXVII, 1419, 1524
 Calloway-Henry gas field, GAS, 633
 Callville limestone, XXIII, 124, 128
 Callytharra and Fossil Cliff series, correlation of, XXV, 389
 Callytharra limestone, fossils of, XXV, 380
 in Northwest Basin, Australia, fossils from type locality of, XX, 1041
 Calvert, A. F., XIX, 828
 Calvert, W. R., GAS, 254; V, 258, 260; VII, 167, 172, 174, 293; XXIX, 1267
 Calvert, W. R., and Stone, R. W., VII, 8
 Calvert foraminifera, XXIX, 905
 Calvin, I, 23
 Calvin, Samuel, XIX, 1114
 Calvin field, XXVIII, 277
 Calvin formation, I, 134; III, 264; V, 123, 283, 401, 546; VI, 13
 Dora pool, STRAT, 413, 422
 Calvin North field, XXVIII, 753
 Calvin sandstone, XXIII, 226, 824, 831
 Olympic pool, STRAT, 459
 structure at Keokuk pool contoured on, XXIII, 235
 Calvin series in Seminole County, Oklahoma, STR II, 340
 Calvin-Thurmar zone, XXIII, 226
 Camacho-Opal area of northern Zacatecas, Cretaceous section, XXVIII, 1156
 Camajuani formation, Cuba, II, 141
 Cambrás thrust fault, XXVI, 811, 829; XXIX, 1080
 Cambria, MSC, 74, Fig. 14 (in pocket)
- Cambrian, RMS, 507, 513
 California, CAL, 25, 40, 60, 62, 65, 94, 96
 Canada, FOP, 19; XXV, 1451
 Chanute pool, STRAT, 62, 63
 China, XXVIII, 1420
 Colorado, XXVI, 1377
 Dakota basin, XXVI, 1566
 Franklin Mountains, Texas, XXIV, 160
 Grass field, Wyoming, 627
 Iowa, XXV, 1634
 Kansas, STRAT, 63, 151; II, 105
 lack of oil in, V, 476
 Llano uplift, XXV, 1627
 Lost Soldier district, Wyoming, STR II, 641
 Louisiana, IV, 122
 Marathon Mountains, XXIX, 1339
 Marathon uplift, XV, 1063
 Mexico, XXVIII, 305
 Mid-Continent, XXV, 1627
 Mid-Continent, references on, XXV, 1699
 Minnesota, X, 194
 Montana, nitrogen in, GAS, 1057
 Moose Mountain area, XXVII, 46
 Nebraska, XVIII, 1616
 Nemaha Granite Ridge, Nebraska, XXV, 1634
 New Mexico, V, 605
 New York oil fields, STR II, 275
 North Dakota, XXVI, 341, 1423
 North Sea, RMS, 332
 northwest Arkansas, XXV, 1633
 Ohio, XXIV, 687
 Oklahoma, IV, 174; V, 33, 121; VI, 6
 Ouachita Mountains, XXV, 1631
 pre-, crystalline rocks, northwestern Ohio, GAS, 910
 pre-, crystalline sandstone unconformity, Bend Arch district, GAS, 626
 Rocky Mountains, XXIII, 1135; XXVII, 421, 465
 St. Francois-Ozark area, Missouri, XXV, 1632
 Tennessee, V, 646
 Texas, III, 128; V, 375; XXIII, 1040; XXVII, 764
 unconformable on pre-Cambrian in Mid-Continent, XXV, 1627
 unconformable on pre-Cambrian gneiss, schist, and granite near margin of Cordilleran geosyncline, XXIII, 123
 Upper, GAS, 94
 Upper, and Lower Ordovician sub-surface subdivisions in north-central Texas, XXIX, 413
 uppermost, northeast Iowa, XXV, 1632
 Utah, VI, 206; XXIII, 123
 Wind River Mountains, Wyoming, XXV, 125
 Wyoming, V, 187; XXIII, 480, 481, 1447; XXV, 1157, 1731
 Zenith pool, STRAT, 151
 Cambrian and pre-Cambrian relations in east-central Minnesota, XXIV, 744
 Cambrian and Silurian sediments, source of Oriskany sandstone, XXII, 564
 Cambrian beds, structural position of, during late Canyon time, in north-central Texas, XXIV, 106
 Cambrian black shales, RMS, 366
 Cambrian formations in New York, XXII, 95
 Cambrian fossils, III, 288
- (Cambrian)
 in Wind River Mountains, XXV, 125
 Cambrian green shales, XXIII, 486
 Cambrian inlier in northern Illinois, XXIII, 1561
 Cambrian-Ordovician boundary, position of, in section of Arbuckle limestone, exposed on highway 77, Murray County, Oklahoma, discussion, XX, 980
 Cambrian rocks in Mid-Continent region, distribution of, XXV, 1628
 subdivisions, nomenclature, and correlations of, XXV, 1629
 Cambrian sediments, Arbuckle limestone (Oa), SBP, 194-243, 292-335
 carbon content, SBP, 27-31
 carbon-nitrogen ratio, SBP, 34, 35
 Deadwood formation (Cad), SBP, 197-243, 413
 Ellenburger limestone (Oe), SBP, 285-292, 415
 Reagan sandstone, SBP, 255-285, 413
 Cambrian succession in Arbuckle region, XXV, 1631
 Cambrian trilobites, XXVII, 46
 Cambridge, Massachusetts, RMS, 230
 Cambridge anticline, STR I, 133; XI, 954; XXV, 1626
 Cambridge anticline and Chadron anticline, continuity of, XXVI, 1535
 Cambridge arch, PROB, 487; XXII, 104; XXVI, 1085, 1567, 1580; XXVII, 813, 1303
 Cambridge field, Guernsey County, Ohio, GAS, 907; STR I, 133, 140; XI, 954
 Cambridge pool, accumulation controlled by stratigraphic trap, XXII, 262
 Cambro-Ordovician, XXV, 1057
 Big Sinking field, STRAT, 174
 Central basin of Appalachian geosyncline, XXV, 819
 Cambro-Ordovician, Garber field, Oklahoma, STR I, 178
 Kansas, XXI, 1002
 Mississippi, FOP, 151; XXV, 1583
 Oklahoma City field, PROB, 412; XIV, 1519
 Osage County field, Oklahoma, STR II, 381
 Texas, XXVI, 1398
 Texas and New Mexico, XXVII, 911
 Zenith pool, STRAT, 150
 Cambro-Ordovician boundary, XXV, 1631
 Cambro-Ordovician magnesian limestones in Alabama, GAS, 858
 Cambro-Ordovician rocks in Otis field, GAS, 481
 Cambroprovincial Pulsation System, Paleozoic formations in light of the Pulsation Theory, Vol. III, XXII, 934
 Camden chert, XXII, 543; XXV, 678
 of Tennessee equivalent of Clear Creek chert of Illinois, XXV, 691
 Camera for X-ray studies, RMS, 619
 cylindrical, RMS, 623
 with flat plates, RMS, 623-628
 Camera mounted on home-made guillotine frame, with lighting arrangements for three-dimensional reproduction, XXIX, 1499
 Camera used in orienting cores, XIV, 566
Camerina jacksonensis zone in Gulf

- (Camirina)
Coast, especially useful for correlation, XXII, 1002
Camirina moodybranchensis zone, XXIII, 1394
Camirina sand, XXIX, 794
Camirina zone, XXIX, 792
Camirina zone in Gulf Coast, XXII, 1007
Cameron, IX, 856
Cameron, A. E., GAS, 8, 12
occurrence of petroleum in Mackenzie River region, Canada, review, VII, 303
Cameron and Vermilion parishes, reports on geology of, review, XX, 838
Cameron anticline, GAS, 528
Cameron Brook seepages, XVI, 788
Cameron field, XXVIII, 862
Cameron Meadows field, Louisiana, GAS, 734; XVI, 255
Cameron pool, GAS, 528
Cameron 1 (Byrd-Gulf) (well 334), SBP, 292-335, 409
Camillus dolomite, GAS, 64, 80
Camp, Charles L., XVII, 459; XXVII, 111, 194; XXVIII, 505, 506; XXIX, 958, 980, 1730
Camp, Charles L., and Hanna, G. Dallas, methods in paleontology, review, XXII, 317
Camp, Richard W., GAS, 385; XVII, 878
Camp Colorado field, XXVII, 772
Camp County, Texas, Pittsburg field, XXIV, 2032
tests in during 1939, XXIV, 1067 (well 305), SBP, 292-335, 408
Camp Crook, South Dakota, XXIV, 1111
Camp Eleven field, XXVII, 733
Camp Nelson beds, XXIII, 1847
Camp Nelson formation, Big Sinking field, STRAT, 175
Camp Polk, Louisiana, methods of well construction at, XXIX, 1186
regional cross section from Hornbeck to, XXIX, 1172
Camp Polk, sections, XXIX, 1178-1181
Camp Polk and North Camp Polk, Louisiana, chemical analyses of water samples from wells at, XXIX, 1184
ground-water geology of, XXIX, 1169
wells drilled at, XXIX, 1174
Camp Polk area, recharge of water to the Miocene sands supplying, XXIX, 1183
regional geologic structure at, XXIX, 1176
Campana field, XXIII, 865
Campanian, MEX, 17, 67, 69, 84, 85
Campanian and Maestrichtian, XXIX, 1084
Mexico, XXVIII, 1103, 1105
Campanian and Maestrichtian fossils of Mexico and Central America, XXVIII, 1106
Campanian-Maestrichtian fossil localities in Central America and Mexico, XXVIII, 1104
Campbell, XX, 898; XXI, 1493
Campbell, Arthur C., XXIX, 958
Campbell, D. H., XIV, 1292
Campbell, F. F., XXIV, 1440; XXVII, 58
discovery rates in oil finding, discussion, XXII, 109
Campbell, Gordon, VII, 264
Campbell, H. D., XXII, 542
Campbell, H. Ross, GAS, 1118
Campbell, Harry, XXIX, 957
Campbell, Ian, XVIII, 788
Campbell, Ian, and Miller, A. D., GAS, 781; XVII, 625
nepheline basalt in Richland Parish gas field, Louisiana, XII, 985
Campbell, K. A., XIX, 809
Campbell, Manus R., PROB, 17, 76, 81; SD, 18, 223, 1, 149; VI, 232; IX, 848; X, 709; XII, 821; XIV, 614; XX, 1317; XXIV, 1677
memorial of, XXV, 546
Campbell, N. R., and Wood, A., XXI, 1199
Campbell, Robert B., XVII, 463; XXIII, 1714; XXVII, 603, 604, 1518, XXVIII, 1676, 1677, 1723; XXIX, 929
deep test in Florida Everglades, XXIII, 1713
new library research tool, XXIII, 1567
Paleozoic under Florida, XXIII, 1712
reviews, XXIV, 504; XXV, 168, XXVI, 1424-1427
Campbell, Robert B., and Holman, E., XXII, 1659
Bellevue oil field, Louisiana, VII, 645
Campbell, W. P., XV, 1281; XXIV, 1629; XXIX, 1158, 1164
Campbell Creek field, XXII, 1160; XXVI, 1126; XXVII, 851
carbon-dioxide content of gas in, XXII, 1175
Campbell-Davis field, West Virginia, XXII, 183
Campbell fault structure, XXVIII, 843
Campbell field, XXVIII, 843
production at, XXVIII, 843
Campbell oil sand in Garber field, Oklahoma, STR I, 178
Campine region in Belgium, XVIII, 1161
Campito sandstone, CAL, 60, 62
Campophyllum bed, III, 135, 143
Campton field, Kentucky, STR I, 79-81, 83, XI, 483
Campton sand, PROB, 509; IV, 307
Camptonite, MEX, 145
Canada, CAL, 75, 76, 92, 114; PROB, 5, 12, 13, 30, 76; RMS, 437; V, 24, 455
account of early endeavors on anticlinal theory in, XV, 597
Alberta, geology and development, IV, 249
Alberta syncline, XV, 491; discussion, XV, 971
balsam, RMS, 379, 594, 601
bibliography on developments in 1944, XXIX, 663
Border-Red Coulee oil field, Alberta, and Toole County, Montana, STRAT, 267
British Columbia oil geology, VI, 112
Cambrian in, FOP, 19; XXV, 1451
Cretaceous in, FOP, 18, 19; XXV, 1450
Cretaceous sources for oil in, XI, 26
Cretaceous stratigraphy of Vermilion area, Alberta, XXIX, 1605
developments at Fort Norman, Mackenzie District, VIII, 511
developments in 1944, XXIX, 654
Devonian in, XXIX, 656
eastern, possible future oil provinces of, FOP, 107; XXV, 1539, 2194
(Canada)
Geological Survey of, GAS, 2, 104, 108
Jurassic in, FOP, 19; XXV, 1451
limestone reservoir conditions in Turner Valley oil field, Alberta, XXIX, 1156
Lower Cretaceous in, XXIX, 659
Maritime provinces, FOP, 119; GAS, 105; XXV, 1551
Mississippian in, FOP, 119; XXIII, 964; XXV, 1551; XXIX, 656
natural gas in Alberta, GAS, 1
natural gas in Quebec and Maritime provinces, GAS, 89
natural gas fields of Ontario, GAS, 59
northern, important oil fields, V, 85
occurrence of petroleum in Mackenzie River region, review, VII, 303
oil shales of the Maritime provinces, review, VII, 302
origin of oil in, XV, 600
Paleozoic limestone of Turner Valley, Alberta, XXIV, 1620
Pennsylvanian in, FOP, 119; XXV, 1551; XXIX, 656
petroleum developments in 1943, XXVIII, 864
production largely increased during 1938, XXIII, 964
references on oil prospects in Maritime provinces, FOP, 121; XXV, 1553
reviews, VI, 261, 263, 264, 383
Silurian in, FOP, 19; XXV, 1451
stratigraphy and oil prospects of Alberta, XI, 237, discussion, XI, 515
Tertiary in, FOP, 18; XXV, 1450
types of foothills structures of Alberta, XIX, 1427
upper Devonian in, FOP, 19; XXV, 1451
uses of oil in, XXV, 353
western, STRAT, 273, 285
western, character of sedimentary rocks in, FOP, 18; XXV, 1450
western, drilling in, VII, 82
western, map, FOP, 16; XXV, 1448
western, possible future oil provinces in, FOP, 15, 20; XXV, 1447, 1452
western, references on, FOP, 21; XXV, 1453
western, section across southern Plains region of, FOP, 17; XXV, 1449
western, structural divisions of, FOP, 18; XXV, 1450
western, unconformities and overlaps in, FOP, 19; XXV, 1451
wildcat wells in, at end of 1943, XXVIII, 868
wildcat wells in, drilled in 1944, XXIX, 661
Canada and United States, extent of Upper Cretaceous sea in, XXIII, 1147
fields rich in helium, nitrogen, carbon dioxide, and hydrogen sulphide, GAS, 1058
map of Rocky Mountain and Great Plains areas showing Upper Cretaceous sea in, XXI, 900
possible future oil provinces of, FOP, 1; XXV, 1433
Canada balsam as impregnating medium in preparation of sedimentary rocks for study, XXI, 261
Canada de Aliso, MSC, 87
Canada de la Segunda, MSC, 36

- Cañada de las Uvas, CAL, 18, 121, 140, 308
- Cañada de Santa Anita, MSC, 100, XXVII, 3
- Refugian stage at, MSC, 100
- Cañada de Santa Anita and vicinity, Santa Barbara County, California, geologic map, XXVII, 4
- Cañada de Santa Anita area, composite columnar section, XXVII, 5
- Cañada de Santa Anita-Gaviota Creek, MSC, Fig. 6 (in pocket)
- Canada del Agua Caliente, MSC, 32
- Canada Department of Mines, GAS, 1053
- Canada-Maxon pool, GAS, 932
- Canadaway group, Music Mountain pool, STRAT, 496
- Canadian foothills belt, summary of, IV, 249
- Canadian Front Range overthrust, X, 106
- Canadian Seaboard Oil and Gas, Ltd., wells of, GAS, 109
- Canadian series in Tennessee, XXIV, 1650, 1653
- Canadian shield, XXVIII, 113, 115, 118
- Canadian system, XXV, 1627
- Canadian Western Natural Gas, Light, Heat and Power Company's system, GAS, 3, 23
- Canadian Western Natural Gas Company's system, GAS, 39
- Canal-bottom sampler, RMS, 643
- Canal field, California, XXII, 706
- Canary Islands, RMS, 376, 498
- Canaseraga member, PROB, 458
- Cancellaria* zone of Choctawhatchee, XXV, 264
- Candy Creek pool, III, 412
- Cane Creek and Shafer domes, Utah, XI, 123
- Cane Creek anticline, Utah, XI, 377, 809
- Cane River beds, Louisiana, GC, 391; SD, 333; X, 235, 250, 264, 281; XVII, 622; XXII, 1663; XXV, 1376
- Mississippi, XXII, 819
- Cane River formation, XXII, 1508; XXIII, 299; XXIX, 39
- Bellevue field, Louisiana, STR II, 241
- Homer field, Louisiana, STR II, 199
- Irma field, Arkansas, STR I, 9
- Monroe field, GAS, 748
- South Arkansas, XXII, 981
- subdivision of, GC, 392; XVII, 622
- Urania field, Louisiana, STR I, 95
- Caney, Edna, RMS, 281
- Caney anticline, Irvine-Paint Creek fault, and Johnson Creek fault, Morgan County, Kentucky, GAS, 926
- Caney formation, GAS, 593
- Caney shale, III, 75, 149, 235; V, 34, 549; VI, 6, 151; XVIII, 1028; XXI, 13; XXIII, 227; XXV, 1651; XXIX, 194
- Bowlegs field, Oklahoma, STR II, 357 (Cca) (Mississippian), SBP, 259, 261, 263-280, 413
- erratic masses of, XVIII, 999
- Oklahoma, XI, 1316
- Pennsylvanian, XXII, 1567
- Seminole district, Oklahoma, STR II, 323
- Canfield, Charles Reiter, subsurface stratigraphy of Santa Maria Valley oil field and adjacent parts of Santa (Canfield)
- Maria Valley, California, XXIII, 45
- Cannan, C. C., SD, 676
- Cannel City sand, IV, 307
- Cannel-coal deposits, PROB, 271
- Cannel-coal distillates, XX, 283
- Canneloid coals, PROB, 82
- Cannelton coal, XXIII, 1385
- Cannon, Helen, XXII, 394
- Cannon, Robert L., IX, 632, 1157, XI, 3, 4; XIV, 830
- Cannon, Robert L., and Cannon, Joe, XXIV, 18; XXV, 88
- structural and stratigraphic development of South Permian basin, West Texas, XVI, 189
- Cannonball member, XXVI, 356, 1560, XXVII, 1575
- Canoas Creek, CAL, 240, 288, 308, SC, 56; XX, 1602
- Canoas shales, MEX, 20
- Canoas siltstone, Kreyenhagen formation, percentage distribution chart, XXVII, 1382
- Canoas station, MEX, 18, 23, 60
- Canol geological investigations in Mackenzie River area, Northwest Territories and Yukon, XXIX, 1669
- Canol project, XXVIII, 864; XXIX, 656
- Cañon City and Florence fields, Colorado, gravity of oil, STR II, 89
- Cañon City embayment in Florence field, Colorado, STR II, 82
- Cañon City field, Colorado, STR II, 89, XXVII, 434, 464
- Cañon de Buenavista, MEX, 27
- Cañon de los Muertos, sequence of formations exposed, XXVIII, 1153
- Cañon de Oates, MEX, 27
- Cañon de Todos Santos, MEX, 56
- Cañon La Borrega, MEX, 25, 27, 28, 34, 57, 162
- Cañon San Carlos (Chihuahua), volatile hydrocarbon in, MEX, 44
- Cañon San Nicolas, MEX, 22, 25
- Cañon Taraises, Coahuila, Cretaceous section along, XXVIII, 1160-1163, 1165
- Cantagallo Concession, production at, XXIX, 1120
- Canton pool, GAS, 476; PROB, 772
- Cantrell, Ralph B., and Casey, S. Russell, Davis sand lens, Hardin field, Liberty County, Texas, STRAT, 564
- Cantua Creek, CAL, 288, 308; MSC, 119
- Cantua Creek-Pancho Creek district, MSC, 78, 101
- Cantua sandstone, CAL, 123; XXIV, 1732, 1737
- Canu, Ferdinand, and Bassler, R. S., VIII, 544; XXVI, 1196
- Canyon, George F., XX, 134
- Canyon, Reliz, section, stratigraphy, MSC, 7
- Canyon, Strawn, and Cisco beds most important producing zones in west-central Texas, XXIII, 849
- Canyon, submarine, RMS, 267
- Canyon-basal Cisco unconformity, GAS, 627
- Canyon beds, XXI, 1019; XXIV, 1053
- Canyon Creek dome, Sweetwater County, Wyoming, XIV, 1035; XXVII, 478
- Canyon del Rey, MSC, 38, 131, 132
- Canyon del Rey-Piñon Peak-Canyon Segundo, MSC, Fig. 6 (in pocket)
- Canyon deposits progressively overlapping earlier Carboniferous and Ordovician beds on Concho arch in eastern Menard County, XXIV, 109
- Canyon formation, Petrolia field, Texas, STR II, 546
- Texas, III, 48, 68, 94, 134, 138, 141, 158, 169, 171, 188, 206; IV, 83; V, 155, 378, 504, 546, 548, 564; VI, 12; XXI, 1023; XXV, 1076
- Canyon group, Seymour pool, Texas, STRAT, 762
- Texas, GAS, 613, 627; X, 462, 479; XXVI, 207; XXVII, 28
- Canyon lime, lower, productive of gas in Schleicher County, West Texas, XXIII, 843
- Canyon limestone, XXIII, 854; XXVIII, 837
- Canyon limestone reef, XXV, 1080
- Canyon nose, XXIII, 851
- Canyon reef limestone, Seymour pool, STRAT, 762
- Canyon sand, XXV, 1067; XXVI, 1044
- Canyon sediments, RMS, 252, 254
- Canyon Segundo, MSC, 36, 37, 127, 131, 132, 234, 235, 278, 297, 313
- Canyon Segundo-Canyon del Rey-Piñon Peak, MSC, Fig. 6 (in pocket)
- Canyon series, XXIV, 89, XXV, 1664
- Bryson field, Texas, STRAT, 541, 542
- Cross Cut-Blake district, Texas, STRAT, 549, 551
- Hull-Silk field, Texas, STRAT, 665
- Seymour pool, Texas, STRAT, 760
- Walnut Bend pool, Texas, STRAT, 785
- Canyon Spring, CAL, 190, 308
- Canyon time, late, structural position of Cambrian beds in north-central Texas during, XXIV, 106
- Canyons and tectonic interpretation: submarine topography off the California Coast, XXV, 1940
- Cap Mountain formation, III, 175, 189; XXV, 1627
- Cap rock, PROB, 151, 152, 639, 651; SD, 48, 50, 51, 83, 84, 86, 169, 212, 222, 225, 231, 295, 311, 331, 430, 459, 482, 485, 536, 539, 566, 581, 584, 630, 636, 652, 696, 697, 730, 733, 751; IX, 548, 566, 868; XI, 694
- American salt domes, IX, 1229
- Anse la Butte dome, XXVII, 1140
- Barbers Hill, Texas, IX, 964, 967
- bearing of, on subsidence on Clay Creek salt dome, Washington County, Texas, and Chestnut dome, Natchitoches Parish, Louisiana, discussion, XV, 1105
- Belle Isle dome, GC, 1037; XIX, 648
- Big Hill dome, Texas, IX, 592, 716
- Big Lake field, Texas, STR II, 518
- Bistineau dome, Louisiana, X, 255
- Bradford field, Pennsylvania and New York, STR II, 429
- cause of halo associated with underlying deposit of petroleum, XXIV, 1428
- chemistry, IX, 76
- constituents, IX, 43
- Damon Mound, Texas, IX, 522, 528
- Darrow dome, XXII, 1416
- Emba shallow salt domes, XXIII, 506
- formation of, XXIV, 1428

(Cap rock)

- Gulf Coast salt domes, IX, 601
 High Island, GC, 927; XX, 606
 Hockley dome, Texas, IX, 1042
 Hoskins Mound dome, GC, 837; XX, 159
 interior domes of Texas, X, 17
 Jefferson Island, residual origin of, GC, 1012; XIX, 1631
 King's dome, Louisiana, X, 259
 McFaddin Beach salt dome, Jefferson County, Texas, Upper Cretaceous chalk in, XXIII, 339
 nature of, IX, 329
 of oil sands, discussion, XIII, 688
 origin of, GC, 849; XVIII, 1249; XX, 171
 over salt plug at Jennings dome, XXVII, 1109, 1117
 Palestine dome, Texas, IX, 51
 petrography of salt dome, SD, 50
 Pine Prairie dome, Louisiana, IX, 749, 752
 porous, at Batson, GAS, 708
 porous, at Boling field, GAS, 702
 rôle of, in oil accumulation, XVII, 713; discussion, XVIII, 1086
 South Dayton dome, Texas, IX, 663
 Spindletop dome, Texas, IX, 601; XXI, 477
 Stratton Ridge, IX, 9
 Sugarland field, GC, 716; XVII, 1369
 Sulphur salt dome, Louisiana, IX, 486
 types, IX, 42, 569
 Vacherie dome, Louisiana, X, 243
 West Columbia field, Texas, STR II, 457
 Winnfield salt dome, Louisiana, SD, 332; X, 279
 Cap rock and salt, Texas and Louisiana salt domes, GC, 117; XX, 734
 Cap rock and salt overhang of High Island dome, Galveston County, Texas, geology and geophysics showing, GC, 909, 940; XX, 560, 591, 818
 Cap-rock crude oil, PROB, 153
 Cap-rock data, Brenham dome, GC, 788; XIX, 1338
 Cap-rock fields, XV, 63
 Cap-rock formation, SD, 38
 Cap-rock minerals in Texas and Louisiana salt domes, GC, 119; XVIII, 212
 Cap-rock oil, hydrogen sulphide associated with, GAS, 1069
 Cap-rock petrography, XV, 509
 Cap-rock pools, SD, 5
 Cap-rock problem, SD, 38
 Cap-rock production from Gulf Coast fields, GC, 3, 5; XVIII, 502, 504
 from High Island dome, GC, 955
 Cap-rock reservoirs, PROB, 668
 Cap-rock type of crude oil at Spindletop, GC, 311, 317; XIX, 620, 626
 Cap rocks, importance of, and relation to source rocks, XXIV, 877
 Capacity, open-flow, of commercial gas wells in United States, GAS, vii
 Cap-au-Gres fault, XXI, 779
 Cap-au-Gres fault and flexure zone, XXIV, 770
 Capay, SC, 17; XX, 1563
 Capay stage, Eocene, unconformable on lower Ingranian or on Tracian Cretaceous sediments, XXIX, 998
 Capaya tongue, XXVIII, 22
 Cape Basin, XXIII, 1667
 Cape Blanco, RMS, 383

- Cape Cod, RMS, 237, 239, 241, 242
 Cape Hatteras, RMS, 231, 234, 236, 240, 244, 450
 Cape Henry traverse, XXIX, 951
 Cape May formation, RMS, 235
 Cape May traverse, XXIX, 950
 Cape Mendocino, CAL, 14, 233, 251, 269, 308
 Cape Mountains, geological history, CD, 122
 Cape region of Lower California, XX, 1282
 Cape San Martin, RMS, 280
 Cape Swell, XXIII, 1667, 1670, 1671
 Cape Verde, RMS, 375, 382, 383, 391, 392
 Cape Verde Basin, RMS, 385, 497
 Cape Verde Islands, RMS, 391, 411, 496, 498-502
 Cape Verde Swell, RMS, 387
 Capillarity, PROB, 181, 255, 256, 259, 273, 281, 284, 286, 288, 290, 462; XXVIII, 1515
 absence of edge-water encroachment in certain oil fields ascribed to, XV, 189
 some effects of, on oil accumulation, I, 140
 Capillarity and migration, PROB, 285; XIV, 27
 Capillary action around periphery of well reduced by downward withdrawals, XXIV, 2174
 of wick action cause of water sheath between oil and well, XXIV, 2164
 Capillary adjustments between oil and water, PROB, 284
 Capillary forces, effect on water in wells, XXII, 1246
 Capillary openings in limestone, MEX, 169
 Capillary tube, RMS, 621
 Capricorn member, XXVIII, 23
 Capistrano, SC, 35; XX, 1581
 limestone in, CAL, 174
 Pliocene of, CAL, 238, 240
 San Onofre breccia in, CAL, 169, 194
 Vaqueros-Tembler disconformity near, CAL, 166, 176
 Capistrano district, CAL, 22, 144, 174, 293, 308, 315
 Capistrano embayment, SC, 14, 24, 104; XX, 1560, 1570, 1650
 Capistrano formation, MSC, 168
 of Woodford, CAL, 238
 Capistrano region, SC, 15; XX, 1561
 Capistrano syndine, SC, 114; XX, 1660
 Capistrano Tertiary embayment, SC, 133; XX, 1679
 Capitan deposits, PTNM, 639; XXVI, 639
 Capitan fauna, PTNM, 605; XXVI, 605
 Capitan field, PROB, 756
 Capitan formation, XXIII, 1699
 Capitan gastropods, XXV, 1717
 Capitan limestone, PTNM, 590, 655; XIII, 935; XXI, 838, 840, 853, 863; XXIII, 1676; XXIV, 11, 272, 341; XXV, 1715; XXVI, 590, 655
 diagram of Delaware basin during formation of, XXI, 881
 gradation of, into Carlsbad, PTNM, 594; XXVI, 594
 Capitan limestone and associated formations of New Mexico and Texas, XIII, 645
 Capitan reef, PTNM, 592; XV, 1090; XXI, 835; XXV, 77, 1063; XXVI,

(Capitan reef)

- 592; XXVIII, 1598
 formed in late Guadalupe time, XXV, 95
 map, XXI, 838
 Capitan reef and upper Castile evaporite, cross sections through, XXIII, 1685, 1687
 Capitan Reef fields, Permian, West Texas and New Mexico, XXVII, 897
 Capitan reef limestone, XXVI, 85
 Capitan reef system, XIII, 1036
 Capitan reef trend, XXV, 1048
 Capitan reef zone, PTNM, 617; XXVI, 617
 Capitol Producing and Refining Company (well 288), SBP, 255-285, 408
 Capitol terrace deposit, XXIX, 1707, 1708
 Caplen field on Bolivar Peninsula in Galveston County, Texas, XXIV, 1087
 Capps, Stephen H., Jr., SBP, 6
 Capps limestone, XXVII, 774
 Walnut Bend pool, STRAT, 786
 Caprinids, MEX, 40
 Caprock pool, XXV, 1062
 Captain limestone, I, 104
 Capture, rule of, in determining ownership of oil and gas, XXII, 565, 566
 Caracol, in a syndinal area, PROB, 392
 natural gas in, MEX, 201
 Caracol field, use of gas in, GAS, 1005
 Caracol formation, XXVIII, 1156, 1160
 Caracol pool, MEX, 153, 164, 185
 Carapita formation, MSC, 229
 of Venezuela, foraminifera of, MSC, 178
 Carapita shale, XXVIII, 22; XXIX, 525
 Caratas member, XXVIII, 13
 Carbohydrates, PROB, 31, 32, 35, 37; RMS, 421, 422, 424, 435, 441, 442
 conversion of, into aliphatic, hydroaromatic, and aromatic compounds, XXIV, 1884
 formation of bituminous coals from, XXIV, 1866
 influence of temperature on decomposition of, XXIV, 1878
 low temperature of formation, XXIV, 1881
 rôle of, in formation of oil and bituminous coals, XXIV, 1865
 Carbon, PROB, 129, 152; RMS, 429, 435, 445
 deviation of duplicate determinations of, from the mean, SBP, 24
 in crude oil at Spindletop, GC, 314; XIX, 623
 in sea water, RMS, 143
 in sedimentary rocks, XII, 907
 per cent of, in organic matter, SBP, 19, 20
 Carbon and Albany counties, Wyoming, Como Bluff anticline, XXVIII, 1196
 Carbon and hydrogen in substances of bituminous or pyro-bituminous nature occurring in shales, determination of, XIX, 293
 Carbon and sulphur content of crude oil, variation of, with age and depth, XXI, 927
 Carbon and Sweetwater counties, Wyoming, gas fields of Lost Soldier district, GAS, 305

- Carbon black, GAS, 1114
in Richland and Monroe districts, GAS, 786
in Texas Panhandle, GAS, 406
in United States, production of, GAS, 1136
- Carbon-black industries in Moore County, Texas, XXI, 1033
- Carbon-black manufacture, wastage of natural gas in, GAS, 1095
- Carbon-black plant, Hugoton field, XXIII, 1056
- Carbon-black plants in Texas Panhandle, XVII, 899
- Carbon-black statistics, GAS, 769, 1115, 1116, 1136
- Carbon content, SBP, 18-32, 394, 397
Appalachian area, SBP, 364, 365
basic data on, SBP, 412
California, SBP, 111-116, 136, 137
California outcrop samples, SBP, 172-175
central California, SBP, 136, 137
distribution of, among ancient sediments, SBP, 25-32
East Texas, SBP, 303-305
Gulf Coast, SBP, 340, 341
Los Angeles Basin, SBP, 111-116
loss by weathering, SBP, 187-189
method of determination, SBP, 21-23
Mid-Continent, SBP, 266-267
of black shales, XXIX, 7
of clastic and limestone sediments, comparison of, SBP, 30
of coals, IV, 309
of Miocene crude oil, PROB, 118
of sediments, RMS, 430-431, 434
of sediments, frequency studies of, in Barataria Bay deposits, RMS, 193
of sediments from Rocky Mountains, Mid-Continent, and East Texas, XXI, 1382
of sediments, in fiords, RMS, 100
of sediments of different ages, SBP, 28
organic, of Barataria Bay sediments, analysis of, XXIII, 589
organic, of Barataria Bay sediments, Louisiana, areal variation of, XXIII, 582
ratio of, to organic matter, RMS, 303, 434
relation of size and, to origin and migration of petroleum in sediments of Barataria Bay, XXIII, 593
relation to nitrogen in ancient sediments, SBP, 31-35
relation to organic content, SBP, 18-21, 359
relation to reduction number, SBP, 42-45
Rocky Mountains, SBP, 211-219
Rocky Mountains outcrop samples, SBP, 245, 246
West Texas, SBP, 287, 288
- Carbon County, Montana, GAS, 269
revision of stratigraphy of Dry Creek and Golden structures, XXII, 106
- Carbon County, Wyoming, geology of Freezeout Mountain-Bald Mountain area, XXV, 883
map, XXV, 885
Medicine Bow anticline, XXVII, 448
outcrop sections, g. h, SBP, 243-255, 411
production in, XXI, 764
(wells 223-227), SBP, 194-243, 406, 407
- Carbon determinations, reliability of, (Carbon)
SBP, 23
- Carbon dioxide, GAS, 369, 370, 381, 1004, 1005, 1061, 1065-1068, 1075, 1117, 1124, 1125, PROB, 36-39, 261, 262, 265, 266, 268, 450, 452, 698, 877; RMS, 143, 147, 150, 285, 292, 418, 421, 422, 438, 443, 458; XXVI, 32
from wells in Colorado, VIII, 831
helium, nitrogen, and hydrogen sulphide, fields in United States and Canada rich in, GAS, 1058
in Baltic sediments, RMS, 317
in natural gases, theories of origin of, XXI, 1256
in sea water, RMS, 141
in stagnant water, RMS, 366
in tidal deposits, RMS, 200
production of, RMS, 261
Quebracha field, MEX, 197, 200
solid, Isleta pool, MEX, 179
solubility of, in water, sodium chloride solution, and Great Salt Lake water, XXII, 1324
source of, MEX, 200
- Carbon Dioxide and Chemical Company, GAS, 381, 1066
- Carbon dioxide and hydrocarbon gas, GAS, 372
- Carbon dioxide and water, flow of, through sands, XXII, 1241
- Carbon-dioxide content of gas in Campbell Creek field, XXII, 1175
- Carbon dioxide equilibrium, RMS, 71
- Carbon-dioxide gas and salt water, MEX, 179, 181, 197, 200, 209
relation of, GAS, 1009
- Carbon disulphide, RMS, 594
- Carbon field, GAS, 28
- Carbon-hydrogen ratio of Playa del Rey shale, XIX, 202
- Carbon monoxide, RMS, 423
- Carbon-nitrogen ratio, SBP, 31-35, 394-397, 399
Appalachian, SBP, 373, 374
California, SBP, 125, 126, 144
California outcrop samples, SBP, 125, 144, 184, 185
Central California, SBP, 144
distribution of, among ancient sediments, SBP, 33-35
East Texas, SBP, 324, 326
Gulf Coast, SBP, 340, 345
higher for productive than for barren beds, XXI, 1392
in sediments, XXI, 1385
Los Angeles Basin, SBP, 125, 126
Mid-Continent, SBP, 276-278
of clastic and limestone sediments, comparison of, SBP, 35
of sediments, RMS, 150, 263, 306, 431, 446
relation to source beds, SBP, 381-384
Rocky Mountains, SBP, 231-235
Rocky Mountains outcrop samples, SBP, 251, 252
size-distribution of, SBP, 32
use of, in recognition of source beds
SBP, 81, 392-394
West Texas, SBP, 287, 288
- Carbon ratio, PROB, 151; VII, 291
critical, PROB 245
of coals, relation of porosity of quartz sandstone to, XXI, 76
of coals and occurrence of oil and gas, relations existing between, XXIV, 877
of Cretaceous coals, Florence field, (Carbon)
Colorado, STR II, 88
of oil, Salt Creek field, Wyoming, STR II, 602
- Carbon-ratio index, PROB, 78
- Carbon-ratio law, PROB, 147, 151
- Carbon-ratio map of Cretaceous coals in New Mexico, VIII, 521
- Carbon-ratio maps of United States, PROB, 85
- Carbon-ratio theory, PROB, 67, 71, 99, 238, 727; XI, 455; XXVII, 1222
component propositions, PROB, 77
difficulties in application of, XI, 461
discussion, XI, 463
in light of Hilt's law, XII, 795
need for detailed investigation of validity, XXVII, 1222
objections to, PROB, 76
of David White, XXIV, 877
of David White, relation to John L. Rich's theory of oil generation, XI, 1145
present status of, PROB, 69; XI, 455; discussion, XI, 637
proofs of, XI, 977
relation to possible oil occurrence, XX, 1487
used in Oriskany explorations, XXI, 1582
validity of, PROB, 75
weaknesses, XII, 817
White's criticism of, XXVII, 1216
- Carbon-ratio values, variation with depth, PROB, 76
- Carbon ratios, PROB, 158, 572, 576, 727; XI, 289
Arkansas Valley in relation to, GAS, 536, 555, 557, 624
as indices of coal metamorphism, PROB, 85
in part of Arkansas-Oklahoma coal field, XIX, 937
in relation to oil and gas occurrence, PROB, 73, 88, 483
north of the Ouachitas, discussion, XX, 102
north-central Texas, III, 149
of coals, SBP, 59, 275, 350-352
of coals in Appalachian region, SBP, 352
of coals in Rocky Mountain region, XIII, 1251; XXVII, 475
of coals, relation of, to nitrogen-reduction ratio, SBP, 391, 392
of Cretaceous and Tertiary coals of United States, PROB, 87
of Cretaceous coals in New Mexico, VIII, 519
of Paleozoic coals of United States, PROB, 86
regional metamorphism as indicated by, GAS, 556, 557
relation of oil and gas to, VIII, 522
relation to faulting, PROB, 73
relation to unconformities, PROB, 73
value of, PROB, 90
variations, PROB, 82, 83, 90
West Virginia, review, VI, 387
western Canada, XIX, 1467
- Carbon ratios and oil gravities in Rocky Mountain region of United States, XIII, 1247
- Carbon residue, PROB, 110
- Carbon tetrachloride, RMS, 435
apparatus for extracting samples with, SBP, 65
relation of bitumen content to loss in reduction number during extraction with, SBP, 68

(Carbon)
 use of, in determining refractive index, XXI, 1476
 Carbon tetrachloride extracts, SBP, 64, 70, 401, 412
 Los Angeles Basin, SBP, 126-130
 Carbonaceous and asphaltic material in lower Arbuckle limestones of Wichita Mountains, Oklahoma, XXIII, 1093
 Carbonaceous residues, non-volatile, PROB, 79
 Carbonaceous rocks, Devonian, Silurian, and Ordovician, in New York, GAS, 958
 in Bend Arch district, occurrence of, GAS, 623
 Carbonaceous shales, MEX, 12, 16
 organic material of, VI, 333; VII, 440
 Carbonate, RMS, 147, 150, 431, 433, 530, 531, 539; XXVIII, 73
 in Great Salt Lake oolites, chemical relation of clay to, XXII, 1376
 in Great Salt Lake oolites, mechanical relation of clay to, XXII, 1374
 magnesium, RMS, 529
 of detrital origin in Baltic sediments, RMS, 317, 318
 Carbonate accretion in Great Salt Lake oolites, physical chemistry of, XXII, 1372
 Carbonate-accumulating soils, XXIX, 1704
 Carbonate cement in Bethel sandstone, origin, XXVIII, 104
 Carbonate content of Great Salt Lake oolites, XXII, 1370
 of sediments, changes of, with depth of burial, RMS, 394
 of sediments of Baltic Sea, RMS, 303
 of sediments of Indian Ocean, RMS, 403
 Carbonate deposition, rate of, in Great Salt Lake, XXII, 1329
 Carbonate ions in sea water, RMS, 61, 144
 Carbonate minerals, RMS, 184
 solubility of, XX, 1395
 Carbonate sand, RMS, 593
 Carbonates, SBP, 77-80. (See also calcium carbonate)
 effect of, on carbon determinations, SBP, 24
 effect of, on carbon-nitrogen ratio, SBP, 35
 in bituminous shales, significance of micro-crystals of, XIII, 1377
 of calcium, magnesium, and iron in rock salt, XXI, 1285
 removal of, in analysis of carbon, SBP, 22
 Carbondale series, XXIII, 1355
 Carbonera formation, XXVIII, 1166
 Carbonera thrust fold, XXIX, 1125
 Carbonero anticline, Colorado, GAS, 372, 374
 Carbonic acid, RMS, 291
 action in solution of limestones, XX, 1391
 dissociation constants of, RMS, 316
 Carbonic acid and organic acids, chief agents in leaching of limestone, XXI, 619
 Carboniferous, PROB, 43, 682; CAL, 15, 62-66, 68, 85, 91, 281, 301
 Arizona, VI, 226
 Association subcommittee on, classification of Mississippian and Pennsylvanian rocks of North America, XXIX, 125

(Carboniferous)
 China, III, 101, VI, 241; XXIX, 132
 Elk Basin field, Wyoming and Montana, STR II, 580
 Grand Canyon, VI, 48
 Grass Creek field, Wyoming, STR II, 627
 Idaho, VI, 472
 later, and Permian sediments in Russia, section of, at close of Kazanian epoch, XXV, 1401
 Lost Soldier district, Wyoming, STR II, 638
 Lower and Upper, in Europe, XXIX, 131
 map of ice, coal measures, and arid regions of, CD, 11
 Maritime provinces, FOP, 119; XXV, 1551
 Mid-Continent region, studies on, XIII, 191
 Middle, XXIV, 243
 Middle and Upper, and Permian formations in U.S.S.R., United States, and South China, correlation chart of, based chiefly on fusuline zones, XXIV, 266
 Middle and Upper, and Permian strata of Permian basin of Russia, stratigraphic relations of, XXIV, 264
 Montana, IV, 314; VI, 226, X, 986
 Moose Mountain area, XXVII, 42
 Moscow coal basin, unconformity of, XXIX, 133
 New Mexico, V, 166, VI, 226
 North Sea, RMS, 332
 Oklahoma, V, 41, 45, 46; VI, 13, XXIII, 326
 Ordovician, Silurian, and Devonian sedimentary rocks of Interior Highlands in Arkansas, GAS, 540, 541
 Russia, XI, 497; XXIII, 956; XXV, 1404
 south Arkansas, XXII, 962
 structural features of, XIII, 585
 Tennessee oil fields, STR I, 251
 Texas, III, 132
 U.S.S.R., divisions of, XXIX, 133
 Upper, XXIV, 244
 Upper, brachiopods of Urals and Timan region, XXIV, 250
 upper, climate in United States tropical, CD, 99
 Urals, XXI, 1442, 1447
 Utah, VI, 226
 Wyoming, V, 187; VI, 226; VIII, 515
 Carboniferous and Permian, distribution of floras, CD, 21
 in Russia, boundary between, XXII, 1015
 of southern Urals, XXIII, 500
 Carboniferous and Permian deposits, succession of, in southern Nevada, XXIV, 309
 Carboniferous and Permian rocks of Kansas, work on, XXIV, 299
 outcropping, of Trans-Pecos Texas, stratigraphy of, XIII, 907
 Carboniferous basin of deposition, PROB, 690
 in Europe, widely differing classifications of, XXIX, 133
 Carboniferous crinoidal bioherms, XXV, 1217
 Carboniferous deposits, thickness, XIII, 561
 Carboniferous foraminifera of the Samara Bend, XXV, 1943
 Carboniferous fossils, III, 251

Carboniferous limestone, XXIX, 130
 Carboniferous map of Pangaea, CD, 135
 Carboniferous oils in Rocky Mountain region, XIII, 1249
 Carboniferous-Permian boundary, XXIV, 282, XXV, 401
 base of zone of *Pseudoschwagerina*, XXIV, 319
 bibliography of, XXIV, 328
 discussion of, based on two distinct philosophies of stratigraphic classification, artificial and natural, XXIV, 276
 in England, XXIV, 293
 in Europe and North America, comparison of, XXIV, 321
 in North America, XXIV, 298
 in north-central Texas and western Texas regions, XXIV, 304
 in northern Mid-Continent region, XXIV, 300
 in Russia, XXIV, 294
 in Russia, problem of, XXV, 1402
 in Russia, revision of, XXIV, 323
 in Russian section, tendency toward revision of, XXIV, 283
 in standard European sections, XXIV, 293
 in type section of eastern Russia, revision of, desirable, XXIV, 327
 paleontologic relationships of, variously defined, XXIV, 313
 structural and stratigraphic relationships of, XXIV, 319
 Carboniferous productive horizons in Tennessee, XI, 914
 Carboniferous reservoirs, PROB, 59
 Carboniferous rocks of Ouachita Mountains, XVIII, 971
 Carboniferous sediments of Mid-Continent oil field, XIII, 557
 Carboniferous stratigraphy of the Ouachitas with special study of the Bendian, XVIII, 1018
 Carboniferous system in type region of northern England, sections showing lower and upper boundaries of, XXIV, 286
 versus Mississippian and Pennsylvanian systems, XXIX, 127
 Carboniferous *Trilobites*-bearing limestones, XXV, 1396
 Carboniferous uplift, rejuvenated, XXVII, 425
 Carbonization, increase with depth, XII, 797
 Cardabia and Winning series at type localities in Northwest Basin, Australia, XX, 1053
 Cárdenas beds, MEX, 18, 72, 74, 77 sections, XXVIII, 1135-1138
 Cárdenas-Canoas-Tamasopo area of San Luis Potosí, Turoonian to Maestrichtian in, XXVIII, 1135
 Cardinal fault zone, XXVII, 1370, 1371
 Cardium formation, XVIII, 1395
 Cardwell unit, XXV, 626
 Careaga sandstone, XXVII, 1339, 1355
 correlated with San Joaquin and San Diego formations, XXVII, 1358
 on Graciosa Ridge, stratigraphic relations of, XXVII, 1356
 Carey, XII, 132
 Carey, C. L., and Waksman, S. A. XX, 262, 263
 Carey, H. W., RMS, 421
 Carey, S. W., and Browne, W. R., XXV, 407
 Carey pool, PROB, 411

- Caribbean, MSC, 176
petroliferous basins tributary to, XXVIII, 1503
- Caribbean affinities of *Siphogenerina*, MSC, 183
- Caribbean area, MSC, 98
- Caribbean Coast Range of Venezuela, mountain chain extending from, to Northern Range of Trinidad and to Tobago, XXIV, 1563
- Caribbean foraminifera, MSC, 12
- Caribbean forms, Imperial fauna related to, CAL, 302
- influx of, to Tejon fauna, CAL, 145, 302
- Oligocene fauna no relation to, CAL, 155, 158, 162
- Tejon and Lower Miocene faunas, CAL, 161, 180
- Caribbean province, MSC, 169
- Caribbean region, north-south contraction of, XXIV, 2121
- Caribbean Sea, RMS, 522
- Caribbean Sea and western north Atlantic, deep-sea bottom samples from, MSC, 13
- Caribbean series, XXVIII, 3
- Carle, W., Seidel, G., and Lotze, F., *Germanolypen Teklonisk*, review, XXIII, 1419
- Carlie and Niobrara, XX, 1192
- Carlie pool, XXV, 1077
- Carlie shale, IV, 76; V, 202; VI, 72; XXII, 1027, 1633; XXIII, 915, XXVIII, 1205
(KF) (Cretaceous), SBP, 193-195, 197, 200-255, 414
- Carlville-Centralia anticlinal belt, XXIV, 219
of importance to accumulation of oil and gas in central and western parts of Illinois basin, XXIV, 222
- Carlville-Centralia zone of structural influence in Illinois, XXIII, 1359
- Carlville limestone, XXIII, 1512
- Carlville oil and gas field, GAS, 832
- Carl, John F., PROB, 11, 13; STRAT, 507, 538; VIII, 718
- Carlos, Grimes County, Texas, restriction of name, XXIII, 1091
- Carlos dome, Grimes County, Texas, occurrence of siderite in cap rock at, GC, 133; XXIII, 543
- Carlsbad, New Mexico, basal beds of Salado formation in Fletcher potash test near, XXVI, 63
- Carlsbad and Capitan unit of Permian of New Mexico, temperature tests on, XXI, 1194
- Carlsbad cavern in Capitan limestone, XXI, 866
- Carlsbad Caverns, XXII, 917
- Carlsbad formation, PROB, 350; XIII, 983
- Carlsbad limestone, PTNM, 589, 593, 639; XIII, 938; XXI, 838, 846, 853, 868; XXIV, 10; XXVI, 64, 78, 85, 589, 593, 639
in Guadalupe Escarpment, XXI, 864
in Seven Rivers Hills, XXI, 861
pisolites in, XXVI, 78
- Carlsberg Ridge, RMS, 398, 400
- Carlson, Anders J., PROB, 991, 992, 993, 994, 997; XIII, 309, 313, 360
geothermal variations in Coalina area, Fresno County, California, XV, 829
geothermal variations in oil fields of Los Angeles basin, California, XIV, 997
- Carlson, Charles Gordon, PROB, 775; STRAT, 386
bitumen in Nonesuch formation of Keweenaw series of northern Michigan, XVI, 737
geology of the Saginaw oil field, Michigan, and discussion of Michigan's oil prospects, STR I, 105, XI, 959
heavy Dutcher oil in Bristow district, Oklahoma, XV, 211
review, XIII, 695
- Carlson, Charles Gordon, and Waring, G. A., geology and oil resources of Trinidad, British West Indies, IX, 1000
- Carlson, Stanley, XXVIII, 505
- Carlston, Charles W., notes on early history of water-well drilling in United States, review, XXVII, 1268
- Carlton, D. P., PROB, 676; XXVI, 1441; XXVIII, 1357
memorial of Walter Winthrop Scott, XXIV, 944
West Columbia salt dome and oil field, Brazoria County, Texas, STR II, 451
- Carlton limestone, XXIV, 314
- Carlton Pipe Line Company, pipe lines of, GAS, 478
- Carlyle field, PROB, 567, XXI, 782
- Carman, J. Ernest, PROB, 544; XV, 749; XXIV, 677
- Carman, J. Ernest, and Stout, Wilber, GAS, 848; PROB, 430
relationship of accumulation of oil to structure and porosity in Lima-Indiana field, PROB, 521
- Carmel, MSC, 123
- Carmel formation, XXIII, 125
Navajo sandstone overlain by marine beds of, XXI, 1261
- Carmel Valley, MSC, 67, 114, 115, 119, 127
- Carmelo Bay, CAL, 270; MSC, 115
- Carmi pool, Pratt County, Kansas, XXVII, 809; XXVIII, 125, 770
- Carmichael, Leonard, XXV, 1204
- Carmody, R. A., XXIII, 102; XXV, 430; XXVII, 1297, 1301
- Carnallite, XXIII, 1690
- Carne, J. E., XI, 75, 77, 163, 173
- Carnegie, D. A., X, 1124
- Carnegie expeditions, RMS, 51
- Carnegie Institution of Washington, MSC, 226
- Carnegie Natural Gas Company (well 415), SBP, 349-379, 410
- Carnelian sandstone, XXV, 1749, 1750, 1755
- Carneros anticline, XXVII, 1365, 1368, 1370
- Carneros Creek, CAL, 166, 214, 217, 220, 308; MSC, 54, 71, 85, 106-108, 184, 187-189, 192, 199, 202, 204, 205, 209, 210, 213, 214, 216, 217, 219, 220, 222, 227, 230, 231, 233, 240, 242, 244, 248, 249, 252, 254, 256, 257, 259, 262, 264, 276, 277, 288-292, 294, 296, 302, 303, 305, 306, 308, 316, 323, 326, 331, 332, 334, 342, 343, 346, 352-354, Fig. 14 (in pocket)
type Temblor faunules, MSC, Fig. 14 (in pocket)
- Carneros Creek area, MSC, 49
- Carneros Creek-Chico Martinez Creek, MSC, 2
- Carneros Creek section, MSC, 67
- Carneros fault, XXVII, 1371
- Carneros sandstone member of Temblor, MSC, 39, 45, 106, Figs. 6, 14 (in pocket), XXVII, 1368
- Carneros Spring, MSC, 55
- Carneros Spring, Zemorra Creek, and Chico Martinez Creek, comparative columnar sections, XXVII, 1366
- Carneros syncline, XXVII, 1368, 1370
- Carney, Frank, memorial of, XIX, 761
- Carney, John, XXV, 2158
- Carney pool, GAS, 522
- Carnian, Lower (Upper Triassic) marine beds, MEX, 8
- Carnic fauna, XXVIII, 307
- Carolina Bays, origin of, XXVII, 654, 874
discussion, XXVII, 1008
- Carolina-Texas field, Texas, PROB, 403, STR I, 397-400; XV, 764, XXI, 1423, 1429
- Carolina-Texas sand in Laredo district, Texas, STR I, 393
- Carpathian and sub-Carpathian salt domes, SD, 177; IX, 1237
- Carpathian arch, XVIII, 879
- Carpathian Mountains, Polish, geology of oil fields of, XV, 1
- oil fields of, XXI, 1183
- Carpathian Oil Geological Institute of Poland, review, XIX, 1555
- Carpathian province in Poland, XVII, 1085
- Carpathian Range in Boryslaw region, XVIII, 896
- Carpathian region of Rumania, geology of salt domes in, SD, 87, IX, 1165
- Carpathian salt domes connected with the zones of tectonic sinking of Cretaceous and Tertiary time, SD, 116
- Carpathian thrust belt of Roumania, salt anticlines with diapiric clay cores, XXIII, 515
- Carpathians, age of salt of, IX, 1189
geological work in, VI, 523
unconformities in, VI, 526
- Carpenter and Steinbeck, XII, 735
- Carpenter, Charles B., review, XXI, 812
- Carpenter, E. Gail, XXIX, 564
- Carpenter, Everett, PROB, 765; V, 281; XVI, 959; XXI, 31; XXVII, 920
- Morrison field, Pawnee County, Oklahoma, STR I, 148; XI, 1087
- Carpenter, J., Survey, Texas (well 383) SBP, 292-335, 410
- Carpenter, J. A., XV, 614
- Carpenter, P. H., XXVI, 1193
- Carpenter, W. B., VIII, 489
- Carper sand of Osage group productive in Martinsville pool, Illinois, STR II, 132, 136; XXIII, 817; XXIV, 854
productive in Clark County, Illinois, XXIV, 232
- Carpenteria, CAL, 258, 263, 303
- Carquinez Straits, CAL, 11, 123
- Carr, R. H., XXIV, 1361
- Carr, Raymond M., PROB, 411
- Carr, Raymond M., and Gish, Wesley G., PROB, 770, 992; XV, 1441, 1447
- Garber field, Garfield County, Oklahoma, STR I, 176
- Carr City pool, PROB, 411
- Carriacou limestone, XXIV, 1596
- Carrier beds, PROB, 345, 400, 565, 687, 689

- (Carrier)
function of, in long distance migration of oil, XV, 911
saturated with water at time of migration and accumulation, XXII, 839
- Carrier beds and oil accumulation, discussion, XVI, 260
- Carrington Island, XXII, 1309
- Carrizal, Hacienda (State of Tamaulipas), Méndez in, MEX, 72
- Carrizo Creek, CAL, 23, 301
- Carrizo formation, CAL, 248; XXIV, 1912; XXIX, 65
a beach sand, XXIV, 1917
- Carrizo Mountain schist, XXIV, 150
in Van Horn region, Texas, XXIV, 145
- Carrizo Mountains, XXIV, 143
- Carrizo Plain, FOP, 32; MSC, 207, 231, 252, 272, 274, 276, 311, 312, Fig. 14 (in pocket); SC, 77, opp 80; XX, 1623, opp. 1626; XXV, 1464
- Carrizo sand (Tc) (Eocene), SBP, 294, 296-335, 337-349, 415
- Carrizo sands well developed in updip wells, Gonzales, Dewitt, and Goliad counties, Texas, section showing, XXIV, 1908
- Carrizo sandstone, GC, 599; SD, 216, 256, 259, 266; XIX, 1368
increase in thickness from Rio Grande to Laguna de Leche section, GC, 600; XIX, 1369
Texas, X, 51
- Carrizo-Wilcox contact, XXII, 738
- Carrizo-Wilcox sand, XXIII, 1411
- Carrizo zone, XXII, 738
- Carroll, Dorothy, possibilities of heavy-mineral correlation of some Permian sedimentary rocks, New South Wales, XXIV, 636
- Carroll, Dorothy, and Higgins, H. G., XXV, 382
- Carroll, northern, and Livingston counties, Missouri, Des Moines and Missouri series in, section, XXV, 40
- Carrollton dome, GAS, 539, 547
- Caruthers, J. N., RMS, 104
- Carsey, Dorothy Ogden, XV, 736, 740; XXV, 1236
- Carsey, J. Ben, SBP, 287
- Carsey, J. Ben, Rettger, R. N., and Morero, J. E., natural gas in West Texas and southeast New Mexico, GAS, 417
- Carslaw, H. S., XXVIII, 1637, 1639
- Carson, B. E., STRAT, 601
- Carson, Carlton M., XII, 559
- Carson County, Texas, southeast, columnar section of, XXIII, 985, 1046
pre-Redbed columnar section of Fields pool, XXIII, 1013
pre-Redbed columnar section of Moore Watkins pool, XXIII, 1015
pre-Redbed columnar section of Noel-Schafer pool, XXIII, 1013
stratigraphy in, XXIII, 1011
structural geology, XXIII, 1009
subsurface geologic map of, XXIII, 1010
- Carson County basin, XXIII, 1011
- Carson County fault, XXIII, 1011
- Carstens, Fred, XVIII, 1507; XXIV, 435
- Carter, Alfred, XIV, 425
- Carter, Atlee, XIV, 425
- Carter, D. V., application of reserve estimates of hydrocarbon fluids, XXVIII, 630
- Carter, Frank B., STRAT, 1, 9; XIII, 509
- Carter, W. T., XVII, 513
- Carter Creek, Pottawatomie, and Marshall counties, Oklahoma, radioactivity logs of wells in, illustrating correlation of logs across long distances, XXV, 1787
- Carter County, Oklahoma, graptolites from well core, XXIX, 454
graptolites on well cuttings, XXIX, 1043
- Carter-Knox anticline, XXI, 1536
- Carter-Knox oil field, XXV, 18
- Carter Oil Company, GAS, 297; XXI, 135, 560, 564, 579, 998, 1010, 1013; XXII, 653; XXIII, 804; XXVI, 1093; XXIX, 715
- Killingsworth 13 (well 298), Thompson 1 (well 300), Tinsley 1 (well 254), SBP, 255-285, 407, 408
studies of surface geology in Illinois, XXI, 784
- Carter sand lens productive of oil, XXII, 1516
- Carters limestone in middle Tennessee, Pencil Cave and Lebanon limestone members of, XXIV, 1647
- Carterville field, oil pipe-line runs, XXII, 1500
- Carterville gas structure, XXII, 1490
- Carterville oil structure, XXII, 1492
- Carterville-Sarepta and Shongaloo fields, Bossier and Webster parishes, Louisiana, XXII, 1473
- Claiborne beds in, XXII, 1477
- Midway beds in, XXII, 1477
- pipe lines, XXII, 1502
- production at, XXII, 1487
- stratigraphic section of formations encountered at, XXII, 1476
- Tertiary in, XXII, 1477
- Wilcox beds in, XXII, 1477
- Carterville-Sarepta anticline, XXII, 1497
- Carterville-Sarepta field, cross section of, XXII, 1494-1495
pertinent data, XXII, 1501
structure map of, contoured on base of Annona chalk, XXII, 1491
- Cartesian coordinate net plotted for solving the two-tilt and allied problems, XXIII, 668
- Cartesian coordinate system, XXIII, 665
- Carthage, Texas, gas near, XXI, 1072
- Carthage and Shelbyville, gas-distillate discoveries in northeast Texas, XXI, 1066
- Carthage field, Panola County, Texas, XXII, 731; XXIV, 1064; XXVI, 1052; XXVII, 785; XXVIII, 845; XXIX, 771
gravity of oil at, XXIX, 771
- Cartographic nomenclature, evolution of, Chico Martinez Creek area, XXVII, 1362
- Cartographic terminology, MSC, 69
difficulty of using, MSC, 117; XXVIII, 374
- Cartwright, Lon D., Jr., CAL, 241; GAS, 451, 454; PTNM, 710; XIII, 495, 497, 742, 985; XV, 738, 740, 1091; XVI, 189; XVIII, 1068; XIX, 1019; XX, 785; XXI, Pl. A, opp. 1084; XXIII, 147, 1836; XXIV, 15, 113; XXVI, 380, 710;
- (Cartwright)
XXVIII, 1355, 1599, 1622
age of oil in Miocene shales of Ventura district, California, XI, 88
loss of color of red sandstone upon deposition, XII, 85
regional structure of Cretaceous on Edwards Plateau of southwest Texas, XVI, 691, 944
sedimentation of Pico formation in Ventura quadrangle, California, XII, 235
subsurface correlation methods in West Texas Permian basin, XIII, 171
transverse section of Permian basin, West Texas and southeast New Mexico, XIV, 969
- Cartwright, Lon D., Jr., and Adams, John Emery, subsurface stratigraphy of Yates field, Texas, STR II, 484-492
- Cartwright, R. S., XIII, 1154
- Cartwright, Weldon E., XXIV, 180
- Cartwright, Weldon E., and Ross, C. P., XXIV, 183, 187
- Carwood fauna, XXIV, 808
- Carwood formation, XXIV, 797
- Cary field, XXVI, 994; XXVII, 994
- Casa Blanca field, XXIII, 865, 866
- Casabe field, XXIX, 1104
middle Magdalena Valley, Colombia, XXIX, 1119
production at, XXIX, 1119
- Casagrande, RMS, 550
- Casanova, M., XVI, 562
- Cascade formation, STRAT, 285
- Cascade Mountains in Washington, XXIX, 1412
- Cascade Range, CAL, 1, 26, 117; XXIX, 1390
- Eocene near, CAL, 124
- northern, Washington, rocks of, XXIX, 1392
vulcanism in, CAL, 261, 282, 286
- Cascadia, CAL, 76; SC, 4; XX, 1550
- Case, II, 71; X, 148; XIX, 560
- Case, E. C., IX, 907; X, 827, 838; XIII, 1421, 1422; XIV, 74; XIX, 1545; XXII, 133; XXIV, 318
- Case, E. C., and Williston, S. W., X, 835
- Case, J. B., GAS, 201; XII, 524
- Case, J. B., and Keyes, Robert L., GAS, 183
- Case, J. B., and Wilhelm, V. H., GAS, 188
- Case, L. C., PROB, 835, 840; XIV, 1218; XVIII, 361, 363, 364, 365, 366
analyses of water at Seminole district, Oklahoma, STR II, 349
base-replacement studies of Oklahoma shales—critique of Taylor hypothesis, XVII, 66
discussion of Iso-con map for Ordovician waters, XIV, 1218
discussion of Venezuelan oil-field waters, XV, 909
exceptional Silurian brine near Bay City, Michigan, XXIX, 567
Powder Wash field, Colorado, water analysis, discussion, XXII, 1604
preservation of oil during erosion of reservoir rocks, discussion, XVII, 1273
research notes, XXIII, 1868
review, XIII, 862
subsurface water characteristics in Oklahoma and Kansas, PROB, 855

- Case, L. C., Heck, E. T., Fash, R. H., Minor, H. E., Crawford, J. G., Jessen, F. W., Foster, Margaret D., and Ginter, R. L., selected annotated bibliography on oil-field waters, XXVI, 865
- Casebeer, Charles Theodore, memorial of, XXV, 1831
- Casey, J., RMS, 17
- Casey, S., Russel, and Cantrell, Ralph B., Davis sand lens, Hardin County, Texas, STRAT, 564
- Casey, T. L., GC, 344; XIX, 1654, 1656, 1659
- Casey limestone, XXV, 689
- fauna of, XXV, 689
- Caseyville sandstone, XXI, 1420
- Cash, William, IX, 712
- Cashin, D. M., GAS, 739
- Casiano, Juan, MEX, 210
- Casiano field, temperatures of oil at, MEX, 227
- Casing and cementing problems, Cunningham field, Kansas, XXI, 519
- Casing cement jobs, two-stage, XXV, 1893
- Casing leaks, PROB, 955
- Casing pattern, in Yates air area, XXV, 1885
- Casinghead gas, GAS, 1076
- Casinghead pressure, Red Fork shoe-string, STRAT, 489
- Casmalia, California, influence of speed of migration of oil on water encroachment at, XVII, 1133
- Casmalia anticline, PROB, 207
- Casmalia field, California, PROB, 207, 741, 758; STR II, 18; XXVII, 1345, 1349
- Casmalia Hills Sisquoc formation, XXVII, 1349
- Casper formation, PROB, 161; V, 189, 191; XXI, 1253
- Caspian Basin, XI, 494, 500
- Emba area in, XXIII, 499
- Caspian Sea, RMS, 102, 362, 367; XXI, 1116
- face of, review, XIX, 120
- Caspian Sea and Persian Gulf, XXVIII, 1502
- Cassel, Chester, MSC, 299; XVIII, 435
- Cassidulinidae, MSC, 15, 327, 331
- Castaic Creek drainage system, XXIII, 554
- Castaic syncline, XXI, 229
- Castaic unit, Tejon Quadrangle, XXI, 219
- Castell Oil Company, SD, 646, 651, 652, 673, 676
- Caster, Kenneth E., STRAT, 494, 538; XIX, 1546; XXV, 161; XXIX, 522, 1074, 1078
- age of Devonian of southwestern Pennsylvania, discussion, XIX, 1546
- demise of Bradfordian series, discussion, XIX, 912, 1546-1548
- Titusvillidae; Paleozoic and Recent branching Hexactinellida, review, XXV, 2082
- Caster, Kenneth E., and Olsson, A. A., occurrence of *Baculites oatus* zone of upper Alberta shales in southeastern British Columbia, XIX, 295, 703
- Castile and Delaware Mountain formations, contact of, XXVII, 754
- Castile anhydrite, XXI, 445, 856, 876
- Castile beds, XXIV, 342
- Castile evaporite, upper, subsurface extent of, XXIII, 1683
- Castile evaporite, upper, and Capitan reef, cross sections through, XXIII, 1685, 1687
- Castile evaporites, XXVI, 385
- Castile formation, PTNM, 611; XXIV, 11; XXVI, 65, 611; XXVIII, 1599, 1603
- banded anhydrite, calcite, and halite of, XXV, 156
- formed by intermittent marine connections, XXVIII, 1616
- lower, deposition of, XXIII, 1686
- lower, in Delaware basin, stratigraphy and history, XXIII, 1684
- of southeast New Mexico, salt, potash, and anhydrite in, XXIII, 1682
- of West Texas-New Mexico Permian basin, extent of, XXIII, 1682
- salt lenses in, XXVIII, 1620
- upper, in Delaware basin, stratigraphy and history, XXIII, 1688
- Castile gypsum, V, 89; XIII, 941, 985
- Delaware basin, XIX, 268
- New Mexico, X, 848
- Castile time, PTNM, 760; XXVI, 252, 760
- Castles, origin of, XXVIII, 1622
- Castile sand, XXVII, 1147
- Castile, Mrs. D. A., XVI, 135
- Castle Cliff thrust in St. George district, Utah, XXIII, 129
- Castle fault, XXV, 2035, 2036
- Castle formation, Sand belt, STRAT, 752
- Castle Hayne formation, XXIX, 915
- Castle limestone, V, 259; XXVI, 315
- Castle Mountain fault zone, SC, 69; XX, 1615
- Castle Mountain group, XXVII, 47
- Castleberry, W. H., Survey, Texas (wells 322, 323), SBP, 292-335, 408
- Casts of fossils in limestone, MEX, 40, 42
- Cat Canyon field, California, PROB, 208, 741, 757, 758; STR II, 20
- Cat Creek anticline, PROB, 704; VI, 146; XIII, 1289; XXVII, 434
- Cat Creek oil field, Fergus and Garfield counties, Montana, PROB, 690, 704, 715, 731, 931, 932, 935, 937, 945; V, 252, 327; XXVII, 434, 455, 459
- geology of, V, 252
- waters in, XXVI, 1373
- Cat Creek sand, VI, 146
- Cat Creek waters, distinctive character of, PROB, 946
- Cat Island, RMS, 171
- Catahoula, calcareous material in, GC, 545; XVII, 543
- correlation of, GC, 750; XIX, 394
- heavy minerals of, GC, 541, 542; XVII, 539, 540
- light mineral content of, GC, 541; XVII, 539
- Lower, oil sands at Buckeye field, Texas, GC, 736, 748; XIX, 380, 391
- Miocene age of, XXI, 495
- of Fayette County, Texas, paleogeography of, GC, 545; XVII, 543
- Paynes Hammock, and Chickasawhay beds, section, XXVIII, 1349
- probably unconformable on Vicksburg, GC, 406; XVII, 637
- rice sands of, XXVIII, 1361
- surface, section showing that thickness of beds indicates correlation
- (Catahoula)
- of, with pyroclastic beds above marine wedge, XXIII, 174
- surface, and subsurface section, alternative correlations of, XXIII, 175
- upper Fayette, and basal Oakville, similarity of sand grains in, GC, 540; XVII, 538
- Catahoula and Fayette in Fayette County, Texas, volcanic glasses in, GC, 543, 544; XVII, 541, 542
- Catahoula and *Heterostegina* zone, XXVIII, 61
- Catahoula faunas, GC, 536; XVII, 534
- Catahoula-Fleming contact, XXIII, 173
- Louisiana, GC, 414; XVII, 645
- Vernon Parish, Louisiana, XVI, 608
- Catahoula formation, GC, 404, 405, 530; XVII, 531, 535, 635, 636, 637; XXI, 491; XXIII, 1616; XXIV, 2128; XXIX, 1176
- age and correlation, GC, 529, 537; XVII, 527, 535
- Conroe field, GAS, 725
- correlation with Chattanooga formation and Tampa limestone, GC, 406, 411; XVII, 636, 642
- detailed study of beds commonly known as, in Fayette County, Texas, with particular reference to their age, GC, 528
- Esperson dome, GC, 863; XVIII, 1638
- Fayette and Walker counties, Texas, sections, GC, 535; XVII, 533
- Greta field, GC, 654; XIX, 550
- Gulf Coastal Plain, XXIII, 182
- lithology of, GC, 407; XVII, 637
- Louisiana, GC, 404; IV, 130; VI, 180; XVII, 635
- lower, XXVII, 1138, 1147
- map of outcrop, GC, 548; XVII, 546
- marine, XXVII, 1137, 1147
- marine fauna of Jackson age in, GC, 549; XVII, 547
- Miocene, Anse la Butte dome, XXVII, 1135
- nomenclature of, XVII, 530
- Oakville formation unconformable on, XXIX, 1723
- so-called, in Texas, XVII, 526
- Texas, GC, 531; I, 36, 73; III, 313; V, 224; XVII, 529, 750
- upper, XXVII, 1136; XXVIII, 201
- upper, in Buckeye field, GC, 744; XIX, 388
- upper, in south Texas pools, XXIV, 1076
- Catahoula-Frio group, XXII, 819
- Catahoula group, GC, 360; XIX, 1164
- Catahoula Lake field, XXVIII, 273
- production at, XXVIII, 273
- Catahoula Parish, Louisiana, geology of, XIV, 433
- oil in, XXVIII, 273
- thickness of Vicksburg in, GC, 403; XVII, 633
- wells in, XIV, 443
- Catahoula sand, XXIV, 1730
- lower, XXVIII, 201
- Catahoula sand series productive of oil in Saxet field, XXIV, 1815
- Catahoula sands, varied texture of, GC, 539; XVII, 537
- Catahoula sandstone, GC, 543; XVII, 541; XXVIII, 1344, 1359
- Covington County, Mississippi, GC, 371; XIX, 1150

- Catahoula sandstone (Miocene?) (Tea), SBP, 336, 338-349, 415; XXV, 2003
- Catahoula series, XXII, 291
- Tepetate tuff, XXII, 295
- Catahoula tuff, GC, 409; XVII, 639; XXIII, 184, XXV, 2005
- Driscoll Ranch, GC, 622; XVII, 818
- Catalina Basin, RMS, 255, 257, 264, 266
- Catalina Channel, RMS, 260
- Catalina Island, CAL, 5, 308, 315; RMS, 245, 251, 254, 256, 260, 277
- schists from basic volcanic rocks, CAL, 82, 84
- schists like those of San Onofre breccia, CAL, 170
- Southern Franciscan area, CAL, 31
- subsidized in recent past, CAL, 8
- Catalina metamorphic facies of Franciscan, SC, 115, 120, 123, XX, 1661, 1666, 1669
- Catalina metamorphisms, XXVII, 124
- Catalina uplift, SC, 14, 118; XX, 1560, 1664
- emergent during Middle Miocene, SC, 123; XX, 1669
- Catalina, CAL, 31, 293, 308
- detritus from, CAL, 8, 171, 183, 196, 259, 292
- Miocene in, CAL, 8, 171, 183, 195, 196, 223, 285
- Pliocene in, CAL, 251
- subsidence of parts of, CAL, 273
- Catalogue of Miocene foraminifera, systematic, MSC, 182
- Catalysts, PROB, 56, 80, 142, 144, 241, 451
- effect on extractable portion of oil shales, XIII, 322
- pressure tests on Colorado oil shale with, XIII, 354
- Catalytic action, bearing on origin of source sediments of petroleum, XIV, 1466
- Catalytic formation of petroleum, XXVIII, 1516
- Catalytic hydrogenation, XV, 615
- Catalytic hydrogenation and polymerization of oils, XXIX, 19
- Catalyzers used in petroleum refining industry, XXIV, 1452
- Catastrophic death of fauna, RMS, 361
- Catatumbo flexure, XXIX, 1127
- Cathaysia, XXVIII, 1419
- Cathaysian geosyncline, XXVIII, 1419, 1420
- Cathcart, Stanley H., SBP, 356; STRAT, 507; XIX, 856; XXI, 1586; XXII, 265
- review, XXI, 1354
- Cathcart, Stanley H., and Ashley, G. H., gas in Tioga region, Pennsylvania, review, XVI, 425
- Cathcart, Stanley H., and Collier, A. J., XXVI, 314
- Cathedral Bluffs redbed tongue of upper Wasatch, GAS, 353; XXII, 1023, 1030, 1031
- Cations, RMS, 454, 455, 475, 478, 536, 541
- absorption of, RMS, 462
- adsorbed, hydration of, RMS, 535
- concentration of, RMS, 485
- effects of, on physical properties, RMS, 482
- exchangeable, in clays, RMS, 478
- metallic, RMS, 463
- non-replaceability of, RMS, 461
- Catoosa field, PROB, 435
- Catskill fields, producing horizons in, GAS, 972
- Catskill formation, PROB, 58, 59, 455, 457, 469
- (Dua, etc.), SBP, 351, 354
- Scenery Hill gas field, Pennsylvania, STR II, 444, 446
- Catskill formation and Old Red sandstone, sources not consistent with former land connection, CD, 85
- Catskill group, PROB, 494
- Catskill redbeds, PROB, 341
- Catskill series in Copley pool, West Virginia, STR I, 449; XI, 589
- Shinnston pool, STRAT, 834, 837-839
- Catskill shale, V, 368
- Catskill Water Supply Project first instance of geologists with a major engineering project, XXVI, 1797
- Cattaraugus, Allegany, and Steuben counties, New York, map of oil fields, STR II, 270
- Cattaraugus beds in New York oil fields, STR II, 275
- Cattaraugus County, New York, Medina in, XXII, 83
- Cattaraugus County field, New York, STR II, 272
- Cattaraugus formation in Bradford field, Pennsylvania and New York, STR II, 413
- Music Mountain pool, STRAT, 495
- Cattell, R. A., GAS, 1054, 1055; VII, 351
- Cattell, R. A., and Bell, H. W., VI, 191; VII, 352, 569
- Monroe gas field, Louisiana, review, VI, 155
- Cauca-Patia graben, XXIX, 533
- Cauca-Patia trough, XXIX, 532
- structure of, XXIX, 532
- Cauca trough, XXIX, bet. 508 and 509
- Cauca Valley coal measures, XXIX, 1077
- Caucasus, tectonics of southeastern, and its relation to the productive oil fields, XVIII, 603
- Caucasus Mountains, XXI, 1077
- Caudill, Samuel Jefferson, application of depletion allowance to oil-property taxation, V, 484
- memorial of, XX, 118
- Cause and enhancement of absolute westward drift, CD, 71
- Caustic for nitrogen determinations, SBP, 37-39
- Cavalan syncline, XVIII, 1057
- Cave, H. S., XXVIII, 1675
- Cave, H. S., and Prettyman, T. M., XXII, 793, 794; XXIX, 920, 921, 924, 925, 926
- Cave Creek formation, XXI, 426, 1558
- Cave-ins in Wallace County, Kansas, origin of, XIV, 316
- Cavern collapse, XXI, 957
- Cavernous sandstone (uppermost Tejon) MSC, Fig. 14 (in pocket)
- Cavett anticline at Pine Island field, Louisiana, STR II, 173
- Caving blue shale, SC, 63; XX, 1609
- Kettleman Hills, XXIII, 24
- upper McClure, faunules from, MSC, Fig. 14 (in pocket)
- Caving shale in Hutchinson County, XXIII, 1026
- Cavins, O. A., XII, 949; XXVIII, 1148
- Cavins, O. A., and Base, Emil, PROB, 377; XV, 867; XXVIII, 1096, 1105, 1139, 1145, 1146, 1149, 1150, 1152, 1169, 1171, 1177, 1180, 1184
- Cavit, W. H., SD, 529
- Cavitation, RMS, 8
- Cavities in cap rock, Clay Creek dome, GC, 768, XX, 79
- High Island dome, GC, 930, XX, 581
- in limestone, MEX, 40, 207
- Cavity at contact of salt and anhydrite, Jefferson Island dome, GC, 1012; XIX, 1631
- Cayetano formation, Cuba, II, 140
- Cayeux, Lucien, CAL, 102; RMS, 593; SD, 84, IX, 76, XI, 362, XIX, 1587, 1588
- roches sédimentaires de France. Roches siliceuses, review, XV, 978
- Cayuga in Anderson, Freestone, and Henderson counties, Texas, XXII, 731
- Cayuga and Long Lake fields, north-east Texas, extended during 1936, XXI, 1067
- Cayuga anticline, GAS, 669
- Austin chalk zone in, GAS, 670
- Cayuga conglomerate, XXII, 1547
- Cayuga field, Anderson, Henderson, and Freestone counties, Texas, XXI, 1066; XXIII, 892, XXIV, 1065; XXV, 1085; XXVI, 1052; XXVII, 785; XXVIII, 846 (well 373), SBP, 292-335, 409
- Cayuga-Salina group in east-central United States, XXII, 1531
- Cebada and Graciosa megafaunas, XXVII, 1357
- Cebada member, XXVII, 1339, 1356
- Cedar Bayou, XXII, 740
- Cedar Creek anticline, Montana, FOP, 43; GAS, 245, 248, 250, 255, PROB, 705; XXI, 991, XXV, 1475, XXVI, 861, 1326, 1557; XXVII, 435, 436
- Cedar Creek dome, Louisiana, SD, 215, 222, 274, 275, 334-338; X, 282-287
- Cedar Creek field, Texas, STR I, 324, 367
- Cedar Creek gas field, Montana, FOP, 43; GAS, 252; XXV, 1475; XXVIII, 791
- Cedar Grove field, IV, 132
- Cedar Hills sandstone, Kansas, II, 74; XXI, 1558; XXIII, 1788; XXV, 83
- correlation of, with Duncan and Piedmont sandstones of Oklahoma, XXIII, 1790
- Cedar Hills sandstone, Flower-pot shale, and Medicine Lodge gypsum in Barber County, Kansas, XXIII, 1790
- in subsurface, XXIII, 1791
- Cedar Keys formation, XXVIII, 1680, 1704
- Cedar Keys limestone and clastic beds of Midway age, XXVIII, 1703
- Cedar Lake field, Gaines County, Texas, XXIV, 1031
- hydrocarbons in, XXIV, 862
- mineralization, XXIV, 862, 1037
- Cedar Lake pay zone, XXVI, 1023; XXVII, 757
- Cedar Pocket Canyon fault, XXIII, 134, 135
- Cedar Point field, Chambers County, Texas, XXII, 1601
- an outstanding discovery of Texas coast for 1938, XXIII, 880
- gravity of oil at, XXIII, 880
- Cedar Point spit, Lake Erie, RMS, 213, 611
- Cedar Valley limestone, fossils of, XXVIII, 1524

- (Cedar)
 limits of, XXVIII, 1522
 Cedartown shale, XXIV, 88
 Cedartop gypsum, II, 114
 Cedarville, CAL, 26
 Cederstrom, D. J., XXIX, 904, 905, 910, 953
 structural geology of southeastern Virginia, XXIX, 71
 Cedro Hill field, XXIII, 865, 866
 Celebes, Eocene, Oligocene, Miocene, and Pliocene in, XXVIII, 1450
 geanticlines of, XXVIII, 1450
 Celebes Sea, RMS, 348, 351
Globigerina ooze in deep parts of, RMS, 351
 Celestine in calcite cap, XV, 518
 in rock salt, XXI, 1292
 Celina, Tennessee, structure of oil fields of, XI, 910
 Celina and vicinity, Tennessee, oil fields of, STR I, 246, 248
 Cell protoplasm, RMS, 422
 Cellular limestone, MEX, 51
 Cellulose, PROB, 37, 39, 261, 462, RMS, 443
 compounds of, in sediments, RMS, 442
 effect of increasing charging density on heat decomposition of, XXIV, 1880
 fermentation of, RMS, 424
 fermentation of, by bacteria, PROB, 38
 in plankton, RMS, 442
 Celt-Iberian mountain system, XVI, 172
 Cement, non-calcareous, RMS, 594
 use in drilling oil wells, VIII, 144
 Cement and cement accelerators, some tests on, XII, 279
 Cement oil field, Caddo County, Oklahoma, II, 55; III, 444; IV, 278; XXI, 1011; XXIV, 1030; XXV, 1687
 color changes in rocks of, XXV, 18
 review, VI, 385
 Cement oil-field and Chickasha gas-field, folds, character of, XXV, 10
 Cementation, PROB, 79, 255, 466, 468, 479, 807
 in Bethel sandstone, variations in, XXVIII, 105
 inside and outside productive areas, PROB, 473
 interstitial, XXVI, 1720
 natural in sandstone, IV, 33
 of crinoidal sediment, XXVI, 1720
 secondary, PROB, 472
 Cementation control and correlations in drill holes, use of temperature measurements for, XXI, 789
 Cementation process in sandstone, IV, 33
 Cemented zones, use of thermometric method in location and study of, XXI, 792
 Cementing or binding materials and their order of deposition, XXV, 1858
 in sandstones, XXV, 1857
 Cementing materials in sandstones and their probable influence on migration and accumulation of oil and gas, XXV, 1839, 1858
 Cementing minerals in sandstones from Rocky Mountain region, distribution of, XXV, 1868
 influence on migration and accumulation of oil and gas, XXV, 1872
- (Cementing)
 influence on porosity and permeability, XXV, 1869
 Cements, crystalline-textured, XXVI, 1720
 fragmental-textured, XXVI, 1720
 Cenomanian, CAL, 111; MEX, 17, 26, 29, 32-34, 36, 37, 39, 46, 48, 53, 60, 204, XXVIII, 1122, 1146
 Lower, MEX, 31, 205
 lower, and upper Albian, several facies in Mexico and Central America, XXVIII, 1095
 Mexico, XXVIII, 1125
 Sierra de Tamaulipas, XXVIII, 1145
 upper, age of basal Agua Nueva, MEX, 25, 33, 53
 upper, hiatus, MEX, 162
 upper, in Sierra Mojada, Coahuila, MEX, 162
 upper, and Turonian in Mexico, XXVIII, 1097
 Cenomanian flora, STRAT, 285, 588
 Cenomanian transgression, XXI, 558
 Cenomanian-Turonian fossil localities in Central America and Mexico, XXVIII, 1098
 Cenomanian-Turonian time, XXIX, 1084
 Cenomanian, Europe, VI, 526
 Cenozoic, CAL, 24, 56, 59, 166, 192, 262, 274, 276-279, 285, 300; MSC, 337; RMS, 154, 155; SC, 58; XX, 1604
 Antillean-Caribbean region, XXIV, 1578
 East Indies, XXII, 28
 great thickness of, in Gulf Coastal Plain, XXIII, 149
 Gulf Coastal Plain, XXIII, 195
 Louisiana, XXIV, 2073; XXIX, 1171
 Mississippi, XXVIII, 47
 Cenozoic and Mesozoic reservoir rocks responsible for major part of oil, XXVIII, 1502
 Cenozoic deposits, late, of California and of Europe, correlation between, XV, 555
 late, of Coastal Plain of Texas between Brazos River and Rio Grande, geologic map, XXIX, 1694
 of Gulf Coastal Plain, transition from lenticular sands in non-marine facies of a formation to blanket sands in marine facies, characteristic of, XXIII, 153
 Cenozoic diastrophism in central coast region of California, CAL, 59
 Cenozoic epeirogeny, SC, 13; XX, 1559
 Cenozoic faunas, MSC, 170
 Cenozoic formations, Caliente Mountain district, SC, 79; XX, 1625
 Coalina district, SC, 58
 San Joaquin Valley, GAS, 126
 Cenozoic fossils, CAL, 286, opp. 288
 Cenozoic petroliferous strata located at relatively high altitudes, XXII, 846
 Cenozoic sedimentation in Wind River basin, diagrams showing history of, XXV, 140
 Cenozoic system in south Arkansas, XXII, 979
 Centennial geological map of Michigan, XXI, 1600
 Centennial Valley, stratigraphic section of Sundance formation measured in, XXI, 744
 Sundance formation in, XXI, 743
 Centrahoma, Oklahoma (well 300), SBP, 255-285, 408
- Central and South America, correlation of Lower Oligocene of, with that of southern Mexico, MSC, 110, 177, 179
 Central America, CAL, 301; XXIII, 1412
 coal and plant-bearing beds of Lower and Middle Jurassic in, XXVII, 1498
 geologic history of, XXIII, 1414
 northern, and southern Mexico. Jurassic in, XXVII, 1417, 1495, 1496, 1501
 references on, XXIII, 1417
 relation of deep-seated faults to surface structural features of, VII, 1
 review, VI, 263
 tectonic units of, XXIII, 1413
 Central America and Mexico, anticlines and geosynclines of, XXVIII, 1080
 Aptian-Albian fossil localities in, XXVIII, 1091
 Campanian-Maestrichtian fossil localities in, XXVIII, 1104
 Cenomanian-Turonian fossil localities in, XXVIII, 1098
 characteristic fossils of middle and late Albian of, XXVIII, 1095
 Coniacian-Santonian fossil localities in, XXVIII, 1101
 correlation of Cretaceous formations of, XXVIII, 1082-1088
 Cretaceous formations of, XXVIII, 1077
 fossils of Bernian of, XXVIII, 1089
 fossils of Hauterivian of, XXVIII, 1089
 fossils of Valanginian of, XXVIII, 1089
 Neocomian fossil localities in, XXVIII, 1081
 redbed and salt localities in, XXVII, 1503
 references on Cretaceous of, XXVIII, 1190
 several facies of upper Albian and lower Cenomanian in, XXVIII, 1095
 Central American geology, some factors of, that may have a bearing on origin of petroleum, IV, 263
 Central American poisonous snakes, XXIV, 383
 Central basin, XXVII, 1043
 of Appalachian geosyncline, XXV, 781
 of Belgian Congo, oil possibilities in, XXVIII, 1168
 Central Basin platform, GAS, 420, 423; PROB, 352; XXI, 1084; XXII, 698; XXIII, 841, 1525; XXIV, 22, 32, 40, 54, 1037; XXV, 77, 103, 1047; XXVI, 1225, 1632; XXVIII, 303, 807; XXIX, 745
 deep Permian production on, XXVII, 753
 Ector County, Texas, XXV, 593
 Ellenburger production on, XXVIII, 819
 pre-Permian wells in, XXVII, 762
 San Andres group in, XXV, 96
 Texas-New Mexico, stratigraphy of west side of, XXIV, 32
 uplift beneath, PTNM, 718; XXVI, 718
 West Texas-New Mexico Permian basin, XXIV, 15
 Wolfcamp beds in, PTNM, 677; XXVI, 677

- Central Basin platform and Midland basin, equivalents of Leonard series in, PTNM, 691; XXVI, 691
- Central California, Chico in, CAL, 105
- Cretaceous in, CAL, 115, 118
- Eocene in, CAL, 144
- Central California samples, assay number, SBP, 139-141
- calcium carbonate content of, SBP, 132, 133
- carbon content of, SBP, 136, 137
- carbon-nitrogen ratio of, SBP, 144
- color, SBP, 138, 139
- key to productivity of, SBP, 148
- location, SBP, 88, 89
- nitrogen content of, SBP, 138
- nitrogen-reduction ratio of, SBP, 141-143
- organic content of, SBP, 133-137
- oxidation factor of, SBP, 143, 144
- reduction number of, SBP, 137-138
- reflectivity, SBP, 138, 139
- relation of properties of, to oil zones, SBP, 146-167
- relative volatility, SBP, 140-142
- texture, SBP, 131, 132
- volatility, SBP, 139-141
- (wells 2-27, 95), SBP, 130-150. (See also California samples)
- Central district of Pennsylvania, XXV, 1137, 1141
- Central fields of Montana, PROB, 715
- Cloverly formation waters in, XXVI, 1352
- Colorado group waters in, XXVI, 1338
- Madison limestone waters in, XXVI, 1367
- Montana group waters in, XXVI, 1331
- Quadrant formation waters in, XXVI, 1360
- Central Franciscan area, CAL, 28, 30
- intrusive masses in, CAL, 82
- metamorphic rocks in small proportions, CAL, 84
- Nacimiento fault a boundary of, CAL, 41
- organisms in, CAL, 93
- part of a thrust sheet, CAL, 37
- Central Gas Utilities, XXIII, 1056
- Central geosynclinal basin, SC, 8, 11, 86; XX, 1554, 1557, 1632
- Central Illinois, coal-bearing strata in, XXIII, 1383
- Central Indian Ridge, RMS, 399, 401
- Central Kansas, geological conditions in, II, 70
- Central Kansas arch, XVII, 796
- Central Kansas oil domes, origin of, IV, 89
- Central Kansas uplift, FOP, 88; STRAT, 131; XIX, 1407; XX, 527; XXI, 1003; XXII, 667, 672, 1589; XXIV, 999; XXV, 1520, 1626, 1662; XXVII, 809; XXVIII, 302; XXIX, 703
- Central Kansas uplift pools, FOP, 84, XXV, 1516
- Central Lowland, XXVIII, 324
- Central Michigan area, GAS, 796
- Mississippian gas sands of, XXII, 129
- stratigraphic relations in, XXII, 169
- Central Michigan Basin, XXI, 124
- Central Mine, Morenci, Arizona, RMS, 515
- Central mineral region, PROB, 340; XI, 826; XVIII, 1067
- columnar sections from, to Frio County, Texas, XXIX, 1425
- Central mineral region of Texas, XXVI, 1398
- Central mineral uplift, XXIII, 845
- Central Mountain complex, XXVIII, 1453
- Central Natural Gas Company, GAS, 942
- Central Plain tuff formation of Antigua, XXIV, 1596
- Central plant, Houston, Texas, wells at, XXVII, 1092
- Central Plateau of Mexico, XX, 1289
- Central sedimentary basin of Uruguay, petroleum geology of, XIX, 1205
- Central States Light and Power Company, GAS, 415
- Central Texas, Bend series of, III, 217
- Ellenburger structure map of, XXV, 1600
- evidence of recent movements along faults of Balcones system in, XX, 1357
- section of Cretaceous in, XXIII, 626
- structural map of, XXV, 1598
- Travis Peak formation of, XXIII, 625
- Central Texas oil fields, new, review of development in, during 1918, III, 163
- Central Valley project, XXVI, 1816
- Central valley region, California, structural and commercial oil and gas possibilities of, XVI, 361
- Centralia area, PROB, 561
- Centralia pool, XXV, 1119
- Centralia-Sandoval area, Illinois, STR II, 120
- Centralia structure, XXIII, 1361
- Centrifugal and precessional pulls, CD, 201
- Centrifugal and tidal forces opposed to probability of Atlantic rift, CD, 195
- Centrifugal force, RMS, 108
- as a factor influencing currents, RMS, 105
- Centrifuge, RMS, 529, 531, 547
- Centrifuge methods, RMS, 551
- Centrifuge separation in heavy mineral studies, RMS, 598
- Cephalopod, fossil, habitats, XXIV, 1192
- Cephalopod fauna of calcareous member of Moorefield formation, XXVIII, 1627
- Cephalopod limestones in Timor, XXII, 11
- Cephalopod sequence, Jurassic, MSC, 92
- Cephalopoda, XXI, 808
- Cretaceous fossil, XXIV, 1169
- Cephalopoden, neue, aus der oberen Kreide vom Río Grande del Norte (Mexico und Texas)*, review, XX, 987
- Cephalopods, MSC, 90; XXII, 1638; XXV, 129, 138, 644; XXVI, 7
- in Word formation, XXIX, 1773
- orthoceracone, orientation of, XXIX, 429
- paleogeographic map showing bathymetric zones of Mexican and Texas Aptian and Albian seas as indicated by types of, XXIV, 1195
- types of sediments in which they are most likely to occur, and their paleontological significance, XXIV, 1190
- Ceptura field, XXIII, 960, 961
- Ceram, RMS, 350; XXVIII, 1451
- Triassic Flysch facies containing oil in, XXII, 11
- Ceratobulimina erima* zone, GC, 426; XIX, 690, 693; XXII, 1007, 1275
- Ceratobulmininae, MSC, 327
- Cerf basin, XXV, 78, 89
- San Andres group in, XXV, 83
- Cerithium* beds, Europe, VI, 526
- Cerralvo anticline, tiend of, GC, 263; XVII, 1206
- Cerritos, volcanic tuff in wells at, MEX, 164, 203
- Cerritos pool, oil production in, MEX, 181
- Cerro Alquitran district, Argentina, XI, 263; XVI, 822
- Cerro Auza, basaltic plug, MEX, 193, Fig. 22 (in pocket)
- Cerro Azul field, MEX, 5, 105, 112, 118, 163, 204, 206, 216, 229, Fig. 32 (in pocket); PROB, 394; V, 85
- Cretaceous in, GAS, 999
- temperatures of oil at, MEX, 227
- Cerro Bernal, volcanic plug, MEX, 150
- Cerro Borrachos, MEX, 216
- Cerro Calote, MEX, 153
- Cerro Cautivo, extinct volcano, MEX, 145
- Cerro Chapapotal, MEX, 2, 151, 153, 217, 219
- Cerro Chapapote, intrusion, MEX, 206
- Cerro Chiquito, quartz-dolerite at, MEX, 147
- Cerro Corcovado, MEX, 138
- Cerro Cortado (Topila), MEX, 118, 133, 136
- Cerro de Tambucan, light oil seepage at, MEX, 156
- Cerro Dicha, MEX, 151, 153, 193, 194
- Tamesí exposure near, MEX, 80
- Cerro Gordo, intrusion, MEX, 148
- Cerro Huolizintla, echinoid from, MEX, 139
- Cerro La Mula, echinoid from, MEX, 135
- Cerro La Pez, volcanic plug, MEX, 151, 153, 193
- Cerro La Puerta, conglomerate in, MEX, 138
- echinoid in, MEX, 135
- Cerro Muleros in northern Chihuahua, Cretaceous section in, XXVIII, 1185
- Cerro Pelón, MEX, 151, 153, 215, Fig. 32 (in pocket)
- Cerro Santa Rita, tuff at, MEX, 147
- Cerro Sombrento, quartz-dolerite at, MEX, 147
- Cerro Tacuba (Topila), MEX, 118, 136
- Cerro Topila beds, Mesón age of, MEX, 133
- Cerro Viejo, MEX, 2, 204, 206, 217-219, Fig. 32 (in pocket)
- Cerro Viejo field, Cretaceous in, GAS, 999
- Cerro Zaragoza, baked marls at, MEX, 151
- cone (southern Amatlán), MEX, 214, Fig. 32 (in pocket)
- Cerro shale, XXIV, 1734, 1738
- Certes, A., RMS, 417; XX, 260, 263
- Cessna sand, Hardin field, STRAT, 567
- Cetothere from Miocene Astoria formation, MSC, 69, 154
- Ceylon and Indian Peninsula, XXIII, 105
- Chachahoula dome, XXIII, 886
- Chaco basin, XXIX, 559
- oil possibilities, XXIX, 514
- Chaco basin and Lake Titicaca region on Andean plateau, XXIX, 510
- Chaddock, R. E., SBP, 9

- Chadron anticline, PROB, 721; XII, 703; XXVI, 1534
- Chadron anticline and Cambridge anticline, continuity of, XXVI, 1535
- Chadron-Cambridge axis, post-Cretaceous pre-Tertiary erosion along crest of, XXVI, 1534
- Chadron dome, XXI, 1003; XXV, 1626; XXVI, 1567
- Chadwick, George H., SD, 44; STRAT, 495; IX, 874; XIX, 914, 1390, 1546, 1549; XXI, 311, 315, 1586
- Canadaway group, STRAT, 496
- demise of Bradfordian series, discussion, XIX, 912, 1546-1548
- discussion of theories of origin of salt domes, SD, 44
- Thorold sandstone, XIX, 702
- Chaffee formation, XXVI, 1377
- Chaffin beds, III, 143; XXIV, 91
- Chagos Islands, RMS, 400
- Chakraborty, Jogendra Nath, RMS, 539
- Chalcedony, MEX, 156; RMS, 499, 602
- in Dockum conglomerates, XXVII, 624
- Chalcedony knobs of Reynosa Plateau, GC, 581; XVII, 519
- Chalcopyrite, XXIII, 1757
- Chalk, PROB, 579; RMS, 593; SBP, 294, 413
- along Little River at White Cliffs, XVIII, 1509
- at White Cliffs, Arkansas, age and correlation of, with notes on subsurface correlations of northeast Texas, IX, 1152
- Louisiana, X, 263
- of North Sea, RMS, 336
- Upper Cretaceous, PROB, 579
- Upper Cretaceous, in cap rock of McFaddin Beach salt dome, Jefferson County, Texas, XXIII, 339
- Chalk Bluff formation, PTNM, 595, 688; XXI, 855, 859; XXIV, 47; XXVI, 65, 595, 688
- equivalent to Whitehorse group, XXI, 856; XXV, 1713
- greenish bentonite in, XXI, 856
- Chalk cliffs, RMS, 211
- Chalk formation in eastern Gulf region, paleogeographic significance of, XXII, 1645
- Chalk group, XXII, 1509
- Chalk Hill field, Archer County, Texas, XXI, 1019, 1023
- Chalk Hill pool, XXIII, 849
- Chalk Hill sand, Seymour pool, STRAT, 762
- Chalk Hill zone, XXIII, 850
- Chalk hills at Monroe field, GAS, 760
- Chalk pool, PROB, 415
- Chalk-rock oil in Pine Island field, Louisiana, STR II, 170, 192
- Chalkley field, Cameron Parish, XXIII, 883
- Chalky Mount beds, Barbados, XXIV, 1554
- Chalky sand, GAS, 757
- Challenge to geology, XXVIII, 897
- Challenger, foraminifera dredged by, MSC, 11
- Challenger Expedition, RMS, 49, 51, 352, 376, 385, 388, 631
- Challenger, H. M. S., value of research by expedition of, XXVII, 941
- Challenger monograph, report on foraminifera in, XXV, 1225
- Challinor, John, and Platt, John L., simple geological structures, re-
- (Challinor)
view, XIV, 1479
- Chalma, Chicotepec beds near, MEX, 99, 100, 249
- Chalmers, J., Talaferro, D. B., Jr., and Rawlins, E. L., GAS, 1103
- Chamal and San José de la Rúsias region, Tuxpan fossils at, MEX, 138
- Chambered-weight samplers, RMS, 638-640
- Chamberlain, Glenn R., STRAT, 239
- Chamberlain, Ralph C., XXIX, 1265
- Chamberlin, Rollin T., IV, 91; VII, 10; X, 667; XI, 33, 46, 47; XII, 201; 825, 850, 851; XIII, 640, 1451, 1453; XIV, 633; XIX, 1257; XX, 1163, 1182; XXIII, 1446; XXIV, 501; XXV, 419
- injustice of misleading citations, discussion, XIV, 521
- injustice of misleading citations, discussion, reply to, XIV, 633
- memorial of J. Claude Jones, XVI, 623
- some of the objections to Wegener's theory, CD, 83; discussion by van der Gracht, CD, 202, 208, 218
- Chamberlin, Rollin T., and Shepard, F. P., XII, 847
- Chamberlin, Rollin T., Bucher, W. H., and Thom, W. T., Jr., GAS, 248; XXII, 307; XXIII, 1445
- results of structural research work in Beartooth-Bighorn region, Montana and Wyoming, XVII, 680
- Chamberlin, Thomas C., PROB, 540, 702; VI, 228; VIII, 699; XIX, 1255; XXV, 2126; XXVIII, 1507; XXIX, 493, 1631
- megatectonic force, CD, 172
- presented with Penrose medal, IX, 184
- response to congratulations, VII, 711
- Chamberlin, Thomas C., and Salisbury, Rollin D., IX, 864; XVI, 34; XXIX, 128
- Chambers, A., RMS, 285
- Chambers County, Texas, Barbers Hill oil field, SD, 530
- Cedar Point field, XXII, 1601
- South Cotton Lake field, XXV, 1898
- Champlain subsidence, CAL, 267
- Champlin Refining Company, XXIII, 832
- Champs pétrolières, vers la recherche de nouveaux*, review, XVI, 948
- Chanac bed, XXIX, 650
- Chanac formation, CAL, 242, 303; MSC, 133, 155, 174
- Edison field, STRAT, 3
- Kern Front field, STRAT, 11
- Chanac series, XXVI, 1141
- Chance, H. M., PROB, 12, 13, 16, 71
- Chance, H. N., I, 31
- Chancellor, C. W., XVI, 1021
- Chancellor pool, XXVII, 754
- Chandeleur Islands, RMS, 159, 165, 166, 171
- Chandler and Newell, XXIV, 1107
- Chandler pool, PROB, 293, 411
- Chaney, Ralph W., CAL, 154, 208, 209, 299; X, 130, 134; XXVIII, 509, 954, 969; XXIX, 1386
- Chaney gypsum, II, 114
- Change, abrupt, from marine to continental beds, XXVI, 50
- abrupt, in chemical composition above and below a contact, XXVI, 50
- Changes in climate as a result of influence of glacial period, RMS, 405
- Channel Island region, CAL, 4, 8, 119, 165, 223, 251, 264, 291
- Eocene in, CAL, 122
- rocks of Temblor age in, CAL, 175
- structure of, SC, 110; XX, 1656
- submarine gorges of, CAL, 268
- Upper Miocene siliceous rocks in, CAL, 223
- Channel Islands of California, MSC, 115, 124, 128, 133, 164, 169, 350; PROB, 30; RMS, 245, 283, 418, 433, 434, 446; SBP, 70
- compaction of sediments in, XV, 275
- shallow-water foraminifera from, MSC, 12
- Channel sand, XXV, 1407
- Channel sands, Venango district, STRAT, 537
- Channel sandstone, IV, 198
- in lower Pleasanton, XXV, 70
- Channels, abandoned, XXIII, 1212
- effect of, on sediments, RMS, 188
- influence of, on currents, RMS, 125
- of Red River, active and abandoned, and abandoned channels of Mississippi River in alluvial valley of central Louisiana, XXIII, 1207
- parallel, of abandoned courses, XXIII, 1215
- straightness of, on distributaries of deltas, RMS, 163
- Chanslor-Canfield Midway Oil Company, GAS, 195
- Del Amo 23 (well 47) Sahlain 1 (well 19), Torrance 70 (well 48), Torrance 90 (well 46), SBP, 87-153, 403
- Chantler, H. McD., STRAT, 308
- Chanute district, STRAT, 57
- Chanute formation, XXIV, 725
- Chanute pool, Neosho County, Kansas —a water flooding operation, STRAT, 57, 66
- analyses of oil, STRAT, 75-77
- Chapacao oil field, MEX, 66, 172, Fig 9 (in pocket); XX, 1303
- Chapapote, MSC, 194
- Southern fields, MEX, 1, 118
- Tamaulipas, dyke at, MEX, 150
- Tamaulipas, olivine-basalt at, MEX, 148
- Veracruz, foraminifera, MEX, 106
- Veracruz, type locality, MEX, 105
- Chapapote facies, MEX, 117
- Chapapote formation, MEX, 97, 107, 108, 117, 123, 220, 236; MSC, 194
- Alazán region, MEX, 122
- Barcodón, MEX, 235
- guide species, MEX, 123
- Chapapote Nuñez field, MEX, 219, Figs. 12, 32 (in pocket)
- Chapapote pool, Oligocene in, GAS, 1001
- Chapel Hill area, Smith County, XXIII, 889
- Chapel Hill field, Smith County, Texas, XXIV, 1065; XXVII, 786; XXVIII, 846
- Paluxy sand productive at, XXV, 1083
- Pettit limestone productive at, XXV, 1083
- Chapel Hill gas field, XXV, 1081
- Chapel Hill pool, Smith County, Texas, XXII, 1107
- Chapeño salt dome, Tamaulipas, Mexico, SD, 771, 772; IX, 134
- Chaplin Lake, XXIX, 34

- Chapman, XXIV, 1591
 Chapman, Frederick, MSC, 11, 21, 26, 200, 218, 225, 227, 322, Fig. 14 (in pocket); VIII, 549; X, 1137, 1144, 1147; XX, 1033, 1039, 1041, 1042, 1043, 1047, 1049, 1050, 1051, 1054, 1055, 1056, 1058, 1059, 1066, XXV, 398, 1219; XXVII, 939
 Chapman, Frederick, and Parr, W. J., XXV, 388
 Chapman, Lewis C., SD, 39, 211, 244, 247, 259, 599; IX, 869; X, 3, 36, 39, 51
 Hockley salt dome, VII, 297
 possible subsea anticlines, Gulf of Paria, Trinidad-Venezuela, VI, 474
 Chapman dolomite, II, 74
 Chapman field, Texas, XVI, 747, XXII, 755
 Chapman oil zone, Richfield field, GAS, 214, 215; PROB, 224
 Chapman pool, XXIII, 1045
 Chaponoteras, MEX, 151
 Chappel limestone, XXIV, 71; XXV, 1065, 1069, 1650; XXVI, 205, 212, 1048; XXVII, 772, 775
 production in, XXVI, 1042
 Chappel limestone formation of north-central Texas correlated with Welden limestone of Oklahoma, XXIV, 67
 Chapulhuacán, asphalt in Cenomanian limestones near, MEX, 15
 basal Agua Nueva near, MEX, 53
 Tamailpas limestone conglomerate, MEX, 32
 Chapuputli, MEX, 1, 151
 Chara spore-case faunule in Edna gas field, XXV, 109
 Character of oil produced at Sulphur Bluff, XXI, 111
 of sima, CD, 29
 Charata high, XXIX, 515
 Charco Blanco field, XXIII, 865
 Charco-Redondo field, Texas, STR I, 406
 Charcoal in deep sea sediments, RMS, 382
 Charcoal gasoline plants, GAS, 1120
 Charges on surface of flakes, RMS, 480
 Charging density, influence of, XXIV, 1879
 Chariton conglomerate, XXV, 70; XXVI, 1592
 of Iowa, XXV, 32
 Charles, XXVII, 918
 Charles, Homer H., PROB, 400, 411, 583, 584, 770, 771; SBP, 257, X, 570; XVI, 1173; XVIII, 1343
 Bush City oil field, Anderson County, Kansas, STRAT, 43
 memorial of Bertrand S. Ridgeway, XXVI, 1172
 oil and gas resources of Kansas: Anderson County, review, XII, 217
 Oklahoma City oil field, Oklahoma, XIV, 1515
 Charles, Homer H., and Page, James H., shale-gas industry of eastern Kansas, XIII, 367
 Charles formation, XXVII, 1288, 1299
 Charles' law, XXIX, 1190
 Charleston earthquake, XXIX, 83
 Charlevoix, XIX, 477
 Charlton, Frances, XXV, 1234
 Charophytes, XXVIII, 39
 Charrin, P., review, XIII, 1489
 Charrin, P., and Geoffroy, P., *Etudes géologiques et prospections minières par les méthodes géophysiques*, re-
- (Charrin)
 view, XVII, 444
 Charts, accuracy of, RMS, 221
 marine, as means of indicating character of shelf sediments, RMS, 220
 nautical, of Baltic, RMS, 312
 showing size distribution of shallow water sands, RMS, 185
 Chase, F. L., GAS, 1099
 Chase formation, V, 508
 Chase group, GAS, 467; XXI, 505; XXIV, 271
 (Cch) (Permian), SBP, 258, 261, 263-280, 413
 Hugoton field, STRAT, 87, 89; XXIII, 1060
 Chase Townsite pool, Kansas, XXVIII, 239
 diagram showing yields per acre for areas of 5 and 10 acre well spacing, XXVIII, 233
 Chat, PROB, 298; XVII, 180
 in Tri-State mining district, XXII, 1591
 Chatman, Cecil Lamar, memorial of, XXIII, 115
 Chattahoochee formation, corals in, same as in Mesón, MEX, 137
 correlation with Catahoula formation, GC, 406, XVII, 636
 Chattanooga and Ohio shales in east-central United States, XXII, 1528
 Chattanooga black shale, XXV, 212
 structure of top of, Smithland area, Tennessee, GAS, 862
 Tennessee, VIII, 455
 Tennessee, unconformity below, VIII, 627
 Chattanooga formation, XXIV, 1997, XXV, 1147, 1655
 Chattanooga oil shale, Kentucky, shearing tests on, XIII, 352
 Chattanooga sea, XXIII, 233; XXIV, 2013
 Chattanooga shale, PROB, 59, 293-295, 301, 317, 319, 410, 519, 567, 765, 766, STRAT, 172; XI, 289; XVI, 239, XXIII, 1179, XXIV, 2013, XXV, 1651, 1707, XXVII, 1043, XXIX, 13, 683, 684, 929
 Chanute pool, STRAT, 63, 64
 Cushing field, Oklahoma, STR II, 401
 (Dc) (Devonian?), SBP, 28, 260-284, 414
 Depew area, Oklahoma, STR II, 368
 East Tuskegee pool, STRAT, 446
 Eldorado field, Kansas, STR II, 161, 162
 gas production from, XVIII, 1127
 Interior Highlands of Arkansas, GAS, 542
 Kentucky, GAS, 857; II, 41; IV, 174, 305; V, 99, 121, 146, 344, 406, 510, 522, 647, 651
 migration of oil from Arbuckle limestone into, in Chotopa oil pool, Labette County, Kansas, XXV, 1934
 Nashville dome, Tennessee, XX, 1073
 Nemaha Mountains region, Kansas, STR I, 68, 70; XI, 926
 Osage County, Oklahoma, and adjacent area, STR II, 381, 387; XX, 91
 Ozark Highland area, GAS, 539
 Seminole district, Oklahoma, STR I, 326, 328
 Smithland field, GAS, 861
 structural contour map of central
- (Chattanooga)
 Tennessee on top of, XXVII, 1044
 unconformable on Simpson formation, XXIV, 2011
 Warren County, Tennessee, disconformity below, GAS, 866
 Chattanooga shale and Mississippian limestone, deposition of, on post-Viola erosion surface, XXIV, 2014
 Chattanooga shale-Pencil Cave isopach map of central Tennessee, XXVII-1053
 Chattian, MSC, Fig. 14 (in pocket)
 Chattian-Aquitania, MEX, 132, 133
 Chautard, Jean, *les gisements de pétrole*, review, VII, 579
 Chautauqua arch, PROB, 765; GAS, 461; XII, 177; XXV, 1626
 Chautauqua-Barton arch, XIV, 1550
 Chautauqua County, New York, Medina in, XXII, 83
 Chaves County, western, New Mexico, structures of, IV, 53
 Chawner, W. D., XIX, 770
 Chazy-Lowville in Turkey Mountain lime pools, Oklahoma, STR I, 212
 Chazy-Sylvan unconformity at Big Lake, Texas, discussion, XIV, 1227
 Chazyan fossils, GAS, 440
 Chazyan series in Tennessee, XXIV, 1547
 Check list of foraminifera from Adelaida Quadrangle, MSC, 48
 from Blakeley formation of Washington, MSC, 77
 from Chico Martinez Creek area, MSC, 40
 from coastal bluffs west of Naples, Santa Barbara County, MSC, 29
 from Contra Costa County, MSC, 62
 from Mendocino County coast, MSC, 76
 from Santa Cruz Mountains, MSC, 52
 from Standard Oil Company Piedmont well No. 1, MSC, 51
 from Sunset Valley district, MSC, 57
 from type area of Monterey shale, MSC, 34
 from type locality of Temblor formation, MSC, 54
 near Cuyama River gorge and Cambria, MSC, 74
 near Newport and Astoria, Oregon, MSC, 70
 Check list of foraminiferal samples from Bakersfield, MSC, 27
 Checkerboard limestone, I, 134; II, 120; III, 260, 270, V, 283, 400, 548; XXIII, 225, XXIV, 721, 1997; XXVII, 638
 Depew area, Oklahoma, STR II, 366
 East Tuskegee pool, STRAT, 441
 Checotah pool, GAS, 527
 Cheleken type of oil-bearing uplift, XVII, 770
 Chemical action, PROB, 247, 268
 Chemical alteration of connate water, PROB, 840
 Chemical analyses, RMS, 530
 of algal bioherms, XXII, 1398
 of Atlantic sediments, RMS, 385-386
 of Barataria Bay sediments, RMS, 184
 of Great Salt Lake clays, XXII, 1339, 1340
 of Great Salt Lake oolites, XXII, 1370
 of Mississippian limestone, chart, XXIX, 1158

(Chemical)

- of oil sands, XXV, 855
- of sediments, XXVI, 1701, 1718
- of subsurface sediments in Atlantic, RMS, 392
- of tidal muds, RMS, 199
- of waters, Wasson field, XXVII, 514
- Chemical analysis by X-ray diffraction, XXV, 856
- of crude oils, application of, to problems of petroleum geology, XXVII, 1595
- Chemical change of waters due to structural movement, PROB, 902
- Chemical changes in oil-field waters, XXIV, 1221
- Chemical character of lake waters, XXV, 835
- Chemical characteristics of California petroleum, VIII, 560
- Chemical composition, mass, of a sediment, XXVI, 1718
- of crinoidal sediment, XXVI, 1719
- of flood waters from Bradford sand, PROB, 482
- of Gulf Coast rock salt, XXI, 1300
- of salt cores, PROB, 636
- Chemical conditions and geological surroundings determining the possibility of oil formation, XXIX, 1744
- Chemical considerations regarding origin of petroleum, XV, 611
- Chemical control of heaving shale, XXIV, 1368
- of undesirable fluids in wells, XXIV, 1363
- Chemical deposits, RMS, 4
- Chemical diffusion of water, RMS, 68
- Chemical effects accompanying disintegration of radioactive material, XXVIII, 934
- Chemical engineering in petroleum exploration and production, XXIV, 1361
- Chemical evidence, conclusions from, XXVII, 1613
- Chemical formula of glauconite, RMS, 504
- Chemical oxygen absorption, RMS, 420
- Chemical precipitates in Great Salt Lake, XXII, 1322, 1329
- Chemical precipitation during reef building in Permian of Pecos Valley, XXI, 846
- Chemical properties, mass, maps of, XXIX, 1255
- of artificial mineral oils, XXIV, 1872
- of clays, RMS, 472
- of organic matter, RMS, 441-445
- of sea water, RMS, 53
- of sediments, RMS, 525
- Chemical reactions, effects on character of crude oil, PROB, 148, 150, 270
- involved in origin of cap rock, IX, 76
- Chemical reactions and volume changes, XXI, 1486
- in nature, XXI, 1487
- Chemical realm of transport, XXVI, 1760
- Chemical relations of salt dome waters, SD, 777; IX, 38
- Chemical studies of sediments, RMS, 528, 529
- of sorption processes, RMS, 489
- Chemical technology of petroleum, XXVII, 652
- Chemical treatment with oxidizing agents in order to destroy organic compounds, RMS, 538

- Chemical water control, XXIV, 1364
- Chemical weathering, XXVI, 775
- Chemically treating producing sands, advantages of, XXV, 1043
- Chemicals as a means of drilling horizontal holes in deeply buried oil-producing formations, XXIV, 1365
- effects of, on properties of drilling muds, XXIV, 1368
- use of, in drilling operations, XXIV, 1365
- Chemistry, relation to oil prospecting, review, VI, 389
- theory of origin of salt domes, IX, 859
- Chemo-autotrophic bacteria, RMS, 422, 423
- Chemung fields, in Pennsylvania and New York, GAS, 973
- Chemung formation, PROB, 58, 59, 456-458, 460, 478, 479; XXIV, 1993
- Bradford field, Pennsylvania and New York, STR II, 415
- (Dua, etc.) SBP, 351, 354
- New York oil fields, STR II, 277
- origin, STR II, 282
- Scenery Hill gas field, Pennsylvania, STR II, 446
- Chemung fossils, XXIV, 1993
- Chemung sandstones, GAS, 973
- Cheney, Charles Albert, IX, 859; XII, 528; SD, 29, 211
- memorial of, XXI, 1617
- salt domes of northeastern Texas, review, VI, 58
- Cheney, Monroe G., GAS, 514, 609, 630, 662, PROB, 309, 766; PTNM, 668, 682; SD, 44; STRAT, 541, 550, 551, 552, 669, 671, 673, 786; III, 184, IV, 284; IX, 874; XIV, 58, 1071, 1550; XV, 802, 807, 994, 1018, 1029, 1030, 1044, 1046, 1052; XVI, 180, 190, 191; XIX, 352; XXI, 468, 470, Pl. B, opp. 1085; XXIII, 1068, 1361, 1711; XXIV, 5, 7, 8, 13, 41, 42, 69, 107, 267, 316, 337, 1353, XXV, 1621, 1662, 1663, 1665, 1670, 1681, 1682; XXVI, 207, 210, 211, 221, 222, 225, 230, 668, 682, 1014; XXVIII, 1019; XXIX, 125, 575
- abstract, XXII, 1703
- biographical sketch of Gilbert D. Harris, XIX, 922
- biographical sketch of Walter C. Mendenhall, XIX, 1922
- discussion of divisions of Pennsylvanian system, XXIX, 142
- discussion of theories of origin of salt domes, SD, 44
- Division of Geology and Geography, National Research Council, XXVII, 1554
- economic spacing of oil wells, XIX, 876
- geology of north-central Texas, XXIV, 65
- history of carboniferous sediments of Mid-Continent oil field, XIII, 557
- map of Cross Cut sand, STRAT, 554, 555
- Quarter-Centennial, Illinois State Geological Survey, XIV, 806
- report of committee on geologic names and correlations for 1932, XVIII, 603; for 1933, XVIII, 705
- report of general business committee for 1934, XIX, 741
- report of representative on division of geology and geography of

(Cheney)

- National Research Council for 1943, XXVIII, 676
- report of representative on Division of Geology and Geography of National Research Council for 1944, XXIX, 608
- report of research committee for 1943, XXVIII, 675
- report of research committee for 1944, XXIX, 607
- report of resolutions committee for 1936, XX, 663
- report of secretary-treasurer for 1934, XIX, 731
- research program, XXVIII, 1543
- research study groups and conferences, XXVII, 1552
- review, XXVII, 225
- South Bend field, Young County, Texas, V, 503
- Cheney, R. B., STRAT, 550; XIII, 594, XIV, 924
- map of Caddo lime, STRAT, 558, 559
- Cheney Ranch well, XXIX, 971
- Cheneyan stage, XXIX, 967, 982
- Cheneyan stages, upper and lower, XXIX, 1005
- Cheneyville dome, XXV, 1365
- Cheneyville field, graben-and-horst interpretation of, XXVIII, 544
- Chengtu plain an alluvial fan, XXVIII, 1431
- Cheniere vegetation, RMS, 162
- Cherdinzev, V. A., XXII, 774
- Chernaiarechka beds, XXIV, 261
- Chernaiarechka limestone, XXIV, 253
- Chernosky sand, XXI, 1427
- Chernyshev, XI, 493
- Cherokee, Rusk, Smith, Gregg, and Upshur counties, Texas, East Texas oil field, STRAT, 600
- Cherokee and Marmaton groups, GAS, 471
- Cherokee and Marmaton Mid-Continent Pennsylvanian formations, regional extent of, XIV, 1249
- Cherokee-Anderson County line of faults, GC, 266; XVII, 1209
- Cherokee basin, PROB, 292, 305
- Cherokee beds, Colorado, XIV, 1266, 1274
- South Dakota, XIV, 1262
- Wyoming, XIV, 1262
- Cherokee County, Texas, vertical variation of properties of sediments in well in, SBP, 332
- (wells 352-356), SBP, 292-335, 408
- Cherokee formation, PROB, 298, 412; XXI, 564
- geologic section through Sni-A-Bar gas field showing, XXII, 920-921
- Kansas, GAS, 487, 489, 490, 492, 501
- near Kansas City, Missouri, subsurface study of, XXII, 918
- Red Fork shoestring sand pool, STRAT, 475
- Cherokee group in Des Moines series, Missouri to Iowa, XXV, 35, 42, 49, 53, 59
- Cherokee Ridge anticline, XIX, 540; XXII, 686
- Cherokee Ridge fault, XIX, 542
- Cherokee sand field, XXIX, 706
- Cherokee sand lenses, PROB, 305
- Cherokee sea, XVIII, 1316
- Cherokee shale, PROB, 293-295, 305, 317, 319, 324, 356, 400, 401, 410; XVIII, 1333; XXI, 31, 561;

- Cherokee)
XXIV, 1781, 2011; XXVII, 811; XXVIII, 772
Bush City oil field, STRAT, 45, 46
(Cc) (Pennsylvanian), SBP, 194, 259, 261, 263-280, 413
Chanute pool, STRAT, 63, 64
Depew area, Oklahoma, STR II, 367
East Tuskegee pool, STRAT, 443
Eldorado field, Kansas, STR II, 161
hypothesis based on assumption that it is sole source of oil in Oklahoma City pool, XXV, 1707
Kansas-Oklahoma, II, 110; III, 148, 212, 236; V, 121, 510, 548, 561; VI, 375
Madison pool, Kansas, STR II, 152
Nemaha Mountains, XI, 926
sketch map of Oklahoma City pool showing distribution of formations prior to deposition of, XXV, 1707
unconformable on underlying beds, XXV, 1708
Cherokee shale wedge, updip limit of, XXV, 1712
Cherokee shales, Nemaha Mountains region, Kansas, STR I, 68, 70
redbeds near base of, IX, 350
Cherry Canyon formation, PTNM, 579; XXV, 92; XXVI, 579
of Bone Spring area, relation of, to reef dolomites underlying Capitan reef, XXV, 94
sandstone tongue of, PTNM, 592; XXVI, 592
Cherry Canyon reef contemporaneous with San Andres, XXV, 94
equivalent of Vidrio reef of Glass Mountains, XXV, 94
Cherry limestone, III, 142
Cherryvale shale, V, 509
Chert, MEX, 34, 39, 45, 46, 48, 50; SBP, 413; XXI, 27; XXII, 556
in Dockum pebbles, XXVII, 626
in Moorefield formation, XXVIII, 1628
organic content of, SBP, 189-190
conglomerate in Medicine Lodge field, GAS, 469
Cherts, Franciscan, XXVII, 147
Cherts and quartz-glaucophane rocks, analyses of, XXVII, 179
Cherty crinoidal facies, XXV, 2131
Cherty limestone, MEX, 27, 31, 96
Cherty zone of Monterey formation productive in Santa Maria field, XXIII, 63
Chesapeake Bay, RMS, 117, 209, 210, 231
"Black shale" formation in and about, VIII, 195
Chesapeake group, XXIX, 73, 82
Cheshewalla sandstone, XXIV, 730
Chester, lower, in Kentucky, Indiana, and Illinois, correlation of, XXII, 269
lower, in southern Indiana and northern Kentucky, sections of, XXII, 274
middle, in Kentucky, XXII, 277
of Illinois basin, cross section of, XXV, 871
of Indiana and Illinois, correlation of, XXII, 268
of Kentucky, Illinois formations correlated with, XXII, 271, 275, 280-283
subdivisions of, XXII, 78
upper, in Kentucky, XXII, 279
upper, in Kentucky, divisions, XXII, (Chester)
280
Chester and Ste. Genevieve, graphic section and lithology of, in Illinois Basin fields, XXIII, 1497
Chester age, III, 271, V, 95, 123, 152, 549; VI, 25
Chester beds, PROB, 159
in Basin fields, Illinois, XXIII, 1498
Chester correlation in Kentucky and Illinois, XXII, 272
Chester epoch, XXIII, 1449
Ozarkia land during, XXIV, 844
Chester fauna, XXIV, 165
Chester formations, XXII, 76, 656
penetration of, XXIII, 1367
Tri-County field, Indiana, STR I, 26
variation in thickness of, XXIV, 821
Chester group, XXIV, 412, XXV, 1655
Big Sinking field, STRAT, 180
central Tennessee, XX, 1076
Illinois, Kentucky, and Tennessee, XXII, 1526
Chester oil sands, western Kentucky, XVI, 244
Chester rocks of Meade, Hardin, and Breckinridge counties, Kentucky, XXII, 267
Chester sands, XXVII, 820
Centralia-Sandoval area, Illinois, STR II, 129
most productive in Kentucky, XXV, 1123
productive of oil in Illinois, XXII, 1526
productive on anticlines and domes in Illinois, XXI, 787
Chester sandstones, XXV, 1116, 1122
deposition of, XXVI, 1607
producing oil and gas in lower Wabash River area, lateral variation in, with special reference to New Harmony field, Illinois and Indiana, XXVI, 1594
western Kentucky, XVI, 248
Chester sedimentation, XXIV, 841
general aspects of, XXVIII, 107
Chester sediments, clastic, source of, XXIV, 844
Chester series, XXII, 655; XXIII, 1355; XXIV, 822; XXVI, 1095; XXIX, 135, 137, 691
areal geologic map of, below Pennsylvanian system, XXIV, 210
Ava-Campbell Hill gas field, GAS, 833
Ayers gas field, GAS, 833
below Pennsylvanian system, areal geologic map of, XXIV, 210
comparisons of sandstones of, XXVIII, 99
correlation of subsurface nomenclature of, in southwestern Illinois and in Indiana and Kentucky, XXV, 881
cycles of sedimentation of, XXIV, 847
Eastern Interior Coal basin, GAS, 825
fossils in, in Kentucky, XXII, 271-273, 275-279, 282, 284
Francisco pool, Indiana, STR II, 138
geologic cross section through, on base of Pennsylvanian system as datum, XXIV, 212
Illinois, GAS, 832, 833; XXIII, 807, 812
Illinois, subsurface geology of, XXIV, 209
Illinois basin, XXI, 785; XXIV, 209
Illinois basin, isopach map of, XXIII, (Chester)
1358
Indiana, GAS, 825, XXIV, 769
isopach map of, below Pennsylvanian system, XXIV, 220
Kentucky, GAS, 825, 835
lateral variation in, XXIV, 842
Mississippi, GAS, 856
of Mississippian, beds of, most widely productive beds in Illinois, XXIV, 853
Pennsylvanian unconformable on, XXV, 873
productive zone in Salem field, XXIII, 1368
section of limestone at base of, XXII, 271
sedimentary environments of, XXIV 846
stratigraphic subdivisions, XXII, 268
zones in, XXV, 873
Chester series sandstones, XXIX, 687
Chester strata in Illinois, greatest thickness of, 1,450 feet, XXIV, 223
Chester time, XXVII, 1303
Chesterian epoch, XXIX, 1151
Chestnut dome, Natchitoches Parish, Louisiana, PROB, 654; XV, 277
Chestnut dome, Natchitoches Parish, Louisiana, and Clay Creek salt dome, Washington County, Texas, bearing of cap rock on subsidence on, discussion, XV, 1105
Chestnut Ridge anticline, GAS, 992, 993; PROB, 106, 485, 487, 490, 494, 495, 501; V, 368; XXII, 175; XXV, 1140; XXVI, 1120, 1127; XXVIII, 732
Chestnut Ridge-Irvine-Rough Creek uplift, PROB, 515, 517
Chetopa oil pool, Labette County, Kansas, analysis of oil from, XXV, 1936
migration of oil from Arbuckle limestone into Chattanooga shale in, XXV, 1934
Chevalier, Jerome Archibald, memorial, XXIV, 2060
Chevy, XXII, 62
Cheyaha pool, XXIX, 714
Cheyenne sandstone, II, 79; VI, 70, 551
Hugoton field, STRAT, 84, 85
Cheyney, A. E., PROB, 323, 324, 400; XXVIII, 1343
Madison shoestring pool, Greenwood County, Kansas, STR II, 150
Chhibber, H. L., XXII, 65, 67, 68
Chialingchiang limestone, XXV, 2062
Triassic, XXVIII, 1437
Chiapas, MEX, 39, 95, 97
Cretaceous sequence in, XXVIII, 1118
Sierra Madre of, XX, 1296
Chibnall, A. C., XXVII, 1188
Chibnall, A. C., and Hopkins, S. J., XXVII, 1182, 1187
Chicago Gulf Corporation, XXV, 117
Chicama Valley, Peru, PROB, 89
Chickamauga limestone, XXII, 430
Chickasaw Creek siliceous shale in Ouachita Mountains, XXII, 874
Chickasawhay, Byram, and Marianna formations in Wayne County, Mississippi, section, XXVIII, 1337
Chickasawhay beds, XXVIII, 60
Chickasawhay-Bucattuna contact, XXVIII, 1338
Chickasawhay fossils in Tampa limestone of Tarpon Springs, Florida, XXVIII, 1351

- Chickasawhay limestone, XXVIII, 1316, 1317, 1344
Alabama, Oligocene manatee from, XXVIII, 1345
molluscan fauna of, XXVIII, 1347
Chickasawhay limestone and Byram formation at Woodward, Mississippi, section, XXVIII, 1336
section near Limestone Church, XXVIII, 1337
Chickasawhay limestone and Paynes Hammock sand, XXVIII, 1346
Chickasawhay marl, XXVIII, 1359
Chickasawhay marl member of Byram, marl, GC, 362, XIX, 1166
Chickasawhay members, GC, 360; XIX, 1164
Chickasawhay Miocene formation, XXVII, 1139
Chickasawhay sand, XXVII, 1149
Chickasawhay section on Chickasawhay River, XXVIII, 1348
Chickasha-Blaine contact, Grady County, Oklahoma, XXI, 1536, 1539
Chickasha-Duncan contact, Garvin, Grady, and McClain counties, Oklahoma, XXI, 1535
Chickasha field, XXV, 1687
Grady County, Oklahoma, production in, XXIV, 1030
Chickasha formation, Oklahoma, X, 798; XXI, 1536
Chickasha gas field, XXV, 18
Chickasha gas-field and Cement oil-field folds, character of, XXV, 10
Chickasha region, Oklahoma, section of formations exposed in, XXI, 1546
Chico, CAL, 99, 286, 308
Chico and Shasta series, hiatus separating, XXVII, 289
Chico formation, CAL, 14, 100, 102, 105-107, 111, 118, 119, 122-124, 128, 131, 145; SC, 11; VI, 305; XX, 1557, XXIX, 991
climate of land areas during time of, CAL, 114, 117, 293
diatom flora of, CAL, 110
faunal migration during time of, CAL, 302
fossils of, CAL, 122, 287
(Kcl, Kcm, Kcu) (Cretaceous), SBP, 96, 130-150, 167-194, 413
Marysville Buttes, XXIX, 981
outcrop section C, SBP, 167-194, 410
are constituents of, CAL, 103
Sacramento Valley, XVIII, 1350
unconformable on all older beds, CAL, 108
Chico group, XXVII, 280; XXVIII, 471
Chico Martinez anticline, XXVII, 1370
Chico Martinez Creek, MSC, 32, 38, 45, 50, 85, 104-108, 123-125, 127, 128, 194, 202, 206, 210, 214, 219, 224, 230, 264, 265, 299, 345, 349, 353
foraminifera collected by United States Geological Survey along, MSC, 50
Mancopa faunule from, MSC, Fig. 14 (in pocket)
molds from, MSC, Fig. 14 (in pocket)
Monterey faunule from, MSC, Fig. 14 (in pocket)
outcrop section K, SBP, 167-194, 411
post-Eocene section of, MSC, Fig. 14 (in pocket)
Temblor faunule from below Button Bed on, MSC, Fig. 14 (in pocket)
- (Chico)
to Carneros Creek, MSC, 2
to Zemorra Creek, MSC, Fig. 6 (in pocket)
to Zemorra Creek, section, MSC, 67
Chico Martinez Creek, Zemorra Creek, and Carneros Spring, comparative sections, XXVII, 1366
Chico Martinez Creek area, Kern County, California, MSC, 186, 188, 189, 191, 197, 199, 202, 203, 205-208, 210, 212-217, 219-224, 226, 231, 233, 234, 239-242, 244, 247-249, 251, 252, 254, 256-259, 262, 268-270, 272, 274, 276, 278, 279, 281, 285, 288-292, 294, 296, 297, 300-306, 309, 311-316, 319, 321, 322, 324-326, 329, 331, 332 333, 335-337, 339, 340, 342-350, 352, 354
check list of foraminifera from, MSC, 40
correlation between Eocene beds of, and strata of near-by areas, XXVII, 1379
Eocene stratigraphy of, XXVII, 1361, 1365
evolution of cartographic nomenclature, XXVII, 1362
faults in, XXVII, 1370
geologic map, XXVII, 1363
microfossil localities and structure of, XXVII, 1373
Miocene in, XXVII, 1365
Oligocene in, XXVII, 1365
paleontology of, XXVII, 1372
references on Eocene of, XXVII, 1385
structures in, XXVII, 1370
tectonic history of, XXVII, 1371
unconformities in, XXVII, 1371
Chico Martinez Creek section, CAL, 216, 308
Chico paleogeography, SC, 10; XX, 1556
Chico sandstone, CAL, 102
Chico series, PROB, 186; XXVII, 281; XXIX, 990
formational units of, XXVII, 282
Marysville Buttes, XXVII, 301
relationship between west side sections and other sections of, XXVII, 297
stratigraphy of, XXVII, 281
subdivisions, XXVII, 303
Chico series sediments, Upper Cretaceous, Sacramento Valley, California, diagram, XXVII, 300
Chico shales in Marysville Buttes, XVI, 362
Chico transgression, SC, 11; XX, 1557
Chiconcillo, MEX, 133, 204, 210-212, Fig. 32 (in pocket)
Mesón beds at, MEX, 133
seepage at, MEX, opp. 143
Chiconcillo field, Cretaceous in, GAS, 999
Chicoatepec formation, MEX, 77, 83, 86, 89-91, 99, 100, 103, 109, 140, opp. 142, 155
Chicoatepec group, MEX, 97, 98, Fig. 12 (in pocket)
Chicoatepec series in Mexico, XI, 1211
Chicky-choc formation, III, 76
Chief Mountain overthrust, XIII, 431
Chihua limestone, XXIV, 271
Chihuahua, central, Cretaceous section in Santa Eulalia and San Pedro Conchoe, XXVIII, 1183
eastern, Rio Conchos area of, (Chihuahua)
XXVIII, 1183
northern, Cretaceous section in Cerro Muleros, XXVIII, 1185
southern, Parral-Jimenez-Cañas area in, XXVIII, 1169
Chijol anticline, MEX, 172, 193
Chijol pools, MEX, 4, 155, 164, 193, 194
Chijol sector, PROB, 392
Chijoles, MEX, 52, 65, 164
production from, MEX, 174
Chikaskia member of Cimarron series, XXIII, 1767
of Harper sandstone, XXIII, 1782
Chikaskia sandstone at type locality in Harper County, Kansas, XXIII, 1783
Chila, PROB, 385
cavities in limestone in well at, MEX, 169
Pleistocene oyster beds in, MEX, 141
Childerhose, A. J., XV, 1186
Childerhose, A. J., and Link, Theodore A., Bearpaw shale and contiguous formations in Lethbridge area, Alberta, ALTA, 99; XV, 1227
Childers, A. F., STRAT, 601
Childers field, XXI, 1006
Childress, Cottle, King, Knox, Foard, and Hardeman counties, Texas, development in 1942, XXVII, 777
Childress County, Texas, Custer formation in, XXI, 451, 452
Childress dolomite member, PTNM, 707; XXI, 452, 458; XXVI, 707
Childress Royalty Company, XXIV, 480
Childs, J. A., XX, 908
Childs dome, XXI, 1008
Chile, CAL, 115
Chile and Argentina, paleogeography of Cretaceous of, XXIX, 504
paleogeography of Jurassic in, XXIX, 500
southern, XXIX, 498
Chilean Andes, ice advances in, RMS, 411
Chiles Ranch field, GAS, 511, 519
Chilostomellidae, MSC, 338
Chilostomellinae, MSC, 338
Chimana formation, XXVIII, 8
Venezuela, Aptian-Albian fossils in, XXVIII, 9
Chimeneas Ranch outcrop, SC, 79; XX, 1625
Chimney Creek area, Colorado (well 235), SBP, 194-243, 407
Chimney Hill limestone, XXIV, 1997; XXIX, 193
Chimney Rock, XXVIII, 60
Adelaide Quadrangle, MSC, Fig. 14 (in pocket)
California, MSC, 49, 121, 301
type locality of *Siphonogenerina hughesi* near, MSC, Fig. 14 (in pocket)
Chimney Rock dome, PROB, 409, 410
Chimney Rock facies of Marianna limestone, XXVIII, 1325
Chimney Rock structure, New Mexico, XIII, 139
Chimneyhill limestone, PROB, 356, 357; V, 34; XXII, 1566; XXIX, 714
Chimneyhill member of Hunton limestone at Fitts pool, XX, 957
China, PROB, 2; RMS, 225
basic structural elements of, XXVIII, 1419
bibliography on Red basin, Szechuan province, XXVIII, 1439

- (China)
 Cambrian in, XXVIII, 1420
 Carboniferous in, VI, 241, XXIX, 132
 clays in, RMS, 481
 Cretaceous in, XXVIII, 1424
 Cretaceous redbeds in Red basin, XXVIII, 1431
 Devonian in, XXVIII, 1422
 Devonian in Szechuan province, XXVIII, 1433
 explorations in, III, 99
 geologic provinces, X, 1076
 Greater, tectonic map showing ancient positive landmasses, directions of structural trends, locations of principal mountain ranges, and positions of larger basins, XXVIII, 1418
 Jurassic in, XXVIII, 1424, 1431
 Mississippian in, XXVIII, 1422
 non-marine origin of petroleum in North Shensi, and Cretaceous of Szechuan, XXV, 2058
 northeast-trending structure in coastal region of, XXVIII, 1425
 northeastern, comparison with American oil fields, X, 1116
 oil in, review, VI, 261
 oil fields of, VIII, 169; IX, 1295
 oil fields of, acknowledgments and correlations, X, 449
 oil prospects in northeastern, X, 1073
 oil prospects in Shansi, X, 1083
 Ordovician in, XXVIII, 1421
 Pennsylvanian in, XXVIII, 1422
 Permian in, XXVIII, 1423
 petroleum possibilities of Red basin of Szechuan province, XXVIII, 1430
 Pleistocene in, VI, 241
 Pleistocene and Recent in, XXVIII, 1425
 post-Triassic disturbance in, XXVIII, 1424
 pre-Cambrian rocks of, XXVIII, 1420
 production in Shensi, X, 1109
 sedimentary basins in, XXVIII, 1427
 Shensi field, VIII, 169
 Silurian in, XXVIII, 1421
 Silurian in Szechuan province, XXVIII, 1433
 south, coal fields of, XXVIII, 1423
 south, United States, and USSR, correlation chart of Middle and Upper Carboniferous and Permian formations in, based chiefly on fusuline zones, XXIV, 266
 south, and Indo-China, great hiatus below Chuanshan limestone in, containing *Pseudoschwagerina* fauna, XXIV, 279
 southwestern, vulcanism in, XXVIII, 1423
 southwestern and northwestern, faunas of, XXII, 221
 structural disturbance in, XXVIII, 1433
 Szechwan field, VIII, 173
 Tertiary in, XXVIII, 1431
 Tertiary redbeds in, XXVIII, 1424
 Triassic in, XXVIII, 1423, 1431
 unconformities in, X, 1079, 1091, 1093, 1096
 China field, Louisiana, XXV, 1013
 China Sea, RMS, 350
 Chinameca limestone, XXVIII, 1120
 Chinampa, MEX, 90, 204, 206, 208, 210-213
 Chinampa field, Cretaceous in, GAS,
- (Chinampa)
 999
 Chinati Mountain area, sketch map showing location of principal exposures of Paleozoic rocks in, XXIV, 181
 Chinati Mountains, Texas, Pennsylvanian in, XXIV, 182
 Permian in, XXIV, 182
 upper Paleozoic section of, Presidio County, Texas, XXIV, 180
 Chinati series, XXIV, 182, 183
 Upper Paleozoic, Presidio County, Texas, XXII, 924
 Chindberg pool, GAS, 482
 Chinese geology, outline of, XXVIII, 1417
 references on, XXVIII, 1429
 Chinle formation, XXIII, 124, 138; XXIV, 64, XXVII, 487
 Chinle shale, XXIV, 51, XXV, 600
 Utah, VI, 47, 205, 211, 217
 Chione walli, XXI, 238
 Chipmunk sand in Bradford field, Pennsylvania and New York, STR II, 422, 424
 Chimpola fauna, similarity to Tuxpan, MEX, 139
 Chipola formation, XXV, 265
 Chippewa pool, pressure in, XXVIII, 1574
 Chippewa storage pool, XXVIII, 1573
 showing limits of production in Clinton sand, XXVIII, 1572
 Chisholm, D. B., GAS, 933
 Chisos beds, V, 27
 Chi-square test, RMS, 584
 Chisum, W. P., Survey, Texas (wells 330, 331), SBP, 292-335, 408
 Chitani, Yoshinosuki, petroleum resources of Japan, XVIII, 908
 Chittin, RMS, 379, 421
 Chittenden pool, XXIII, 856
 Chittum anticline, XXVIII, 311
 trend of, GC, 263; XVII, 1206
 Chittum field, thickness of Glen Rose formation in, XXVII, 1243
 thickness of Trinity division in, XXVII, 1242
 Chitwood pool, XXVIII, 770; XXIX, 704
 Chlamys, faecal pellets of, RMS, 517, 520
 Chloride brines, subsurface concentration of, XVII, 1213
 Chloride content of salty water, XXVI, 845
 of waters, PROB, 315, 836, 893, 955
 Chloride profiles, Schuler field, XXVIII, 227
 Chloride-salinity ratio in sea, RMS, 143
 Chloride waters, comparison of various types, IX, 1078
 Chlorides, RMS, 61, 147, 455, 512
 in sea water, RMS, 65, 143
 in tidal deposits, RMS, 200
 Chlorine, SBP, 22
 in Corpus Christi area, anomalies of, GC, 291; XIX, 338
 Chlorine, sulphate, and carbonate radicals of Beaumont-Lisse waters, range of, GC, 285; XIX, 332
 Chlorine, sulphate, and carbonate radicals, range of, XIX, 332
 Chlorine anomalies, local, in East Texas, GC, 290; XIX, 337
 Chlorine concentrations in aquifers, effect of depth factors upon, GC, 306; XIX, 353
 Chlorine gradients at Ingleside, Texas, GC, 282; XIX, 329
 of mixed waters in artesian aquifers, theoretical development of, GC, 299, 301; XIX, 346
 Chlorine radical an indicator of structural conditions in aquifers, GC, 273; XIX, 321
 Chlorinity, RMS, 61
 as related to salinity, RMS, 61
 definition of, RMS, 61
 Chlorite, MEX, 148; RMS, 211, 499; XXII, 560, XXVII, 171
 quantity of, in a Cambrian shale, RMS, 509
 schist fragments in sediments, RMS, 531
 Chlorite group, XXVIII, 74
 Chlorophyll porphyrins in oil shales, asphalts, and petroleums, XX, 289
 Chlorophyllaceous flagellates, RMS, 145
 Choate, R. J., Survey, Texas (well 387), SBP, 292-335, 410
 Choate, S., RMS, 574
 Chocolate Bayou area, Brazoria County, Texas, XXIV, 1086
 Chocoy, MEX, 15, 16, 34, 66, 69, 81, 148, 155, 157, 169, 172
 Chocoy, Berriasian, Neocomian, and Portlandian in, MEX, 15, 16
 Méndez formation exposed at, MEX, 69
 to Tamisimolán, correlation, MEX, Fig. 9 (in pocket)
 Chocoy well, temperatures in, MEX, 227, 228
 Choctaw, Louisiana, GAS, 712
 Choctaw and Ti Valley faults, XVIII, 1066
 rocks exposed between, XXI, 14
 Choctaw fault, GAS, 513, 525, III, 263; XV, 808; XXI, 20, XXIV, 2143; XXV, 8; XXVII, 1257
 formations exposed west of, XXI, 13
 southward continuation of, XXI, 28
 Choctaw fault and flanks of Tishomingo anticline, relationship between, XXIV, 2148
 Choctaw fault zone, XXII, 900
 Choctaw Gas Company, GAS, 529
 Choctaw Oil and Gas Company, GAS, 567, 568
 Choctaw thrust fault zone of Oklahoma, XXI, 1027
 Choctawhatchee formation, MSC, 176
 Cancellaria zone of, XXV, 264
 Choctawhatchee marl, MSC, 129
 Chokrak series of Miocene in Russia, XXI, 1077
 Chonetes wralica limestones, XXIV, 250
 Chonopectus fauna, XXIV, 792
 Chopopo road, type Tantoyuca on, MEX, 117
 Chorro series, oil producing, XXIX, 1098
 Chouteau fauna, XXIV, 792; XXV, 2123
 Chouteau formation, XXV, 1655
 Chouteau limestone, XXIV, 788, 792; XXV, 2112
 correlated with Fern Glen formation, XXV, 2113
 Choy Cave, MEX, 20, 36, 38
 Choza, upper Veso, and upper Hennessey time, paleogeography of, XXVI, bet. 224 and 225
 Choza formation, XXIV, 42, 57; XXVI, 231
 Chriesman area, Edwards limestone productive in, XXIII, 865

- Chriesman pool in Burleson County, Texas, XXIII, 864
- Christ, Peter, XIX, 775, 776, 779, 780, 790; XXVIII, 1643
- coup géologique le long du chemin de Mucuchachi a Santa Barbara dans les Andes vénézuéliennes*, abstract, XII, 1123
- Christensen, H. E., STRAT, 327
- Christian, W. G., SD, 529
- Christian 1 (Amerada Petroleum Corp.) (well 360), SBP, 292-335, 409
- Christians, George W., XIX, 798
- Christie, W. A. K., XVIII, 293
- Christmas sand zone, XXIX, 823
- Christner, D. D., VIII, 778; XIII, 999
- Todd Ranch discovery, Crockett County, Texas, XXIV, 1126
- Christner, D. D., and Beede, J. W., XVI, 200
- Chromic acid, RMS, 432
- as measure of reducing power, RMS, 419
- Chromic acid reagent for determination of reduction number, SBP, 49, 50
- Chromic acid titration method of determining organic matter in soils, SBP, 46-55
- Chromite, RMS, 602
- Chromium rays, RMS, 621
- Chronic, John, XXV, 2158
- Chronologic-biostratigraphic classification of marine Middle Tertiary, MSC, 87
- Chronologic-biostratigraphic section, MSC, 99
- Chronologic horizons, MSC, 83
- Chronological value of microfossils, XXIV, 1760
- Chu, T. O., X, 1108
- oil fields of China, VIII, 169; IX, 1295
- Chuanshan limestone, XXIV, 270
- Chubb, L. J., XXII, 34
- Chubut petroliferous formations, XXIX, 507
- Chudeau, R., CD, 127
- Chugwater, lower, of central and southeastern Wyoming, Phosphoria and Dinwoody tongues in, XVIII, 1655
- Chugwater formation, XXIII, 909, 1449; XXV, 887, 889; XXVII, 470; XXVIII, 1201
- Lost Soldier district, Wyoming, STR II, 641
- stratigraphic sections, XXVIII, 1202 (Tr) (Triassic), SBP, 193-195, 198-258, 285-292, 416
- waters from, XXIV, 1313, 1316
- Wyoming and Montana, X, 304
- Chugwater formation and Embarras group, gypsum in, XXV, 895
- Chugwater group, Wind River Mountains, XXV, 133
- Chugwater red shales, water from, XXVIII, 1213
- Chugwater redbeds, IV, 38, 314; V, 191, 410
- Grass Creek field, Wyoming, STR II, 625, 634
- Chugwater sandstones, XXVIII, 1198
- Chugwater Sundance contact in Big-horn district of Wyoming, XI, 747
- problems of, discussion, XI, 1235
- Chumley, RMS, 375, 376, 377
- Chunnenuggee Ridge, XXII, 1650
- Chupadera formation, XIII, 967; XXVI, 85
- fossils of, X, 838
- (Chupadera)
- New Mexico, X, 837
- Pecos Valley, New Mexico, XXI, 849
- Chupadera limestone, XIII, 933
- Church, C. C., CAL, ix, 108, 154, 288; MSC, 11, 78, 79, 102, XV, 743; XVIII, 470, XXIV, 1734, 1930; XXIX, 956, 958
- Cretaceous-Eocene contact north of Coalinga, California, XV, 697
- Church, C. C., and Cushman, J. A., CAL, 110; XXVII, 255
- Church, C. C., and Hanna, G. D., MSC, 12
- Church, C. C., and Willis, Bailey, memorial of Joseph Alexander Taff, XXVIII, 1236
- Church and Fields area in Crane County, West Texas, XXIII, 840
- Church-McElroy field, Texas, GAS, 456
- Church Run field, PROB, 473
- Church Run pool, Venango district STRAT, 531
- Churchville field, Monroe County, New York, XXII, 83
- Chusa argillaceous tuff, XXV, 2003
- Chusovskie Gorodki field, XXIII, 957
- Chuyu, Ku, X, 1098
- Cia. Petrolera Tamaulipas, S. A., GC, 588; XIX, 1357
- Cibicides americanus* zone, XXV, 224
- of Gould Hills, MSC, Fig. 14 (in pocket)
- Cibicides hazzardi* zone, XXIX, 794, 795, 796
- Cibicides* zonule, MSC, 17, Figs. 4, 14, and Table I (in pocket)
- Cibolo area, Texas, XI, 849
- Cibolo fault, XI, 837
- Cibolo formation, PTNM, 673; XXIV, 182; XXVI, 673
- fossils in, XXIV, 185
- Cibolo limestone, massive, overthrust on thin-bedded limestone of Capitan age, XXIV, 186
- Cibolocrinus* fauna, XXIV, 182
- Cienega syncline, MSC, 56, 111, 196, 214, 216, 219, 222, 239, 240, 251, 253, 260, 261, 264, 265, 271, 276, 316, 331, 343, 353, Fig. 14 (in pocket)
- Cieneguita formation, PTNM, 673; XXIV, 182; XXVI, 673
- correlated with Strawn formation, XXIV, 185
- Cierbo, MSC, 69, 71, 127, 133
- Cierbo and Neroly substages of Monterey, oscillation between, XXV, 195
- Cierbo and Neroly successions, XXV, 249
- Cierbo and overlying Neroly, unconformity between, near Discovery Gulch, XXV, 241
- Cierbo beds, echinoids of, XXV, opp. 241
- Cierbo-Briones, regressive and transgressive aspects of, MSC, 89
- Cierbo formation, CAL, 163; MSC, 71, 89, 130, 167, 168
- Ciervian stage, XXIX, 984
- Ciervian stages, upper and lower, XXIX, 982, 983, 1005
- Ciervo anticline, XIII, 223
- Ciervo field, California, review, VI, 263
- Ciervo Hills, CAL, 216; SC, 20; XX, 1566
- Eocene section, SC, opp. 26; XX, opp. 1572
- sections and areal geology of, showing
- (Ciervo)
- distribution of Tume sandstone, XXVIII, 961
- Cięskowice sandstone, Europe, VI, 526
- Cięskowice sandstones, XXI, 1187
- Cimarron anhydrite, XXIII, 1058
- Cimarron County, Oklahoma, areal geology of, XI, 753
- geology and ground water resources of, XXVIII, 877
- Cimarron group, GAS, 477
- (Cci) (Permian), SBP, 258, 261-280, 413
- Cimarron redbeds, section showing relation of outcrops of, to subsurface, from south-central Kansas and adjacent parts of Oklahoma, northward to eastern Colorado, XXIII, 1762
- Cimarron redbeds and adjacent formations in subsurface, section from Oklahoma Panhandle across Kansas to crest of central Kansas uplift, XXIII, 1764-1765
- Cimarron series, XXI, 505; XXIII, 1678, 1755
- F. W. Cragin's classification of, XXI, 423
- Hugoton field, STRAT, 86
- in Kansas, XXIII, 1766
- Permian system, Salt Fork division of, in Kansas, XXI, 1557
- subdivisions, XXIII, 1766
- Cimarron strata of Kansas, correlation of, with those of Oklahoma, XXIII, 1789
- Cimarron Utilities Company, GAS, 413; XXIII, 1056
- Cimarron Valley area, formations of, XVIII, 1545
- Cimitarra area, XXIX, 1140
- Cincinnati and Kankakee arches, XXII, 1546
- Cincinnati anticline, PROB, 101, 524, 537-539, 544; XI, 945; XIII, 420
- Ohio, STR I, 124
- Ontario, XV, 608
- Cincinnati arch, GAS, 820, 835, 844, 847, 853, 859, 898, 915, 916, 924, 940; PROB, 17, 106, 369, 430, 485, 487, 509, 515-520, 558, 562; STR II, 702; V, 495, 610, 617, 646; XI, 478; XVI, 149; XXI, 773; XXII, 427, 1534, 1539; XXIII, 1357; XXV, 820, 1147; XXVI, 1095; XXVII, 852, 1041; XXVIII, 70, 531, XXIX, 684, 691
- eastern coal field, Kentucky, STR I, 74, 75
- features of its development, XXIII, 1847
- structure and accumulation in Michigan basin and its relation to, PROB, 531
- Cincinnati arch area, northern, FOP, 139; XXV, 1571
- references on oil prospects in, FOP, 142; XXV, 1574
- Cincinnati arch region, XIII, 418
- natural gas from Paleozoic horizons in southern, GAS, 853
- northern, of Indiana and Ohio, map showing structure, FOP, 140; XXV, 1572
- Cincinnati geanticline, PROB, 523
- Cincinnati group, eastward thickening of, XXII, 1540
- in east-central United States, XXII, 1534
- in Ohio, source material in, XX, 802

- Cincinnati-Nashville island, GAS, 957
Cincinnati, Big Sinking field, STRAT, 178
Cinnabar Mountain, Park County, Montana, and Mount Everts, Yellowstone National Park, Wyoming, section of Paleozoic and Mesozoic rocks measured at, XVIII, 368
Circle of inertia, RMS, 108
Circular motion, RMS, 108
Circulation, RMS, 52-130, 145-147 as influenced by bottom configuration, RMS, 59
in Atlantic Ocean, RMS, 368
in basins, RMS, 95-97
in basins in East Indies, RMS, 351
in sea, RMS, 58, 387
in sima, tidal effects on, CD, 48
in Sulu Sea, RMS, 352
in Woodbine sandstone, PROB, 276 of underground fluids, PROB, 306, 367
of water, effect on oil migration and accumulation, PROB, 247, 260, 275, 279, 305, 342, 344, 408, 410
of water in East Indies, RMS, 349
vertical, processes maintaining, RMS, 89
Circum-Pacific mobile belt, possible parallels in history, XXI, 559
Cisco, Canyon, and Strawn beds most important producing zones in west-central Texas, XXIII, 849
Cisco and Permian beds most important producers in north Texas, XXIII, 849
Cisco and Strawn beds present in King well on South fold in Wilbarger County, Texas, XXIV, 1052
Cisco and Wichita beds, PTNM, 534; XXVI, 534
Cisco field, XXVII, 450
Cisco formation, PROB, 402; 1, 93; III, 48, 68, 94, 134, 138, 143, 169, 171, 191; IV, 83; V, 154, 155, 324, 378, 504, 548; VI, 12; XXV, 1077
Archer County fields, Texas, STR I, 424
Petrolia field, Texas, STR II, 546, 552; GAS, 1054
productive in Burkburnett and Electric fields, XXV, 1677
west-central Texas district, oil production in, XXI, 1025
Cisco group, XXVI, 207; XXVII, 29
Bend Arch district, GAS, 613
Noodle Creek pool, STRAT, 706
Seymour pool, STRAT, 762
Texas, X, 462
Cisco Lake pool, XXIII, 848
Cisco limestone, XXVI, 1044
Cisco limestone pool, XXV, 1079
Cisco producing horizons, GAS, 627
Cisco sand, XXV, 1066, 1067, 1080; XXVI, 1045; XXVII, 780
Cisco sand pays, XXIV, 1047
Cisco sand pool, XXIX, 763
Cisco sands in Texas, gravity of oil in, XXI, 1022
Cisco sands and sandy limestones, XXI, 1019
Cisco sandstone, XXVIII, 837
Cisco series, XXIV, 41, 91; XXV, 1069, 1664
Bryson field, STRAT, 541, 542
Cross Cut-Blake district, STRAT, 549, 551
Hull-Silk pool, STRAT, 665
in north-central Texas, XXIV, 90
Cisne field, Illinois, XXII, 73, 651; XXV, 1120
Citations, misleading, injustice of, discussion, XIV, 521
reply to Professor R. T. Chamberlin's discussion, XIV, 633
Cities Service Gas Company, pipe line of, GAS, 478
Cities Service Oil Company, XXV, 1107; XXIX, 749
Cities Service system, GAS, 486
Citrate of iron, RMS, 511
Citronelle, Alabama, relationship of Lamberts locality to exposures north of, XXIII, 1556
future use of term, XXIII, 1557
Citronelle formation, GC, 418; XVII, 649
Citronelle, Alabama, type locality of, XXIII, 1553
Covington County, Mississippi, GC, 370, XIX, 1149
Louisiana, GC, 417; XVII, 648
Midway dome, XXII, 819
Spindletop field, XXI, 480
City Bank sand zone, XXIX, 823
Ciudad del Maiz, MEX, 20, 61
Ciupagea, D. T., *nouvelles données sur la structure du Bassin Transylvain*, review, XIX, 1695
Civil Service resolution, discussion, XXIX, 1352
Claggett formation, GAS, 248, 283; STRAT, 275, 276; V, 268; VI, 146; XXII, 1634
Claggett shale, Border-Red Coulee field, STRAT, 274
Claiborne, lower, Wilcox, and Midway groups of Texas, Louisiana, Mississippi, and Alabama, correlation chart, XXIX, 47
upper, age of Temporal beds, MEX, 111
Claiborne and Lincoln parishes, Louisiana, Lisbon oil field, XXIII, 281
Claiborne beds, XXII, 1485
Carterville-Sarepta and Shongaloo fields, XXII, 1477
Claiborne Cockfield formation, XXVIII, 275
Claiborne dips, differential compacting the cause of, VII, 370
Claiborne Eocene Tertiary in San Marcos quadrangle, Texas, XI, 830
Claiborne fauna, XXV, 1374
Claiborne formation, XXV, 2012
Clay Creek dome, GAS, 706
East Texas, XV, 537
Esperson dome, GAS, 728
Humble dome, GAS, 706
Irma field, Arkansas, STR I, 2, 9
Livingston field, GAS, 727
Louisiana, IV, 129; V, 383, 493, 632; VI, 180, 195, 249
Louisiana, idealized cross section, GC, 430; XIX, 694
Lower, of East Texas, with special reference to Mount Sylvan dome and salt movements, XIII, 1347
lower, production from, in Texas and Louisiana, XXII, 737
of East Texas, correlation of, with Claiborne of Louisiana, XIII, 1335
of Texas, idealized cross section, GC, 430; XIX, 694
subsurface, of Texas and Louisiana, tentative foraminiferal zonation of, GC, 425, XIX, 689
Tomball field, GAS, 725
Upper, Conroe field, GAS, 724
(Claiborne)
Upper, Hull field, GAS, 705
upper, of Alabama correlated with Cockfield formation of Louisiana, XXII, 309
Claiborne fossiliferous sand, XXII, 310
Claiborne group, GC, 599; SD, 170, 215, 217, 219, 277, 302; SBP, 337; XIX, 1368; XXV, 1374; XXVI, 261; XXVIII, 55; XXIX, 39
Covington County, Mississippi, GC, 375; XIX, 1154
East Texas, STRAT, 607
Florida, XXVIII, 1732
Gulf Coastal Plain, XXIII, 155
Homer field, Louisiana, STR II, 198
Louisiana, GC, 391; SD, 286; X, 225, 234, 250; XVII, 621
Louisiana, paleontology of, GC, 397; XVII, 627
south Arkansas, XXII, 980
Stephens field, Arkansas, STR II, 2, 7
Sugar Creek field, Louisiana, XXII, 1508
Urania field, Louisiana, STR I, 93
Claiborne Parish, Louisiana, Sugar Creek field, XXII, 1504
Claiborne sand, XXII, 1475
Claiborne sands, section showing rapid downip "shaling-out" of, and rapid rate of Claiborne thickening, Fayette, Lavaca, and Colorado counties, Texas, XXIV, 1907
Claiborne series, Conroe oil field, Texas, GC, 798; XX, 745
Claiborne species, Guayabal, MEX, 111
Claiborne thickening, Vernon and Beauregard parishes, Louisiana, section showing, XXIV, 1904
Claims against Mexico, IX, 183
Clair, and Greene, F. C., XXV, 31
Clairaut, Al. Cl, XII, 890
Clallam County, Washington, MSC, 77, 259, 324
Blakely faunule from, Fig. 14 (in pocket)
Clam borings, XXV, 1377
Clam Lake, XXII, 741
Clams, RMS, 171
Clamshell snappers, RMS, 182, 658-662
Clansay horizon, MEX, 22, 27, 37, 95
Clapp, C. H., XXIX, 1406
Clapp, C. H., Bevan, Arthur, and Lambert, G. S., PROB, 697
Clapp, Frederick Gardner, GAS, 671, 673, 1067; PROB, 18, 20, 436, 444, 992, 1005; III, 99; V, 460; VII, 613, 615, 618; VIII, 317, 323, 327; IX, 349, 1296; X, 1098; XL, 638, 718, 1297; XVIII, 35, 872; XX, 1031, 1047, 1064, 1068, 1069; XXV, 386; XXIX, 1542, 1745, 1748
bibliography of, XXIX, 405
fundamental criteria for oil occurrence, XI, 683
geology and bitumens of the Dead Sea area, Palestine and Trans-Jordan, XX, 881
memorial of, XXIX, 402
New Zealand oil discovery, X, 451
notes on natural gas fields of Transylvania, Roumania, VIII, 202
oil and gas possibilities of France, XVI, 1092
oil and gas prospects of New Zealand, X, 1227
oil prospects of Desert Basin of Western Australia, X, 1118
oil prospects of Northwest Basin of Western Australia, X, 1136

- (Clapp)
 review of the oil and gas prospects of Australia, XI, 55
 rôle of geologic structure in the accumulation of petroleum, STR II, 667
 safety of water-flooding pressures at Bradford, Pennsylvania, XIX, 793, 1239
 Taranaki oil field, New Zealand, XVI, 833
 Clapp, Frederick Gardner, and Fuller, Myron L., XXV, 2059
 oil fields of China; acknowledgments and correlations of, X, 449
 oil prospects in northeastern China, X, 1073
 Clapp, Frederick G., and Powers, Sidney, nature and origin of occurrences of oil, gas, and bitumen in igneous and metamorphic rocks, XVI, 719
 Clapp, G. F., SD, 18, 782, IX, 848, 862
 Clara Couch pool, XXVI, 1022
 Clara pool, XXIX, 704
 Clare, Vernon, and Leaton area, structural map of, XXII, 145
 Clare, Vernon, and Leaton fields, Michigan, general relation of, XXII, 147
 Clare County pool, Michigan, GAS, 797, 806
 Clare formation in Kentucky, XXII, 283
 Clare gas field, Clare County, Michigan, XXII, 138
 Claremont, MSC, 92, 234, Fig. 14 (in pocket)
 Claremont shale, MSC, 56, 65, 165, 203, 210, 212, 227, 231, 234, 237, 248, 249, 252, 262, 266, 288, 300, 304, 309, 311, 313, 324, 331, 343
 California, outcrop section E, SBP, 167-194
 Claremont shale faunules, MSC, Fig. 14 (in pocket)
 Claremont shale foraminifera, MSC, 66
 Claremore formation, I, 134
 Clarendon, CAL, 303
 Clarification of constituents of sediments relative to petrologic analysis, RMS, 593
 Clarion County field, GAS, 952
 Clark, I, 23; IX, 997, 998; X, 667; XXI, 1144; XXII, 1530; XXIV, 729
 Clark, A. P. S., XX, 909
 Clark, Alex, SC, 13; XIV, 406; XX, 1559; XXIII, 25; XXV, 195, 1331; XXVIII, 451, 502
 Clark, Alex, and Clark, L. M., MSC, 39; XIX, 523
 Clark, Austin Hobart, XI, 1221; XII, 1058; XIV, 1452; XXVI, 1193
 Clark, Bruce L., CAL, ix, 44, 52, 54, 100, 101, 112, 135, 136, 137, 138, 139, 147, 148, 149, 150, 151, 156, 180, 249; MSC, 56, 66, 89, 160, 162, 172, 174; SBP, 92; SC, 17, 27, 69, 70; VII, 414, 419; XI, 611; XIII, 515, 516; XIV, 406, 1323; XV, 699; XVII, 82, 1011, 1162, 1165; XXVIII, 493; XIX, 1198, 1201, 1202, 1821; XX, 220, 866, 867, 1563, 1573, 1616; XXI, 1340; XXIII, 33, 44; XXIV, 1730, 1733, 1734, 1745, 1747, 1750; XXV, 194, 245, 248, 249; XXVII, 2, 126, 200, 641; XXVIII, 451, 502, 503, 516; XXIX, 958
 tectonics of Valle Grande of California, XIII, 199
 (Clark)
 theory postulating migration of oil along faults, XXI, 269
 Clark, Bruce L., and Anderson, C. A., MSC, 101; XXVII, 13
 Clark, Bruce L., and Arnold, Ralph, XII, 746
 Clark, Bruce L., and Vokes, H. E., MSC, 103, 152; SC, 17; XXIV, 1743, 1930, 1934, 2049; XXVII, 9, XXIX, 963, 996, 998
 Clark, Bruce L., and Woodford, A. O., CAL, 103, 127, 138; XIV, 413; XXIV, 1936
 Clark, C. C., XXVII, 1410; XXIX, 1417
 Sugar Creek field, Claiborne Parish, Louisiana, XXII, 1504
 Clark, C. R., XV, 612
 Clark, C. W., CAL, 60
 Clark, Charles K., XXII, 133; XXIV, 1967
 Clark, Clare M., XV, 1198
 sections of Bearpaw shale from Keho Lake to Bassano, southern Alberta, ALTA, 115; XV, 1243
 Clark, Ernest, XIV, 25
 Clark, Frank Rinker, PROB, 247, 567; SBP, 2, 7; STRAT, 386; XI, 1111; XIII, 793, 1511; XVIII, 568; XX, 390, 1251; XXV, 1706
 en echelon fault belts, discussion, XIV, 330
 Kevin-Sunburst oil field, Montana, VII, 263
 memorial of Harold Beach Goodrich, XXIX, 1675
 memorial of Roy J. Metcalf, XXVI, 1175
 memorial of Sidney Powers, XVII, 328
 origin and accumulation of oil, PROB, 309
 presidential address: the new challenge, XVIII, 680
 report of committee on applications of geology, for 1935, XX, 657
 report of committee on applications of geology, for 1936, XXI, 675
 report of committee on applications of geology, for 1937, XXII, 611
 report of committee on applications of geology for 1938, XXIII, 746
 report of president for 1933, XXVIII, 685
 report on finances for 1931, XVI, 511
 Clark, Frank T., GAS, 385; XIV, 1537; XVII, 878
 Clark, Glenn Cecil, PROB, 770; VIII, 291, 326; XV, 412; XVII, 110, 375, 397; XXV, 1229; XXVII, 26
 Rogers pool, Montague pool, Texas, XXIV, 1836
 Wilcox sand production, Tonkawa field, Oklahoma, X, 885
 Clark, Glenn Cecil, and Aurin, Fritz Love, Tonkawa field, Oklahoma, VIII, 269
 Clark, Glenn Cecil, and Cooper, C. L., PROB, 770; XVI, 120; XVII, 247, 248
 Clark, Glenn Cecil, Aurin, F. L., and Officer, H. G., core drilling for structure in north Mid-Continent area, X, 513
 Clark, Glenn Cecil, Aurin, F. L., and Trager, Earl A., XI, 1316; XII, 179; XIV, 1536; XIX, 1416; XX, 91
 notes on subsurface pre-Pennsylvanian stratigraphy of northern
 (Clark)
 Mid-Continent oil fields, V, 117, 324
 Clark, Howard, XXI, 34
 Clark, Hubert Lyman, XXVI, 1190
 Clark, John, XXIX, 51
 Clark, John D., saline springs of Rio Salado, review, XIV, 639
 Clark, John W., XXIV, 1537
 Clark, K. A., XIX, 154, 158, 170; XXII, 1148, 1150
 discussion of origin of oil in McMurray oil sands, XXII, 1151
 Clark, K. A., and Blair, S. M., XXII, 1134
 Clark, L. M., CAL, 206, 231; GAS, 119; MSC, 33; XXVII, 1351
 memorial of Gerhard Henny, XXIX, 246
 Clark, L. M., and Clark, Alex, MSC, 39; XIX, 523
 Clark, Robert P., and Eby, J. Brian, XIX, 1069
 relation of geophysics to salt dome structures, GC, 170; XIX, 356; discussion, XIX, 1069
 Clark, Robert Watson, PROB, 764; XI, 199, 639; XVI, 727, 916; XVII, 713; XVIII, 1175; XXIX, 957
 coal in Eocene near Bakersfield, California, XXIV, 1676
 origin of folding in Oklahoma, XI, 199
 Paloma oil field, Kern County, California, XXIV, 742
 review, XVI, 219, 616
 Clark, Robert Watson, and Bauer, Clyde Max, notes on the geology of Okmulgee district, V, 282
 Clark, Robert Watson, and Botset, Holbrook G., XVIII, 68; XXIV, 1539
 correlation between radon and heavy-mineral content of soils, XVI, 1349
 Clark, Stuart E., V, 121
 Clark, Stuart K., PROB, 583, 614, 770, 822; XV, 412; XVI, 655, 658; XVIII, 1080; XIX, 844; XXVII, 1633; XXVIII, 542, 1649
 classification of faults, XXVII, 1245
 comment on discussion of classification of faults and thrust fault on Barranquilla-Cartagena highway, Colombia, by Mason L. Hill, XXVIII, 1650
 comment on south Louisiana deep-seated domes, XXVIII, 1549
 factors governing estimation of recoverable oil reserves in sand fields, discussion, XVIII, 1080
 faulting in Thomas field, Kay County, Oklahoma, discussion, XII, 769
 Thomas oil field, Kay County, Oklahoma, X, 643
 thrust fault on Barranquilla-Cartagena highway, Colombia, XXVIII, 1219
 Clark, Stuart K., and Daniels, James I., PROB, 775
 relation between structure and production in the Mervine, Ponca, Blackwell, and South Blackwell oil fields, Kay County, Oklahoma STR I, 158
 Clark, Stuart K., Daniels, Jas. I., and Richards, J. T., logging rotary wells from drill cuttings, XII, 59
 Clark, Stuart K., Tomlinson, C. W., and Royds, J. S., well spacing—its

- (Clark)
 effect on recoveries and profits, XXVIII, 231
 Clark, W. B., XXVI, 1195
 Clark, W. B., and Miller, B. L., XXIX, 73
 Clark, W. B., and Twitchell, M. W., XVII, 616
 Clark, W. L., *et al*, XXIX, 901, 902, 903
 Clark, W. M., XX, 266
 Clark, W. O., XVI, 356
 Clark, William L., memorial of Harry H. Wilson, XIII, 1238
 Clark and Cumberland counties, Illinois, Oakland anticline in, XXII, 651
 Clark-Wick pool, Kansas, STR II, 157
 Clark zone at Santa Fe Springs field, GAS, 203
 Clarke, XIII, 1475; XXI, 311; XXIV, 503
 Clarke, Carl W., map of surface structure, St. Louis pool, Oklahoma, STR II, 348
 memorial of, XIII, 93
 Clarke, Edward de Courcy, X, 1238, 1241; XI, 72; XVI, 834; XXIII, 106; XXV, 372, 374, 375, 377, 386, 389
 middle and west Australia, review, XXIII, 105
 Clarke, Edward de Courcy, and Talbot, H. W. B., XXV, 396
 Clarke, Frank Wigglesworth, CAL, 96; GAS, 1072; MEX, 207; PROB, 182, 913; RMS, 515; SBP, 57; V, 466; IX, 937; XI, 1285, 1289, 1297; XII, 907, 935, 937, 1002; XIV, 140; XVIII, 364, 1234; XIX, 1593, XXII, 1044, 1320, 1321, 1343; XXV, 1862, 2065; XXVIII, 1517; XXIX, 1483
 Clarke, Frank Wigglesworth, and Wheeler, W. C., MEX, 207; XXVIII, 1017
 Clarke, John M., XIII, 479; XV, 174, 673, 675; XX, 1208, 1221, 1229, 1230, 1233; XXII, 555; XXIII, 1181; XXIX, 14
 Clarke, L., RMS, 82, 83, 84
 Clarke and Wavne counties, Mississippi, cross section and columnar section, XXI, 81
 Garland Creek-Shubuta bridge section of the Jackson Eocene of, XXI, 80
 Clarke zone, PROB, 226, 405
 Clarks gas field, XXVI, 1259
 Clarksville field, GAS, 560
 Clarno formation, XXIX, 1387
 Class, MSC, 184
 Classen, William J., memorial of Linn Markley Farish, XXVIII, 1783
 Classification, diastrophic method of, XXVI, 219
 new, of Permian redbeds of southwestern Oklahoma, VIII, 322
 of Artinskian series in Russia, XXV, 1396
 of currents, RMS, 108
 of East Indian Tertiary, XXII, 29
 of exploratory drilling for petroleum, definitions, XXVIII, 703
 of exploratory drilling and statistics for 1943, XXVIII, 701
 of exploratory wells, XXIX, 630
 of faults, XXVII, 1245
 of faults, discussion, XXVII, 1633
 of faults and thrust fault on Barran-
- (Classification)
 quilla-Cartagena highway, Colombia, discussion, XXVIII, 1649
 of gas lands, GAS, 1030
 of Mississippian and Pennsylvanian rocks by State Geological Surveys, XXIX, 127
 of Mississippian and Pennsylvanian rocks of North America, XXIX, 125
 of normal shallow waters in Gulf Coast region, PROB, 893
 Classification of oil and gas accumulations, geological terminology in, XXIX, 1738
 principles of, XXIX, 1748
 references, XXIX, 1754
 sketches, XXIX, 1746
 Classification of oil and gas reservoirs, PROB, 433, 442, XXVI, 1291
 of oil and gas structures, STR II, 671
 of oil reservoirs, discussion, XXVII, 224
 of Permian, XXII, 925
 of Permian rocks, XXIV, 337
 of Permian section in America, XXIII, 1673
 of petroleum reservoirs, XXIX, 1537
 of Pliocene formations and faunas of southern California, CAL, 230
 of reservoir traps, proposed new, and stratigraphic type oil fields, discussion, XXVII, 539
 of reservoirs, bearing on oil migration, PROB, 445
 of samples of sediments of Lake Ponchartrain, XXIII, 13
 of sedimentary data, RMS, 558
 of seepages, XI, 687
 of stratigraphic divisions in Texas, XXIII, 149
 of Vicksburg group, GC, 346, 348; XIX, 1656
 paleontologic method of, XXVI, 218
 problems of, formations versus members, XXIV, 92
 Classification and correlation of the type Permian, XXIV, 237
 Classification and economic use of foraminifera, MSC, 12; XXIV, 1498
 Classification and nomenclature of rock units, XVII, 843; XXIII, 1068, 1069, 1070, 1072
 stratigraphic, XXIX, 1208
 Classifying sediments as apparent source beds, limits used in, XXI, 1381
 Clastic and limestone sediments, comparison of carbon content of, SBP, 30
 Clastic and limestone sediments, comparison of carbon-nitrogen ratio of, SBP, 35
 Clastic cycle, XVIII, 1230
 Clastic deposits of Pushmataha series, XXII, 859
 Clastic dike in Fort Hays chalk, Kansas, XV, 842
 Clastic facies, MSC, 158
 Clastic facies and faunas of Monterey formation, California, XVII, 1009
 Clastic material in Barbados, origin of, XXIV, 1560
 Clastic zones in non-clastics, XXVI, 47
 Clastics, coarse, and thrust faulting in Temblor Range, California, XXV, 1327
 Clavilithes series in Peru, XII, 12
- Clawson, W. W., Jr., XIII, 573, XIV, 58, 59, 1517; XXIX, 152
 Clawson, W. W., Jr., and McGee, D. A., PROB, 355, 411, 771; XVIII, 251
 geology and development of Oklahoma City field, Oklahoma County, Oklahoma, XVI, 957
 Clay, base exchange capacities of, RMS, 456, 462, 472
 base exchange in relation to composition of, with special reference to effect of sea water, XVIII, 358
 chemical properties of, RMS, 472
 crystal structure of, RMS, 474-478
 dehydration properties of, RMS, 472-474
 diagenesis of, RMS, 489
 dimensions of, in terms of textural units, SBP, 71
 distribution of, in river, RMS, 24
 effect of, on erosion, RMS, 11
 effect of, on properties of sediments, SBP, 160-165
 enmeshed, in Great Salt Lake, constitution of, XXII, 1378
 enmeshed, in Great Salt Lake oolites, chemical and mineralogical analysis of, XXII, 1379
 grade of non-argillaceous sediments, constitution of, RMS, 488
 green and dry strengths of, RMS, 483
 in Baltic, RMS, 300, 303, 312-315
 in deep sea sediments, RMS, 488
 in Europe, RMS, 483
 in oil field sediments, RMS, 464
 mineral, RMS, 454-495
 mineralogy in relation to mechanical analyses, RMS, 487-488
 of Helgoland, RMS, 331
 of Southern North Sea, RMS, 347
 or shale, effect on acidizing, XXI, 625
 Clay, properties of, RMS, 466-495
 effect on plasticity and bonding strength, RMS, 482
 relation to exchangeable bases, RMS, 457, 482-483
 relation to mineral composition, RMS, 484-487
 Clay, resistance of, to erosion, RMS, 11
 sensitivity of, to electrolytes, RMS, 536
 size, RMS, 167, 169-172, 197, 202, 239-243, 255, 265, 269, 280, 286-290, 434, 450, 498, 529, 550
 structure of, RMS, 478
 Clay acid, RMS, 535, 538
 Clay-ball conglomerates, XXIX, 64
 Clay Basin field, XXIII, 917
 Clay Basin gas field, Utah, XXVII, 430, 450
 Clay City field, Illinois, XXII, 73, 651; XXIII, 1495, 1499; XXVI, 1092
 Clay City-Noble uplift, XXIV, 223
 Clay content, relation to depth, RMS, 388
 Clay County, New York, XXVI, 1042
 Clay County, Texas, XXIII, 852
 developments in, XXIV, 1049, XXVII, 772
 developments in 1940, XXV, 1070
 Henderson pool, discovery, XXIV, 1495
 subsurface stratigraphy of, STR II, 545
 Clay County gas field, Kentucky, STR I, 73, 82, 86; XI, 486
 Clay Creek salt dome, Washington County, Texas, GAS, 706; GC, 757, 762; PROB, 648, 649, 654; XII,

- (Clay)
 1166, XV, 43; XX, 68; XXVII, 1234
 central depression of, GC, 762, XV, 55
 discussion, XV, 279, 1113
 sections at, GC, 63, 773, 777, XVII, 1068
 Clay Creek salt dome, Washington County, Texas, and Chesnut dome, Natchitoches Parish, Louisiana, bearing of cap rock on subsidence on, discussion, XV, 1105
 Clay dikes in Redstone coal, West Virginia and Pennsylvania, XVII, 1527
 Clay dunes in South Texas, GC, 229, XVII, 933
 Clay minerals, RMS, 456, 465-490; XXVIII, 75
 chemical composition of, RMS, 471
 distribution of, RMS, 483-484
 hardness and density of, RMS, 469
 identification of, by X-ray, RMS, 624
 optical properties of, RMS, 470
 origin of, RMS, 484-487
 properties of, RMS, 469-483
 use of, in correlation of strata, RMS, 488
 Clay particles, RMS, 534
 Clay-pebble zones in Tertiary rocks near Talara, Peru, XXIX, opp. 509
 Clay shale, RMS, 593
 Clay Township, Ohio (well 423), SBP, 349-379, 410
 Clayey sediments, RMS, 165, 393, 616
 Claypool, C. B., XXIX, 62
 Claypool, C. B. and Howard, W. V., method of examining calcareous well cuttings, XII, 1147
 Claypool, Chester, XXVII, 608
 Clays in Great Salt Lake bottom, XXII, 1334
 Clays and loams, of Great Salt Lake, mechanical analyses of, XXII, 1336
 Clayton, John, XXIV, 1807
 Clayton field, Arenac County, Michigan, XXII, 406, 659, 663; XXIV, 985
 Clayton formation, XXII, 791; XXVIII, 47
 Clayton limestone at Jackson, Mississippi, XVII, 45
 Clear Creek chert, XXV, 680
 Clear Creek formation, II, 118; III, 95, 142; XXVIII, 815, 821
 Big Lake field, Texas, STR II, 505, 507, 508, 512
 Westbrook field, Texas, STR I, 287
 Clear Fork beds, developments, XXIX, 747
 production from, XXIX, 747
 Clear Fork formation, XXV, 1054, 1068; XXVII, 754, 759
 Clear Fork group, PTNM, 695; XXIII, 1077; XXIV, 42; XXVI, 695
 eastern Midland basin, XXIV, 57
 West Texas, XIII, 947
 Clear Fork group and Wichita group, correlation of upper part of, PTNM, XXVI, 696
 Clear Fork oil in Wasson field, XXVI, 1017
 Clear Fork sandstones, Wilbarger County, Texas, STR I, 296
 Clear Fork zone, XXV, 1053
 Clear Lake, CAL, 308
 Eocene beds near, CAL, 14, 123, 125, 126, 276, 292, 296
 Clear Lake dome, SD, 222, 272
 Clear Lake field, XXIII, 882
 Clearfork sand zone, lenticular, productive at Fort Silfield, XXVIII, 785
 Clearwater fault, XXI, 221; XXIII, 545, 550
 Clearwater shales, possible derivation of oil in McMurray sands from, XXII, 1141
 Cleavage, RMS, 603, 604
 face, RMS, 617
 of clays, RMS, 487
 Cleaves, Arthur B., STRAT, 538
 discussion, XXII, 1108
 Cleaves, Arthur B., and Willard, Bradford, XXI, 311, 315
 Cleland, Ralph H., XIX, 109, 111
 Clement, G. M., and Atwater, G. I., XXIV, 745, 749
 Clement, Josephus, XX, 900
 Clement sand, gas-bearing, XXVII, 1107
 Clements, T., SC, ix, 84, 99
 Clements, T. D., memorial of Arthur Jerrold Tieje, XXVIII, 686
 Clements, Thomas, MSC, 71; SC, ix, 74, 84; XX, 1535, 1620, 1630; XXIII, 518, 529, 532, 548, 550; XXVII, 1246; XXIX, 1079
 structure of southeastern part of Tejon Quadrangle, California, XXI, 212
 Clendenn, W. W., SD, 10, 397; IX, 840
 Clerici solution, RMS, 596
 Cleu, T. F., SD, 372; IX, 772
 Cleve, P. T., XXIV, 1593
 Cleveland area, XXIII, 877
 Cleveland field, XXV, 2015
 Liberty County, and Segno field, Polk County, Texas, Wilcox Eocene production at, XXII, 1274
 Cleveland Hills, deep bore in, XXIX, 1354
 Cleveland sand, V, 400; VI, 466; XXIV, 2001; XXV, 1677
 Davenport field, STRAT, 395
 Cleveland sand, Depew area, Oklahoma, STR II, 366, 377
 Cliff cutting, RMS, 231
 Cliff-forming limestone in Maurice member of Deadwood formation in Wind River Canyon, XXIII, 481
 Clifford, XIV, 55
 Clifford, O. C., Jr., magnetic resurvey of Oklahoma City field, XVI, 1171
 Cliffs, rate of recession of, RMS, 270, 347
 Cliffside field, helium-bearing natural gas in, GAS, 1053
 Clifton, R. L., PROB, 355; IX, 631; XIV, 787; XV, 419; XVI, 1024; XXIII, 1297; XX, 1087; XXIII, 1806, 1810, 1811
 ammonoids from upper Cherry Canyon of Delaware Mountain group in Texas, XXVIII, 1644
 example of directional drilling as applied to geology in Ellis County, Kansas, XXVII, 87
 paleoecology and environments inferred for some marginal Middle Permian marine strata, XXVIII, 1012
 Permian structure and stratigraphy of northwestern Oklahoma and adjacent areas, XIV, 161
 Permian Word formation: its faunal and stratigraphic correlatives, XXIX, 1766
 Clifton Forge sandstone, XXIV, 1984
 Clifton formation, V, 654
 Climate, effect of, on clay minerals, RMS, 486
 effect of, on currents, RMS, 117
 effect of, on ocean, RMS, 58
 effect of, on organic content of sediments, RMS, 446
 effect of, on sediments, RMS, 390
 of East Indies, RMS, 348
 of Mesozoic generally warm, CD, 64
 of Permian, XXI, 883
 relation of, to erosion, RMS, 26
 Climate and type of weathering, XXVI, 1755
 Climates, complicated group of problems involved, CD, 188
 of former geological periods, in belts not parallel to present equator, CD, 60
 Climates and paleontology, Pennsylvanian, XIV, 1279
 Climatic accidents and landscape, XXVII, 1013
 Climatic changes, RMS, 58
 as indicated by CaCO₃ content of sediments, RMS, 393
 in year 1300, RMS, 362
 intermittent, effect of, XXV, 2012
 Climatic conditions, effect on sediments in lake basins, XXV, 832
 Climatic implications of Mint Canyon formation, CAL, 213
 Climatic relations of Tertiary and Quaternary faunas, MSC, 17, 81, 169
 Climatic significance of lignites, XVIII, 1259
 of Pleistocene birds, CAL, 265
 Climatic variations, effects on Great Salt Lake, XXII, 1317
 Climatic zones, CD, 7, 58
 an indication of grouping of continents from Carboniferous to Cretaceous, CD, 61
 influence on pelagic sediments, XXIII, 1671
 present, CD, 7, 58
 South Texas, GC, 575; XVII, 513
 Climatological arguments, favoring continental drift, CD, 58
 Climatology, factors of, influence on sediments of Lake Pontchartrain, XXIII, 9
 of Brown's hypothesis on origin of Gulf Border salt deposits, discussion, XX, 821
 Cline, Justus H., possible origin of graphite in some ancient quartzites, slates, and schists in Virginia, XVI, 736
 Cline, L. M., XXIII, 328, 338; XXV, 35
 Osage formations of southern Ozark region, Missouri, Arkansas, and Oklahoma, XXIII, 1132
 Traverse of upper Des Moines and lower Missouri series from Jackson County, Missouri, to Appanoose County, Iowa, XXV, 23
 Cline, L. M., and Miller, A. K., XXIII, 86; XXIV, 312; XXV, 438
 Cline, L. M., Weller, J. M., Wanless, H. R., and Stookey, D. G., interbasin Pennsylvanian correlations, Illinois and Iowa, XXVI, 1585
 Clinzoisite, XXVIII, 76
 Clinton, DeWitt, XIX, 482
 Clinton and Cumberland counties, West Virginia, activity in, 1944, XXIX, 683

- Clinton-Bullion pool, Venango district, STRAT, 517
- Clinton field, eastern Ohio, GAS, 908
- Clinton field, Harris County, Texas, XXI, 1051; XXII, 739
- extensions to, XXIX, 679
- Clinton-Medicina-Cataract fields, Ontario, GAS, 72
- Clinton formation, GAS, 63, 79
- Big Sinking field, STRAT, 179
- Ontario, structure contours and isopachs of, GAS, 66
- (Sc) (Silurian?), SBP, 351, 355, 357-379, 415
- Clinton gas in Ohio, XXIX, 679
- Clinton gas field productive from Brassfield beds, XXII, 1534
- Clinton group in Ohio, XXIV, 679
- Clinton sand, PROB, 74, 506; STRAT, 382; IV, 28, 45; V, 359, XXV, 816; XXVI, 1124; XXIX, 682
- Chippewa storage pool showing limits of production in, XXVIII, 1572
- eastern coal field, Kentucky, STR I, 88
- eastern Ohio, STR I, 128, 145, 146; XI, 956, 958
- Homer gas field, Ohio, STR I, 136, 137
- Ohio, a pinching sand, STR II, 697
- Ohio, helium in, GAS, 1056
- Ohio pools, STRAT, 383
- (Sm) (Silurian), SBP, 351, 355-379, 415
- Clinton sand area, PROB, 505
- Clinton sand fields, eastern Ohio, STR I, 140
- Clinton sand gas and oil fields, relation to geology, XXVII, 891
- Clinton sands, XXVI, 1127
- eastern Kentucky, XI, 490
- Clinton sandstone, GAS, 898, 908
- eastern Ohio, XI, 1031
- Clinton series, XXV, 814
- Clinton Stray sand, XXV, 816
- Clodine field, Fort Bend County, Texas, XXV, 2057
- fossils in, XXV, 2057
- Cloos, Ernst, CAL, 18; XX, 64, 1123, 1180
- Cloos, Ernst, and Cloos, Hans, XX, 862
- Cloos, Ernst, and Johnston, W. D., Jr., XX, 67
- Cloos, Hans, CD, 32, SC, 126; SD, 45, 46, 160; IX, 326, 327, 434, 435; XVI, 176; XX, 59, 64, 860, 862, 871, 1672; XXI, 1497; XXIII, 1722; XXVIII, 543; XXIX, 1652
- Einführung in die Geologie; ein Lehrbuch der inneren Dynamik*, review, XXI, 276
- Cloos, Hans, and Cloos, Ernst, XX, 862
- Clore fauna, XXIV, 841
- Clore formation, XXIV, 211, 838; XXV, 874
- Close spacing of wells, recovery greater with, XXVIII, 241
- Wortham field recovery a result of, XXVIII, 248
- Closed anticlines or domes, PROB, 689
- Closed basins, types of, XXI, 1112
- Closed contours, search for, XXVIII, 916
- Closed flow, GAS, 1113
- Closed-pressure tests, GAS, 49
- Closed reservoir, definition, PROB, 434
- Closed reservoirs, XXIX, 1745
- Closed synclines, STRAT, 823
- Closure, Bellevue field, Louisiana, STR II, 242, 245
- Big Lake field, Texas, STR II, 518
- Bradford field, Pennsylvania and New York, STR II, 420
- Bunker Hill dome, Wyoming, STR II, 653
- due to impermeability of rocks, MEX, 191, 196
- Eldorado field, Kansas, STR II, 163
- Elk Basin field, Wyoming and Montana, STR II, 581, 585
- Ferris dome, Wyoming, STR II, 656
- formed by uplifted fault blocks at Salt Creek field, Wyoming, STR II, 594
- Francisco pool, Indiana, STR II, 140
- Gosston field, Louisiana, STR II, 194
- Griffithville field, West Virginia, STR II, 573
- Hiawatha dome, Colorado, STR II, 114
- in Rangely anticline, Colorado, STR II, 96
- in Texon zone, Big Lake field, Texas, STR II, 520
- Kevin-Sunburst field, Montana, STR II, 263
- Lance Creek field, Wyoming, STR II, 607, 610
- Little Lost Soldier dome, Wyoming, STR II, 637
- Mahoney dome, Wyoming, STR II, 654
- Middle Ferris dome, Wyoming, STR II, 659
- of anticlines and domes, STR II, 674
- of Pine Island structure, STR II, 174
- Oseage County field, Oklahoma, STR II, 382
- Petrolia field, Texas, STR II, 548, 554
- Rangely dome, Colorado, STR II, 108
- Rock River field, Wyoming, STR II, 617
- Salt Creek field, Wyoming, STR II, 591
- Stephens County, Texas, STR II, 472, 476, 478
- structural, importance, GAS, 1081
- Thrall pool, Kansas, STR II, 157
- Virgil pool, Kansas, STR II, 145
- Wertz dome, Wyoming, STR II, 651
- Yates field, Texas, STR II, 494
- Cloud, P. E., XXIX, 414
- Cloud, Preston E., Jr., XXIX, 1767
- Cloud, Wilbur F., petroleum production, review, XXI, 811
- Cloud, Wilbur F., and George, H. C., oil sands and production relations, review, XII, 680
- Cloud Chief formation, PTNM, 707; XXVI, 707
- unequal distribution of gypsum in, XXI, 1529
- Cloud Chief gypsum, XXI, 1527
- in Weatherford area, Oklahoma, XII, 709
- in West Texas, XIII, 952
- Cloud Chief gypsum and Weatherford dolomite, relations between, XXI, 1530
- Cloverly conglomerate, STRAT, 301
- Cloverly formation, GAS, 250, 286; XXIII, 486; XXV, 1150, 2035; XXIX, 1598
- disconformable over Morrison, XXIII, 1450
- (Kd) (Cretaceous), SBP, 198
- (Cloverly) productive at Wertz dome, XXIV, 1101
- Rocky Mountain states, PROB, 167, 168, 698, 716
- Cloverly formation water, XXVI, 1350
- characteristics, XXVI, 1354
- in central fields of Montana, XXVI, 1352
- in Montana, XXVI, 1349
- in southern fields of Montana, XXVI, 1352
- Cloverly group, Elk Basin field, Wyoming and Montana, STR II, 579, 580
- Cloverly sandstone, V, 196, 261; XXV, 1853
- Clute and Cutler, VIII, 591
- Clute, J. R., Survey, Texas (well 351), SBP, 292-335, 409
- Clyde formation, PTNM, 682; XXVI, 682
- Coagulating effect of electrolytes, RMS, 540
- Coagulation, RMS, 274, 533, 535, 536, 540, 541, 545
- Coahuila, PROB, 75; MEX, 17, 48, 55, 95
- Cretaceous fossils of, XXVIII, 1159
- Cretaceous section along Canon Teraises, XXVIII, 1160-1163, 1165
- Cretaceous section in Sierra de Parras, XXVIII, 1158
- east-central, Cretaceous section in mountains of, XXVIII, 1175
- eastern, Cretaceous section in Sierra de la Paila, XXVIII, 1174
- Glen Rose fauna in Cuchillo formation, XXVIII, 1163
- La Casita formation, sections, XXVII, 1489
- La Gloria formation, sections, XXVII, 1481, 1482
- Leonard and Guadalupe fossils in, PTNM, 700; XXVI, 700
- northwestern, Sierra del Carmen area of, XXVIII, 1182
- Permian rocks in, PTNM, 685; XXVI, 685
- southern, Sierra de la Peña, XXVIII, 1165
- western part of Sierra de Parras and Parras basin, XXVIII, 1160
- Coahuila peninsula, Mexico, XXVI, 226; XXVIII, 303, 321
- a buried platform, XXVIII, 302
- evolution of, XXI, 1206
- Coal, CAL, 82; GAS, 1139; PROB, 45, 69, 269, 483; RMS, 436; SBP, 58, 413; XXVII, 257
- as a source of energy, PROB, 267
- banded, PROB, 82
- carbon ratio of, SBP, 59, 275, 350-352
- differences between source material of petroleum and source material of, XX, 1478
- Eagle Pass, V, 21
- fixed-carbon content of, connected with depth of burial, XXVII, 1204
- Herrin, in Centralia-Sandoval area, Illinois, STR II, 122
- in Bend group, GAS, 623
- in Carboniferous, CD, 11
- in Cretaceous, CD, 31
- in Dawson arkose, XX, 1323
- in Eocene, CD, 37
- in Eocene near Bakersfield, California, XXIV, 1676
- in Jurassic, CD, 27

- (Coal)
 in Miocene, CD, 41
 in Montana, I, 150
 in New Mexico, I, 149, 151
 in Permian, CD, 17
 in southeastern West Virginia, regional metamorphism of, XXVII, 1194; discussion, XXVII, 1225
 in Triassic, CD, 23
 in United States, production, GAS, 1140
 in West Virginia, references on regional metamorphism of, XXVII, 1223, 1227
 occurrence of gas in, in Illinois, GAS, 834
 oxygen content of, SBP, 19, 20
 Pennsylvanian, SBP, 351, 353, 357-379
 proximate analysis of, XXVII, 1209
 regional metamorphism of, in southeastern West Virginia, XXVII, 1194
 Coal and coke formed experimentally from lignin humic acids, XXIV, 1867
 Coal and petroleum, relations in origin between, XIX, 937
 Coal and plant-bearing beds of Lower and Middle Jurassic in Central America, XXVII, 1498
 Coal and Pontotoc counties, Oklahoma, Jesse pool, XXII, 1560
 Coal basin, Illinois-Indiana, STR II, 117
 Coal-bearing horizon in Rio Grande section, GC, 608; XIX, 1377
 Coal-bearing strata in central Illinois, XXIII, 1383
 Coal beds in Belden shale member, XXVI, 1395
 in Lower Eocene of Magdalena Valley, XXIX, 1105
 in Mercure formation, XXVIII, 15
 in Middle Jurassic in Oaxaca, XXVII, 1501
 miscorrelations of, resulting from lack of cooperation in studies of stratigraphy, XXIII, 1509
 near Ojinaga, XXVIII, 1184
 workable, Coal Division of Illinois Geological Survey active in mapping of structure of, XXIII, 1508
 Coal carbonization, theories of, XXVII, 1195
 Coal City limestone, XXV, 59, 64, 69, 71; XXVI, 1591
 Coal County, Oklahoma (well 300), SBP, 255-285, 408
 Coal deposits, conditions for development of, XXI, 1122
 major, formed from accumulations of vegetable matter not quantitatively in existence at present, XXI, 1104
 western, significant features of, I, 148
 Coal district, Rhenish-Westfalian, geology of, XXIII, 611
 Coal Division of Illinois Geological Survey, active in mapping of structure of workable coal beds, XXIII, 1508
 Coal field, Arkansas and Oklahoma, XXI, 1403
 Arkansas-Oklahoma, carbon ratios in part of, XIX, 937
 western Kentucky, produced by compressive forces, XXI, 781
 Coal fields, Arkansas and Oklahoma, correlations of Pennsylvanian strata in, XVIII, 1050
 of south China, XXVIII, 1423
 Coal gas, natural, in West Virginia, XXVII, 529
 Coal industry, use of paleontology in, XXIV, 1755
 Coal Measure series in Western Australia, XXV, 378
 Coal measures, XXIX, 130
 distribution of *Pecopteris*, *Lepidodendron*, and *Gangamopteris-Glossopteris* floras in, CD, 63
 generalized section, XXVII, 531
 in Eastern Interior basin, XXIII, 1374
 in Eastern Interior basin, columnar sections, XXIII, 1381, 1383, 1384, 1386
 in Eastern Interior basin, map showing extent of, XXIII, 1380
 in Eastern Interior basin, sedimentary cycles in, XXIII, 1376
 in Madison and Macoupin counties, Illinois, XXIII, 1382
 in southern Illinois, XXIII, 1385
 in southern Indiana, XXIII, 1385
 in southwestern Illinois, XXIII, 1382
 in Vermilion County, Illinois and Indiana, XXIII, 1387
 in western Illinois, XXIII, 1382
 in western Kentucky, XXIII, 1385
 lower, of New South Wales, correlation with middle Ecca of South Africa, XXV, 406
 Murphysboro seam and coal No. 6 in, XXIII, 1383
 Coal Measures section in Illinois valley, XXIII, 1381
 Coal Measures strata, variations in section in succession of, XXIII, 1377
 Coal Measures succession in La Salle County and vicinity, Illinois, XXIII, 1380
 in southern versus western Illinois, XXIII, 1377
 Coal metamorphism, PROB, 82, 83, 85 by tangential stress, XXVII, 1221
 relation to oil and gas, XVIII, 1077
 Coal Mine Canyon, SC, 56; XX, 1602
 Coalinga area, geologic events in, SC, 137; XX, 1683
 Coal No. III, Indiana, XXIII, 1387
 Coal No. IIIa, Indiana, XXIII, 1390
 Coal No. IV and Coal No. VI, Indiana, area containing, one of richest coal-bearing regions in Eastern Interior basin, XXIII, 1387
 Coal No. IVa, Indiana, XXIII, 1390
 Coal No. V, Alum Cave seam, in Indiana, XXIII, 1385
 Coal No. VI, Indiana, XXIII, 1391
 Coal No. VII, Indiana, XXIII, 1387
 Coal No. 4, XXVI, 1590
 Coal No. 5a, XXIII, 1385
 Coal No. 6 and McLeansboro formation, graphic section of, from Macoupin County to Cumberland County, Illinois, XXIII, 1514-1517
 Coal No. 7, XXVI, 1592
 Coal No. 8, XXVI, 1592
 Coal No. 9 in Kentucky, XXIII, 1385
 Coal No. 11, XXIII, 1385
 Coal No. 12, XXIII, 1385, 1391
 Coal No. 14, XXIII, 1385, 1392
 Coal-seam gas, XXVI, 28
 Coal seams, Illinois nomenclature of, XXIII, 1375
 in Adaville formation in La Barge region, XXV, 1742
 in Indiana, scheme of Roman numerals with added letters for
 (Coal)
 designation of, XXIII, 1375
 in West Virginia, column showing, XXVII, 1202
 Indiana nomenclature of, XXIII, 1375
 overlying Cody shale in Wind River Canyon area, XXIII, 1450
 Coal tar, VI, 293
 natural, mistaken for oil residue, VI, 293
 Coalburg syncline in Cabin Creek field, West Virginia, STR I, 466
 Coalgate anticline, GAS, 528
 Coalgate field, GAS, 519
 Coalification theory of origin of oil and gas, discussion, XVIII, 1547
 Coalinga, California, CAL, 46, 106, 109, 123, 128, 141, 154, 172, 173, 177, 178, 184, 215, 220, 309; MSC, 101, 124, 127, 133, 156, 157; SC, 13, 46, 47; XX, 1559, 1592, 1593; XXIV, 1940
 contours on top Gatchell sand showing relationship of new Eocene fields at, XXIV, 1115
 Cretaceous-Eocene contact north of, XV, 697
 Eastside Miocene section, CAL, 216
 Eocene near, possibly reworked Cretaceous, CAL, 125, 142
 Eocene Yokut sandstone north of, XXIV, 1722
 foraminifera, CAL, 110, 111
 fossils from, CAL, 181, 182, 188, 211, 215, 234, 251, 288
 geothermal variations at, PROB, 992
 San Joaquin Valley north of, CAL, 102, 106, 136, 139, 172, 193
 Coalinga anticline, CAL, 174, 234; GAS, 133; PROB, 186, 194, 196; XIII, 221; XVII, 1166; XXIII, 937; XXIV, 1113
 Coalinga area, MSC, 124, 135, 155; XXVII, 870
 Fresno County, California, geologic events in Coal Mine Canyon, SC, 137; XX, 1683
 Fresno County, California, geologic events in Kettleman Hills, SC, 137; XX, 1683
 Fresno County, California, geothermal variations in, XV, 829
 north, vertebrates of, MSC, 155
 northeast, Amerada, XXIV, 1948
 Coalinga district, CAL, 11, 20, 49, 52, 88, 100, 104, 108, 110, 111, 138, 142, 148, 151-153, 155, 173, 174, 181, 182, 184, 205, 206, 232, 234-236, 240, 243, 250, 279, 283; MSC, 17, 70, 163, 175; PROB, 185, 743, 795; SC, 11, XX, 1557
 columnar sections of Tertiary, SC, 56; XX, 1602
 correlation of Miocene in, CAL, 212
 correlation of Oligocene in, CAL, 148
 correlation of Pliocene in, CAL, 236, 249
 Cretaceous of, CAL, 100, 103, 105, 106
 early folding of, SC, 65; XX, 1611
 Eocene formations in, XXIV, 1944
 fault-blocks of, CAL, 56
 faults of, SC, 67; XX, 1613
 geologic section, XVIII, 477
 geology of, SC, 53; XX, 1599
 map of, SC, 54; XX, 1600
 marine and nonmarine facies, CAL, 235
 nature of Franciscan beds in, XXV, 6

(Coalinga)

- Pliocene formations of, CAL, 234-236, 238, 242, 245, 249, 250
 reef beds of, CAL, 171
 structure sections in, SC, 68; XX, 1614
 Temblor in, CAL, 55, 152, 153, 166, 171-173, 175, 178, 181, 182, 184, 188, 215, 216, 220, 279, 303
 Tertiary land area northwest of, CAL, 293
 vertebrate fossils of, CAL, 250
 Coalinga East side, SC, 62; XX, 1608
 Coalinga East-side wells, use of Big Blue as marker, SC, 60; XX, 1606
 Coalinga field, PROB, 194, 228, 745, 746, 958; V, 181, 457; VI, 57, 380
 Coalinga (Gatchell) pool, XXIV, 1948
 Coalinga-Kettleman Hills-Lost Hills line of folds, SC, 66; XX, 1612
 Coalinga Nose field and East Coalinga field, typical stratigraphic traps, geophysical methods used to locate, XXV, 1258
 Coalinga oil field, XXVI, 1135
 Northeast, structure section, XXVI, 156
 Southeast, structure section, XXVI, 158
 Coalinga pools, Gatchell sand productive in, XXIV, 1948
 Coalinga quadrangle, Fresno County, California, Yokut sandstone in, XXIV, 1751
 Coalinga region, Fresno and Kings counties, California, SC, 15, 142; XX, 1561, 1688
 McLure shale of, XIV, 403
 Miocene shales and mudstones of, MSC, 165
 Coalinga syncline, PROB, 195
 Coalinga waters, content of, PROB, 958
 Coals, bituminous, formation of, from carboxylates, XXIV, 1866
 bituminous, and oil, rôle of carboxylates in formation of, XXIV, 1865
 correlation of, XXIII, 1376
 minable, description of, XXIII, 1387
 minable, in Illinois, XXIII, 1379
 minable, in Indiana, XXIII, 1379
 minable, in western Kentucky, XXIII, 1379
 minable of Illinois, Indiana, and western Kentucky, correlation of, XXIII, 1374
 most important of Eastern Interior coal basin, including Harrisburg No. 5 and Springfield No. 5 of Illinois, Kentucky No. 9, and Petersburg Coal V of Indiana, XXIII, 1390
 of Arkansas-Oklahoma field, variations in fixed-carbon content of, directly related to structural deformation produced by pressure from south, XIX, 947
 of Eastern Interior basin, XXIII, 1378
 of Eastern Interior basin, development of three different systems of nomenclature for, result of lack of cooperation of state agencies, XXIII, 1375
 of New Mexico, carbon ratios of Cretaceous, in their possible relation to oil, VII, 519
 of northwest Arkansas, carbon ratio, GAS, 557
 oil, asphalt, and natural gas, origin

(Coals)

- of, XXIV, 1868
 Coarse clastics and thrust faulting in Temblor Range, California, XXV, 1327
 Coarsening of texture on outer edge of shelf, RMS, 233
 Coast and Geodetic Survey, gravity determinations made by, in southeastern Oklahoma, XXIV, 2149
 Coast fields, PROB, 206
 Coast lines, apparent coincidence of, probably accidental, CD, 155
 instability of inherited shape, CD, 113
 Coast Prairie of Texas, GC, 211, 212; XVII, 913, 914
 Coast Range, SC, 1; XX, 1547; XXIX, 1397
 between Olympic and Klamath mountains, XXIX, 1399
 from Klamath Mountains north to Vancouver Island, Puget Sound Basin, and Willamette Valley rocks of, possible sources of oil and gas, XXIX, 1413
 of Oregon and Washington, Tertiary formations in, XXIX, 1404
 of Venezuela, fossils from metamorphic rocks of, XXVI, 1632
 Coast Range and Cascade Mountains, origin of, XXIX, 1410
 Coast Range complex bordering Caribbean coast in Venezuela, XXII, 1225
 in Venezuela, XXIII, 699
 Coast Range diastrophic history, SC, 50; XX, 1596
 Coast Range folios, SC, 1; XX, 1547
 Coast Range oil geology, mapping of, by United States Geological Survey, XXVII, 255
 Coast Range orogeny, SC, 5; XX, 1551
 Coast Range province, disturbance of, contemporaneous with Laramide orogeny of the Rocky Mountain region, SC, 13; XX, 1559
 Coast Range strata, Oligocene age of, SC, 30; XX, 1576
 Coast Range structure, hypotheses of, SC, 1; XX, 1547
 Coast Ranges, California, CAL, 1, 9, 11-13, 24, 29, 35-37, 46-48, 60, 74, 86, 87, 91, 92, 94-97, 109, 111, 112, 134, 142, 146, 175, 183, 191, 193, 208, 224, 225, 262, 266, 267, 274, 292, 296, MSC, 17, 88, 101, 115, 150; PROB, 737, 739; XXI, 550
 Miocene orogenies in, MSC, 91
 stratigraphic units sampled in, SBP, 93
 Cenozoic, flooded during, CAL, 276
 central, Miocene paleogeography in, MSC, 18
 Cordilleran revolution, CAL, 75, 87
 Cretaceous, CAL, 14, 74, 79, 99, 109, 111
 Eocene, CAL, 79, 120, 124, 142
 faulting in, CAL, 50
 faults and fault blocks, CAL, 49, 50, 58, 59, 262; XIII, 200
 faunal horizons of, MSC, 174
 folds and faults of, SC, 52; XX, 1598
 importance of Franciscan-Knoxville group in evolution of, XXVII, 217
 Jurassic, CAL, 27, 60, 74, 259
 Mesozoic, flooded during, CAL, 276
 Miocene, diastrophism during, CAL, 226, 279, 282-284
 Miocene paleogeography in, X, 130

(Coast)

- Miocene stages in, CAL, 164, 166
 nappe theory, CAL, 35
 no sedimentary rocks older than Carboniferous in, CAL, 65
 Northern. (See Northern Coast Ranges)
 Oligocene in, CAL, 147, 149, 151, 152, 160, 186
 Oligocene diastrophism in, SC, 32, XX, 1578
 Paleozoic in, CAL, 64
 physiography of, CAL, 255
 Pliocene in, CAL, 233
 rhythmic bedding in formations of, CAL, 105
 rocks of, in correlation table, CAL, 96
 seas, CAL, 145, 207, 276, 292, 297
 shortening of, CAL, 78, 296
 Southern. (See Southern Coast Ranges)
 stratigraphy of, CAL, 136, 138, 249
 structure of, SC, viii, XI, 34; XX, 1533; XXI, 551
 structure section by Louderback, CAL, 58
 structure sections to determine block faulting in, CAL, 54
 tectonics of, CAL, 52, 54, 112, 137, 148
 Triassic, schists and limestones, CAL, 68
Valisineria californica zone widespread in, CAL, 163, 190
 Vaqueros sediments, probable source of, CAL, 164, 169, 183
 vulcanism in, CAL, 278, 283, 284
 Ynez Island an active positive area in, CAL, 166
 Coast Ranges and East Indies, parallels between pre-Tertiary stratigraphy of, XXII, 558
 Coast region a revision of the Texas Tertiary section with special reference to oil-well geology of, VIII, 424
 earth movements in, CAL, 59
 Coastal area, hypothetical, bathymetric, isopachous, and paleolithologic maps and sections of, XXIX, 434
 of south Texas, Frio zone productive in, XXIII, 867
 Coastal barren belts, XVIII, 1250
 Coastal belt in south Texas, fields in, XXII, 756
 Coastal configuration of North Sea, RMS, 334-336
 Coastal line of England, changes of, since Roman time, RMS, 347
 Coastal Mound class of salt domes, SD, 646
 Coastal Oil and Fuel Company, SD, 406, 412, 418
 Coastal Plain, RMS, 211, 232, 242-244, 483, 484
 between New Jersey and Florida, correlation of formations of, XXIX, 929
 deep alluviation of, GC, 584
 mountains of, structure, MEX, 5, 161
 of Arkansas, Louisiana, and Texas, correlation of Lower Cretaceous formations of, XXIX, 1481
 of Georgia, geologic map of, XXII, 790
 of Georgia, stratigraphy of, XXII, 789
 of Georgia, structure of, FOP, 143; XXV, 1575

- (Coastal)
 of south Georgia, recent petroleum activities in, XXII, 794
 of Sumatra, test-pit exploration in, XIV, 1439
 of Texas between Brazos River and Rio Grande, geologic map showing late Cenozoic deposits of, XXIX, 1694
 of Texas, geologic map showing Lissie, Reynosa, and Upland Terrace deposits, XXI, 492
 of Texas, Lissie, Reynosa, and Upland Terrace deposits of, XVII, 453
 of Texas, oil fields in igneous rocks in, XVI, 741
 of Texas and Louisiana, GAS, 686
 of Texas and Louisiana, secondary salt-dome materials of, XIV, 1469
 of Texas and Louisiana, subsurface stratigraphy of, IX, 79
 of Virginia, North Carolina, and South Carolina, fresh and salty waters encountered in, XXVI, 843-845
 of Virginia, well samples from, XXIX, 904
 Coastal Plain and western interior regions, map showing areas of outcrop of Upper Cretaceous sediments in, XXII, 1630
 Coastal Plain area in Virginia, geologic cross sections and gravity anomaly curves of, XXIX, 75-78
 map, XXIX, 74
 Coastal Plain beds, south Arkansas stratigraphy with emphasis on older, XXII, 953
 Coastal Plain deposits, RMS, 238
 Coastal Plain states, comparative statistics on wildcat drilling for, omitting north-central Texas and Panhandle of Texas, XXIII, 791
 Coastal Plain stratigraphic nomenclature, discussion, XVII, 1535
 Coastal Plain unconformity, typical, XIII, 1325
 Coastal salt domes, I, 34
 Coastal southeast Texas, surface geology of, XIV, 1301
 Coastal southeast Texas and south Louisiana, post-Fleming surface formations of, GC, 432; XIX, 651
 Coastal unconformity, sketches showing progressive development of, XXIV, 2029
 Coastal water, RMS, 235, 236
 Coatings, iron-oxide, RMS, 593, 594
 Coats, R. R., XXVII, 157
 Coats pool, XXIX, 704
 Cobalt, RMS, 149
 Cobán formation, XXVIII, 1094
 Cobán limestone, XXVIII, 1118
 Cobb, A. C., XXIX, 1265
 Cobb, Margaret C., XIX, 12; XXV, 328
 elements of geophysics as applied to exploration for oil and gas, review, XIII, 86
 reviews, XV, 713, 978, 1298; XVI, 106; XVIII, 1212
 Cobb, Owen, XXVII, 1060
 Cobban, William A., STRAT, 285; XXIX, 1024
 marine Jurassic formations of Sweetgrass arch, Montana, XXIX, 1262
 Cobban, William A., Inlay, R. W., and Reeside, John B., Jr., type section of Ellis formation, Jurassic, of Montana, XXIX, 451
 Cobbles, RMS, 40, 45, 257
 Coberly, C. J., and Stevens, A. B., GAS, 1103; XXV, 1311
 Cocoliths, RMS, 145, 147, 376, 388, 410
 Cochran County, West Texas, development in 1938, XXIII, 842
 Cockburn, H. C., XIV, 1116; XIX, 364; XXIV, 1449
 Cockerell, VIII, 667, IX, 258
 Cockfield, Lopez field, STRAT, 689
 Cockfield and Gosport formations, correlation of, eastern Mississippi and western Alabama, XXII, 309
 Cockfield beds, XXV, 1374, XXVIII, 56
 Cockfield, discoveries in Texas in 1941, XXVI, 986
 Cockfield exploration, XXVII, 733
 Cockfield formation, GC, 396, 592; XVII, 627, XIX, 1361, XXI, 1429; XXII, 1508; XXIX, 26, 42
 Arkansas, VI, 351
 Conroe field Texas, GC, 793, 798; XX, 740, 745, 751
 Louisiana, GC, 396; V, 631; VI, 180; XVII, 626
 Louisiana, correlated with upper Claiborne of Alabama, XXII, 309
 Monroe field, Louisiana, GAS, 747
 production in Conroe field, GC, 16; XVIII, 515
 productive in Bammel field, XXIX, 262
 south Arkansas, XXII, 981
 south Texas, XXII, 750
 Texas fields, GAS, 724, 725, 727, 728
 Cockfield prolific oil-bearing sands of Gulf Coast, XXV, 2015
 Cockfield sand, XXV, 1379, 2010; XXVIII, 275; XXIX, 800
 upper, in Conroe field, GC, 811, 822; XX, 758
 Cockfield sands productive in Texas, XXII, 738, 739
 Cockfield section through Live Oak and Bee counties, Texas, electrical-log profile, XXV, 2017
 through Polk and Liberty counties, Texas, electrical-log profile showing, XXV, 2014
 Cockfield-Vegua sand, XXIII, 878
 productive in Conroe and intermediate zones, in Texas and Louisiana, XXIII, 874
 Cockfield-Vegua section, XXIII, 876
 Cockfield zone, XXIII, 1410
 South Texas, GC, 626; XVII, 822
 Cocoa sand, 102, 177, 179; XXIII, 878
 Cocoa sand member of Jackson formation, definition of, XVII, 1387
 Coconino sandstone, GAS, 370, 381; VI, 47, 205, 210, 224, 226, 246; XXVI, 467
 Arizona, X, 828
 gas fields in Utah from, XXII, 1256
 Grand Canyon region, XXIV, 621
 Utah, helium in, GAS, 1057
 Cocui quartzite, XXIX, 1084
 Cocuy sandstones of Cretaceous age, XXV, 1795
 Cocuy series, east of Páramo de Chita, Neocomian fossils in, XXV, 1795
 near La Mesa, limestone beds of lower part of, XXIV, 1617
 of Neocomian Lower Cretaceous age, XXIV, 1617
 Cocuy series sandstones, Giron beds at contact with, near La Mesa, Colombia, XXIV, 1616
 Codell sandstone, Greasewood field, STRAT, 26, 28, 29
 in Rocky Mountain area, XXI, 906
 Cody, Kane, and Thermopolis sections of Sundance formation, correlation between, XXI, 739, 741
 Cody, Wyoming, outcrop section b, SBP, 243-255, 411
 Cody formation, XXV, 1856
 Cody Petroleum Company, SD, 274
 Cody shale, XXV, 138, 2034, 2035, 2037; XXVIII, 796
 Elk Basin field, Wyoming and Montana, STR II, 579
 (Kln, Kun), SBP, 197
 Wyoming, XXV, 2027
 Coefficient of diffusion, RMS, 73
 Coefficient of eddy viscosity, RMS, 78-80, 107, 119, 121
 factors influencing, RMS, 79
 Coefficient of skewness, RMS, 209, 564, 570, 576, 581
 of sorting, RMS, 306, 311-315. (See sorting coefficient)
 of thermal conductivity, RMS, 73, 77
 of variability, SBP, 11, 24, 25, 45, 383, 384
 Coefficients, absolute, RMS, 73
 in the kinematic equations, RMS, 68, 69, 72-74
 Coelenterata, XXI, 808
 Coeymans limestone, XXIV, 1985
 Coffee sand, XXII, 1646
 Coffee shale, XXV, 803
 Coffey, G. N., XVII, 923, 932, 935
 Coffey, George, XXIX, 1265
 Coffeyville field, Kansas, STR I, 49; STR II, 677
 Coffeyville formation, STRAT, 441; XXIV, 722; XXVII, 639
 East Tuskegee pool, STRAT, 441
 Coffeyville pool, PROB, 765
 Coffin, R. Clare, X, 633; XI, 112, 117, 120; XIV, 770, 780; XV, 740, 1099; XVI, 53, 776, 1263; XVII, 110, 126, 966; XXIII, 1170
 preface, Colorado symposium, XVII, 351
 Coffin, R. Clare, and DeFord, Ronald K., PROB, 837; XXII, 1038
 waters of oil- and gas-bearing formations of Rocky Mountains, PROB, 927
 Cogen, William M., RMS, 611, 612, 613; STRAT, 594; XXII, 211
 heavy-mineral zones of Louisiana and Texas Gulf Coast sediments, XXIV, 2069
 Cogen diagram, RMS, 612
 Cogollo limestone, XXIX, 1088, 1125
 Cretaceous, XXIX, 1079
 in Venezuela, XV, 231
 Cohansey formation, XXIX, 900
 Cohee, George V., RMS, 221, 243, 245, 252, 258, 281; XXII, 216; XXVII, 818
 lateral variation in Chester sandstones producing oil and gas in lower Wabash area, with special reference to New Harmony field, Illinois and Indiana, XXVI, 1594
 Cohee, George V., and Bell, Alfred H., recent development in Illinois with discussion of producing formations below McClosky sand, XXIII, 807
 recent petroleum development in Illinois, XXII, 649
 Cohee, George V., and Shepard, F. P., XXIX, 1255

- Cohesion, PROB, 282, 283
mechanical, RMS, 538
Cojo Canyon, MSC, 32
California, outcrop section M, SBP, 167-194, 411
Coke formed experimentally from coalification of saccharinic acid, XXIV, 1869
Coke County, Texas, XXI, 472, 473
geology, III, 117
Coke field, XXVII, 782; XXVIII, 847
gravity of oil at, XXVII, 782
Coker field, XXVII, 772
Colbert porphyry, XXV, 1624
Colby sand, XXVII, 755
Colchester coal No 2, XXIII, 1389; XXVI, 1589
Colden field, GAS, 952
Coldwater formation, XXII, 396; XXIV, 1966; XXVIII, 186
a micaceous shale containing potassium-bearing minerals, XXIX, 7
Coldwater lime in western Michigan, approximate extent of, XXV, 722
Coldwater mollusks, MSC, 152
Coldwater oil field, Michigan, XXIX, 695
Coldwater Red Rock, XXIV, 2151, XXV, 732
Coldwater Red Rock to Traverse limestone interval, isopach map of southwestern Michigan showing, and type log for southwestern Michigan, XXIV, 2152
Coldwater sandstone (TCW) (Eocene), SBP, 95, 97, 168-194, 415
Coldwater-Tespe contact, MSC, 101
Coldwater shale, XXV, 731; XXIX, 17
distribution, XXV, 732
Coldwater shales, XXV, 721
concretionary zones in, XXV, 723
fossiliferous limestone zones in, XXV, 723
Coldwater stage, CAL, 141
Coldwater structure, XXIII, 1050
Cole, XIX, 690
Cole, A. M., XXIV, 1807
Cole, C. A., XXVII, 1410
Cole, F. M., X, 1239; XVIII, 1479
Cole, Taylor, PTNM, 737; XXVI, 737; XXVII, 752; XXVIII, 831
abstract, XXII, 1710
Barnhart field, Reagan County, Texas, XXVI, 387
Embar field, Andrews County, Texas, XXVII, 538
Midland, Texas, Insoluble Residue Study Group, XXV, 318
Ordovician development, Apco structure, Pecos County, Texas, XXIV, 478
subsurface study of Ellenburger formation, West Texas, XXVI, 1398
Cole, Taylor, and Linehan, C. M., XXVI, 1026
Cole, Taylor, Bybee, H. P., and Haigh, Berte R., developments in West Texas and southeastern New Mexico in 1937, XXII, 694
Cole, Taylor, Cordry, C. D., and Hemphill, H. A., McKee and Waddell sands, Simpson group, West Texas, XXVI, 279
Cole, Taylor, Dickey, R. I., and Kraus, E., XXVI, 1026
developments in West Texas and southeastern New Mexico during 1940, XXV, 1044
Cole, Virgil B., and Koester, Edward A., developments in north Mid-Continent in 1944, XXIX, 701
Cole, W. Storrs, MEX, 105, 110-113, 117, 119, 134; XX, 434, 441; XXII, 1008; XXIV, 1498; XXVII, 604; XXVIII, 1358, 1677, 1680, 1683, 1704, 1724; XXIX, 928, 929
stratigraphic and paleontologic studies of wells in Florida, review, XXVI, 1425, 1426
Cole, W. Storrs, and Gillespie, Ruth, XX, 439
Cole-Bruni field, Texas (well 403), SBP, 335-349, 410; XV, 765
Cole-Bruni structure, O'Hern field, STRAT, 731
Cole Creek field, XXIII, 908; XXV, 1151, 1157
Cole Creek structure, Frontier and Lakota water in, XXIV, 1250
saline Lakota water in, XXIV, 1266
Cole field, Texas, STR I, 399; XXI, 1423
Cole member, XXIII, 1629
Cole sand, XXI, 1427; XXIII, 1409
Cole field, Texas, gas accumulation in, STR I, 402
Driscoll pool, GC, 624; XVII, 820
Government Wells area, GC, 624, 636; XVII, 820; XIX, 1136
Laredo district, Texas, STR I, 392
Randado field, Texas, STR I, 406
Coleman, XXI, 1124
Coleman, A. P., CD, 125, 137; XII, 140
Coleman, Lyman, XX, 891
Coleman, Mrs. Tom, and Decker, Charles E., graptolites from well core, Carter County, Oklahoma, XXIX, 454
Coleman, Wilde, and Moore, T. W., XXII, 1238
Coleman County, Texas, XXIII, 867; XXVI, 1043
development, XXVII, 772
Coleman Junction limestone, PTNM, 681; XXVI, 681
Seymour pool, STRAT, 762
Coleman pool, XXV, 1066
Coleman pool discovery, Archer County, Texas, XXV, 428
Coles Levee, XXVII, 865
Coles Levee area, Kern County, California, hydrocarbons, XXIV, 870
mineralization, XXIV, 871
Coles Levee field, XXIII, 937; XXIV, 1118; XXVII, 871
structure section trending northwest through, XXIV, 1117
Coletto Creek field, XXVII, 745
Coley, H., XXV, 375
Colfax formation, CAL, 77
Colfax region, CAL, 76
Colher, A. J., GAS, 258, 269, 272
Colma, southern Jalisco, and western Michoacan, Albion in, XXVIII, 1122
Collapse breccias, XIV, 1470
Collapsed casing, remedial procedure, XXV, 1888, 1892
Collapsing pressures and specific gravities, mud-laden fluids and tables on, review, VI, 382
Colle, Jack O., Clodine field, Fort Bend County, Texas, XXV, 2057
Collecting and recording of samples, XXVII, 944
Collecting sedimentary data, RMS, 558
Collective motion, of bed load, RMS, 12, 15, 28
College field, XXVI, 1094
College Point field, Louisiana, XXIX, 795
College pool, XXV, 1122
College students majoring in geology, survey of, XXVIII, 629; XXIX, 571
Collegeport field, Matagorda County, Texas, XXIV, 1086
Colleges attended by members and associates of the Association, survey of, XXIII, 1117, 1435
Colleges and universities in United States attended by A.A.P.G. members and associates, XXIII, 1118, 1435
outside United States attended by A.A.P.G. members and associates, XXIII, 1121
Collet, L. W., XV, 1021; XVII, 220; XX, 936
Collet, L. W., Bailey, E. B., and Field, R. M., XXIII, 1006
Collett, J. Davis, XXV, 1394
Collie, G. L., V, 667
Collier, Arthur J., PROB, 697; 932; STRAT, 273, 308, 849; VII, 264; VIII, 762; XIII, 791; XV, 1134, 1148, 1172; XVIII, 1051, 1052, 1411, 1475; XX, 1352; XXVII, 1570
Collier, Arthur J., and Cathcart, S. H., XXVI, 314
Collier, George, IX, 959
Collier, I. H., XI, 395, 398
Collier field, XXVII, 745
Collier shale, XXV, 1631
Colligative properties, RMS, 64, 65
Collingsworth County, Texas, Custer formation in, XXI, 447, 449
redbeds of, XXI, 450
Collingsworth gypsum, II, 114
Collingwood, Douglas M., X, 722; XIV, 515; XV, 1307; XVI, 743, 753, 754
Decatur area, review, IX, 359
discussion of magnetometer survey of Little Fry Pan area, XIV, 515
graphic method of determining surface projection of the axis and crest traces at any depth of an asymmetrical anticline, V, 159, 328, 497
magnetic susceptibility and magnetite content of sands and shales, XIV, 1187
magnetics and geology of Yoast field, Bastrop County, Texas, XIV, 1191
magnetometer study of Caddo-Shreveport uplift, Louisiana, discussion, XIV, 175, 327
some structural and stratigraphic features affecting relative amounts of oil production in Illinois, V, 311
Collingwood, Douglas M., and Rettger, R. E., GAS, 664; PROB, 444; XI, 848, 851; XVI, 755, 756; XXI, 1491; XXIX, 1736
Lytton Springs oil field, Caldwell County, Texas, X, 953
Collins, Burton Wallace, reviews, XXV, 1813, XXVI, 1160; XXVII, 551, 652, 1013, 1266; XXVIII, 278, 1652, 1756; XXIX, 230, 1046, 1048, 1208, 1353, 1354, 1355, 1516
Collins, Melvin J., GAS, 444; XII, 99
memorial of, XX, 841
Collins, R. L., and Payne, Kenneth A., XXIX, 900
Collins, W. D., IX, 935; XI, 1289

- Collinsville field, Illinois, XXIII, 820
 Collision of particles, as influencing heat relations, RMS, 72
 Colloform, RMS, 608
 Colloidal aggregates, RMS, 537
 Colloidal clay in Baltic sediments, RMS, 314
 Colloidal organic matter, source material of some oils, PROB, 57
 Colloidal origin for calcareous oolites, XXII, 1385
 Colloidal range, RMS, 543
 Colloidal particles, RMS, 149, 536
 Colloidal sediments in Great Salt Lake, 1345
 Colloidal silica, PROB, 57; RMS, 511
 Colloidochemical forces, RMS, 533
 Colloids, RMS, 11, 171, 197, 199, 200, 533, 534, 550, 616
 content of, in Baltic sediments, RMS, 315, 316
 content of, in clays, RMS, 465
 in relation to glauconitization, RMS, 509
 sizes, RMS, 240
 soil, isoelectric point of, RMS, 486
 soil, sodium saturation of, RMS, 543
 Colloids and absorption, XXIX, 14
 Collom, R. E., GAS, 155; PROB, 758; VII, 250; VIII, 726; XXIV, 1706
 notes on California oil-field practice, VII, 114
 oil accumulation and structure of the Santa Maria district, Santa Barbara County, California, STR II, 18
 recommendation of rotary drilling in California, VII, 250
 review, X, 314
 Collom, R. E., and Barnes, R. M., California oil production and reserves, VIII, 212
 Collom, Roy, and McLaughlin, R. P., VII, 611
 Collophane from Miocene brown shales of California, XV, 257
 Colluvium in Illinois and Kentucky, XIV, 859, 866
 Colmar oil field, XXI, 775
 Colmar-Plymouth field, Illinois, XXI, 782; XXIII, 819
 Colombia, South America, bibliography on petroleum geology of, XXIX, 1140
 bibliography on pre-Cretaceous sediments in, XXV, 1795
 classification of faults and thrust fault on Barranquilla-Cartagena highway, XXVIII, 1649
 climate conditions, factors in search for and production of petroleum in, XXIX, 1069
 columnar section and grain size, Miocene sand, De Mares Concession, XXIX, 1101
 compilation of official geological studies in, 1917-1933, review, XIX, 1560
 Cretaceous in, X, 383, 384; XXV, 1789; XXIX, 1075, 1084
 Cretaceous and Tertiary geosynclines in, XXIX, 1075
 Cretaceous fossils of, X, 384
 Cretaceous sections, XXIX, 1086
 Devonian in, XXV, 1789
 Eocene in, X, 388
 Eocene or Miocene in, XI, 153
 exploration work in, XXIII, 963
 fossiliferous Paleozoic sediments in, XXV, 1789
 (Colombia)
 fossils, Eocene, X, 392
 free oil in ammonites, XXVIII, 875
 general oil geology of, XI, 151
 geology of Barco concession, reprints, XXVIII, 1665
 geology of Honda district, XXVI, 793
 graphs showing rainfall and temperature, XXIX, 1069
 Llanos of, XXIX, 522
 Llanos area, potentially rich oil province of, XXIX, 1131
 location map of Honda district, XXVI, 796
 Lower Cretaceous in, XXIX, 1084
 map, XXIX, 1066
 map of northern Cordillera Oriental showing distribution of Girón series, XXV, 1792
 Maracaibo Lake region, XI, 155
 Mesozoic in, XXIX, 1077
 Middle Cretaceous in, XXIX, 1088
 Miocene in, X, 398; XXVI, 804
 north, marine Miocene and related deposits of, review, XIV, 109
 northeastern, and western Venezuela, Upper Cretaceous in, XXIX, 1090
 northern, Eocene to Recent in lowlands of, XXIX, 528
 northern, favorable prospects for oil discovery in lowlands of, XXIX, 529
 northern, lowlands of, XXIX, 528
 northern, Miocene in, XXIX, 1096
 notes on Lower Tertiary deposits of, and their molluscan and foraminiferal fauna, review, XIV, 108
 oil in, XXVIII, 1503
 oil in Tertiary rocks, X, 403
 oil development in, I, 156
 Oligocene in, X, 398; XXVI, 819
 original sources of oil in, X, 382, 1175
 petroleum and gas fields, and new concessions, map, XXIX, 1109
 petroleum geology of, XXIX, 1065
 petroleum reserves of, XXIX, 1339
 physiographic provinces, XXIX, 1071
 Pleistocene in, XXVI, 821; XXIX, 1096
 Pliocene in, X, 401; XXVI, 819, 821; XXIX, 1096
 potential petroliferous provinces of, XXIX, 1107
 pre-Cretaceous in, XXIX, 1073
 pre-Cretaceous sediments in Cordillera Oriental, XXV, 1789
 production in, XXIII, 963; XXIX, 1139
 references on geology of Honda district, XXVI, 836
 relief map showing physiographic provinces of, XXIX, 1072
 reviews, VI, 263, 383, 384
 stratigraphy of, XXIV, 1611
 structural trends in, XXIX, 1079
 Tertiary in, XXIX, 1091
 Tertiary orogeny in, XXIX, 1077
 Tertiary sections, XXIX, 1094
 Tertiary series, X, 386
 thrust fault on Barranquilla-Cartagena highway, XXVIII, 1219
 unconformity in, X, 402
 Upper Magdalena Valley, XI, 152
 Colombia and Venezuela, correlation chart of Cretaceous-Jurassic beds in, XXIV, 1613
 Jurassic-Cretaceous (Girón) beds in, XXIV, 1611
 (Colombia)
 Llanos trough and intermont basins of, XXIX, 520
 map of part of, showing location of Jurassic Girón formation, XXIV, 1612
 sub-Andean or Llanos trough of, XXIX, 521
 tectonic structure of Northern Andes in, XVII, 211
 intermont basins and troughs of, XXIX, 526
 Colombia petroliferous provinces, map, XXIX, 1108
 Colombian and Venezuelan structures, De Cizancourt's interpretation, XXIX, 1083
 Colombian Andes, XXIX, 1071
 Colombian oil produced mainly from middle Magdalena Valley, XXIX, 1107
 Colombian petroleum, origin of, XXIX, 1134
 Colombian petroleum legislation, XXIX, 1138
 Colón shales, XXIX, 1090
 Colonial Oil Company, XXIII, 896
 Colony Coal and Coke Company (well 433), SBP, 349-379, 410
 Colony gas sand in eastern Kansas, GAS, 492
 Colony shoestring field, GAS, 494
 Color, RMS, 3, 526, 604; SBP, 73-77, 394, 398. (See also Reflectivity)
 Appalachian area, SBP, 365, 368, 370
 as a guide in recognizing source beds, XXI, 1383
 basic data of, SBP, 412
 California, SBP, 117, 118, 138, 139
 central California, SBP, 138, 139
 due to minerals in rock, XII, 902
 East Texas, SBP, 311-313
 factors influencing relation of, to organic matter in sediments, XXV, 1927
 Gulf Coast, SBP, 340, 344
 Los Angeles Basin, SBP, 117, 118
 measurement of, XXV, 1922
 method of determination, SBP, 73, 74
 Mid-Continent, SBP, 269, 270
 number of determinations of, SBP, 403-411
 of sedimentary aggregate, XXVI, 1718
 of ancient sediments, effect of texture on SBP, 76
 of continental clastics, climatic effects on, XII, 917
 of deposits and salinity of water in an epicontinental sea depositing saline sediments, XXI, 887
 of dust transported by wind, RMS, 498
 of Great Salt Lake clays, XXII, 1354
 of marine sediments, XII, 932
 of samples of bottom sediments of Lake Pontchartrain, XXIII, 14
 of sea water, cause of, RMS, 84
 of sedimentary rocks, factors affecting, XII, 901
 of sedimentary rocks, relation of organic matter to, XXV, 1921
 of sediments, RMS, 170, 171, 178, 182, 195, 275, 289, 303, 354, 381, 385
 of sediments in Baltic, RMS, 319
 of sediments in Black Sea, RMS, 499, 450
 of sediments, relation of, to reduction number, XXV, 1923

(Color)

- of tidal muds, RMS, 200
 relation to nitrogen content of sediments, XXV, 1925
 relation to reduction number, SBP, 74, 75
 relation to source beds, SBP, 381, 384
 relation to texture, SBP, 76
 Rocky Mountain samples, SBP, 224
 Rocky Mountains, SBP, 224
 standards for bitumen extraction, SBP, 66-68
 use of, in regional studies, SBP, 81
 variation of, among ancient sediments, SBP, 77
 West Texas, SBP, 287, 288
 zones of sedimentation and their relation to, XXI, 885
- Color and gravity of oil, map showing progressive change in, across central part of Michigan basin, XXIV, 1978
- Color and hardness, difference in, between Anadarko-Ardmore and Amarillo-Wichita-Red River provinces, XXV, 17
- Color and nitrogen-reduction ratio of Upper Devonian shale in Appalachian region, SBP, 368
- Color changes in rocks of Cement oil field, XXV, 18
- Color chart of committee on sedimentation of National Research Council, IX, 1018
- Color measurements, application of, XXV, 1932
- Coloradic geosyncline, XIII, 758
- Colorado, GAS, 341, 363, 370-379, 1057, 1061, 1065, PROB, 110, 159, 161, 165, 166, 169, 171, 275, 276, 338, 343, 658, 682, 728, 929; RMS, 471
- Axial Basin anticline in northwestern, STR II, 105
- Cambrian in, XXVI, 1377
- Cañon City field, STR II, 89
- carbon dioxide from wells in, VIII, 831
- central, unconformities in stratigraphy of, XVII, 353
- comparison of Iles, Moffat, and Thornburg domes, STR II, 105
- Cretaceous in, XXI, 989, 1246; XXII, 1025
- Dawson and Laramie formations in southeastern part of Denver Basin, XX, 1308
- DeBeque field, STRAT, 869
- development in, XXI, 994
- developments in 1937, XXII, 680, 687
- Devonian in, XXVI, 1377
- discovery of oil at Greasewood Flats, Weld County, XVI, 256
- early history of Florence field, STR II, 77
- eastern, Benton paleogeography of, XIII, 850
- eastern, Cretaceous waters of, PROB 948, 949
- eastern, Montana group in, XVII, 397
- eastern, Paleozoic orogeny in, FOP, 59; XXV, 1491
- eastern, unconformity in Colorado group in, XIV, 789
- eastern, and parts of adjacent states, structure map of, XVII, 436
- eastern, and parts of New Mexico, Wyoming, and Nebraska, map showing general features of, FOP, 62; XXV, 1494

(Colorado)

- eastern, and vicinity, FOP, 59; XXV, 1491
- Eocene in, XXII, 1029; XXV, 1153
- Eocene in Powder Wash field, XXII, 1023
- extensions to old fields in, 1942, XXVII, 857
- exploration in 1938, XXIII, 922
- fields discovered in 1938, XXIII, 906
- Florence field, STR II, 75
- fossil sink holes in Cretaceous beds of Prowers County, XVIII, 1493
- gas near Fort Collins, VIII, 79
- geologic map of Wilson Creek dome, Rio Blanco and Moffat counties, XXV, 1155, XXVII, 454
- geology of Two Buttes dome in southeastern, discussion, XVIII, 1544
- geology and natural resources of, review, XII, 455
- geophysical investigations at Caribou, review, XIV, 110
- Greasewood area, XVII, 433
- Greasewood oil field, Weld County, STRAT, 19
- Green River basin, VIII, 30
- Green River formation, VIII, 663; IX, 249
- igneous sill on Hartsel anticline, Park County, XXI, 989
- Iles dome, STR II, 93
- important dry holes, XXIV, 1110, XXVII, 858
- Jurassic in, STRAT, 23, XXV, 1150; XXVII, 470
- late Paleozoic stratigraphy of Gore area, XXVI, 1375
- Lower Cretaceous in, STRAT, 23
- map showing general features in North and Middle Parks, FOP, 60; XXV, 1492
- Miocene (?) in, XXII, 1034
- Mississippian of, XVIII, 531
- Moffat dome, STR II, 93
- Montana, and Wyoming, reserves in, 1943, XXVIII, 789
- Muddy sand productive at Fort Collins field, XXIV, 1104
- new discovery in 1943, XXVIII, 792
- New Mexico, and Utah, correlation of Jurassic formations of, XXI, 723
- new producing zones discovered in 1944, XXIX, 1597
- North and Middle Parks, FOP, 50; XXV, 1490
- north-central, correlation of sections from western Wyoming to XXI, 755
- North-central, fauna of so-called Dakota formation of, and its equivalent in southeastern Wyoming, review, VII, 306
- northeastern, Cretaceous formations of, XVII, 411
- northeastern, Fox Hills formation, XVI, 702
- northeastern, well sections in, XVII, 422
- northern New Mexico, and Utah, natural gas in, GAS, 363
- northwest, petroleum and natural gas in non-marine sediments of Powder Wash field in, XXII, 1020, 1604
- northwest, and southwest Wyoming, geology of Hiawatha gas fields, GAS, 341
- northwest, and southwest Wyoming,

(Colorado)

- Geology of Vermilion Creek gas area, XIV, 1013
- northwestern, Cretaceous waters, PROB, 947
- northwestern, Eocene in, XXI, 986
- northwestern, relation of accumulation to structure, STR II, 93
- northwestern, typical Dakota and Frontier waters, PROB, 946
- occurrence of oil in crystalline rocks in, XVI, 769
- oil from Cretaceous beds in, FOP, 60; XXV, 1492
- oil and gas fields in, XXVII, 448, 459, 464
- oil and gas industry of, XXVI, 1293
- oil fields in, SBP, 407
- oil possibilities, VI, 88
- oil producing counties in, XXI, 989
- oil reserves, VI, 44
- oil shales, XVI, 1029; review, VI, 385
- Ordovician in, XXVI, 1377
- origin of Sangre de Cristo conglomerates, XIII, 177
- Paradox Valley, XI, bet. 118 and 119
- Pennsylvanian in, XXIII, 922, XXVI, 1377
- Pennsylvanian stratigraphy in, XXVI, 1395
- Permian algal reef in South Park, XVII, 863
- Permian sections from Bass Trail, Arizona, to Rico, XXIV, 620
- Powder Wash dome, Moffat County, XXI, 988
- pre-Pennsylvanian stratigraphy of Front Range in, XVII, 375
- recompletions in 1938, XXIII, 913
- references on oil prospects in, FOP, 59, 64, 66; XXV, 1491, 1496, 1498
- résumé of Paleozoic stratigraphy of, XXIX, 1356
- review, VI, 385
- section of geological formations as exposed or drilled in northwest Moffat County, XXII, 1024
- section showing subdivisions of Morrison formation at Dunton, XXV, 1764
- Shinarump horizon in, XI, 131
- southeastern, anticlines, XI, 374
- southeastern, geology of Two Buttes dome, XVIII, 860
- southwest, map showing occurrences of La Plata sandstone, XXV, 1747
- southwestern, correlation of Cross' La Plata sandstone, XXV, 1745
- southwestern, correlation of La Barge sandstone in, XXV, 1751
- southwestern, nomenclature of Upper Jurassic formations in, XXV, 1753
- southwestern, southern Utah, northern Arizona, and northwestern New Mexico, correlation of Permian of, XIII, 1413
- stratigraphy, VI, 47
- stratigraphy of northeastern and east-central parts of South Park, XIX, 1339
- stratigraphy of Pennsylvanian Hermosa formation in Elk Mountains, Gunnison County, XIX, 1668
- stratigraphy and structure of Pennsylvanian and Permian rocks in Salt Creek area, Mosquito Range, XIX, 971
- structural development of Las Animas arch, Lincoln, Cheyenne, and Kiowa counties, XXIX, 1663

- (Colorado)
 structure section across Denver Basin, FOP, 63; XXV, 1495
 structure section across North Park, FOP, 61; XXV, 1493
 structure section across Uinta Basin, FOP, 65; XXV, 1497
 supposed marine Jurassic (Sundance) in foothills of Front Range, XV, 1095
 surface types of oil and gas fields in, XXVII, 452
 Tercio Park dome, faults, X, 121
 Tertiary in, XXII, 1029
 Thornburg dome, STR II, 96, 103
 Thornburg structure in Moffat County, XXI, 989
 thrust faults, X, 106
 Tow Creek anticline in northwestern, STR II, 107
 type section of Hermosa formation, XVIII, 944
 Upper Cretaceous in, STRAT, 23; XXII, 1025, 1631, 1634, XXIV, 1104
 Weld County, STRAT, 22
 wells in, SBP, 407
 western and eastern Utah, Paradox formation in, XVII, 963
 White River dome, STR II, 11
 Wilson Creek field, XXIV, 1110
 Wyoming, and northwestern New Mexico, oil and gas fields in, PROB, 719
 Colorado and Brazos rivers, distribution of early Beaumont sediments by, Coastal Plain of Texas, XXIV, 698
 Colorado and California examples of important faulting, STR II, 687
 Colorado and Kansas, use of thin bentonite beds in mapping structure Rosencranz area, XIV, 1065
 Colorado and New Mexico, a probable buried mountain range of Permian age east of present Rocky Mountains in, V, 605
 Barker and Southern Ute domes, GAS, 380
 San Juan Basin, FOP, 72; GAS, 367; XXV, 1504
 Colorado and northern New Mexico, oil and gas fields and main structural features of, XXIV, 1105; XXVII, 451
 Colorado and Utah, Colorado River salt basin, FOP, 67; XXV, 1499
 hydrocarbons of Uinta basin of, XXVIII, 341
 map showing general features of Colorado River Salt Basin, FOP, 68; XXV, 1500
 map showing general features of Uinta Basin, FOP, 64; XXV, 1496
 nomenclature of Jurassic formations in, XXI, 721
 Uinta Basin, FOP, 66; XXV, 1498
 Colorado and Wyoming, Eocene in, XXVII, 470
 Green River Basin, FOP, 53; XXV, 1485
 Hiawatha dome, STR II, 111
 location of wells and outcrop sections in, SBP, 192
 Upper Jurassic in, FOP, 58; XXV, 1490
 Colorado beds, variation in thickness in Montana, IX, 896
 Colorado delta, sub-province of Lower California, XX, 1280
 Colorado Desert, CAL, 22, 23, 24, 203, 238; SC, 1, 71; XX, 1547, 1617
 below sea level, CAL, 23, 283
 Imperial formation in, CAL, 190, 237, 238
 Miocene gypsum of, CAL, 190
 Mohavia, CAL, 119, 250
 only marine invasion of, CAL, 190
 Pliocene in, CAL, 237, 250, 251
 salt deposits of, CSL, 295
 San Joaquin Valley, similar to, CAL, 45
 Tertiary deposits of, CSL, 203
 trees of Pliocene in, CAL, 251
 volcanic rocks in, CAL, 203
 Colorado Desert series, members of, CAL, 237
 Colorado fields, GAS, 370
 northwestern, source beds, STR II, 96, 103, 107
 operations in 1942, XXVII, 854
 producing zones in, XXVII, 452
 Colorado formation, GAS, 22, 30, STRAT, 337
 Cut Bank field, STRAT, 337
 Spring Coulee region, Alberta, ALTA, 144; XV, 1272
 Colorado geanticline, XXVII, 430
 Colorado Geophysical Corporation, XXIII, 463
 Colorado group, MEX, 49, XXII, 1026, 1633
 Laramie Basin, Wyoming, nomenclature of, XX, 1190
 of Upper Cretaceous shales in Rocky Mountain area, XXI, 911
 Osage field, STRAT, 850
 Upper Cretaceous, in northern New Mexico, stratigraphy of, XXIX, 232
 Colorado group waters in central fields, XXVI, 1338
 in Montana, XXVI, 1333
 in north-central fields, XXVI, 1337
 in southern fields, XXVI, 1340
 in Sweetgrass arch fields, XXVI, 1333
 in Sweetgrass Hills fields, XXVI, 1336
 Colorado oil shale, XXV, 2171
 effects of heat on, XVII, 1234
 shearing pressure tests on, XIII, 343
 Colorado Plateau, GAS, 222
 oil possibilities of, XI, 129
 Permian stratigraphy of, XXIV, 620
 Southern Nevada, and western Texas, correlation of stratigraphic sections in, XX, 1200
 Colorado Plateau and Rocky Mountain regions, Permian in parts of, XXIV, 617
 Colorado Plateaus, XXIII, 122; XXVII, 431
 Colorado River, CAL, 237, 238; RMS, 11; STRAT, 551
 bed of, at Austin, section, XXIX, 1710
 Colorado River anticlines, XI, 817
 Colorado River delta, growth of, XXIX, 1714
 in 1930, XXIX, 1712
 in 1941, XXIX, 1913
 Recent in, XXIX, 1711
 Colorado River Salt Basin, references on oil prospects in, FOP, 70; XXV, 1502
 structure section across, FOP, 69; XXV, 1501
 Utah and Colorado, FOP, 67; XXV, 1499
 (Colorado)
 Utah and Colorado, map showing general features of, FOP, 68, XXV, 1500
 Colorado Rockies, PROB, 275
 Colorado samples, outcrop sections k-p, SBP, 243-255, 411
 (wells 232-241), SBP, 192-255, 407
 (See Rocky Mountain samples)
 Colorado sand in Dakota group productive at Fort Collins field, XXIV, 1104
 Colorado School of Mines, geophysics at, X, 1305
 Colorado sections, SBP, 529
 Colorado series, XXVI, 801, XXIX, 1099
 Oligocene, XXIX, 1113
 Colorado shale, FOP, 20, 42; GAS, 32, 248, 250, 260, 273; PROB, 698; STRAT, 285; IV, 253, 314, V, 198, 257; VI, 116, 136, 335; XXI, 989; XXV, 1452, 1474; XXVII, 855
 Alberta, ALTA, 6, XV, 1134
 Border-Red Coulee field, STRAT, 283, 318
 heulandite in, STRAT, 284
 in southern plains of Alberta, stratigraphy of, ALTA, 43; XV, 1171
 Kevin-Sunburst field, Montana, STR II, 257, 264
 Red Coulee field, Alberta, ALTA, 35-37; XV, 1163-1165
 Viking field, GAS, 53
 Wyoming, VII, 488
 Colorado shale waters, XXVI, 1334
 characteristics, XXVI, 1340
 Colorado symposium, XVII, 351
 Colorado-Utah area, formations in, XI, 115
 Colorado-Utah salt domes, XI, 111
 Colorimetric method of determining percentage of oil in cores, XXI, 1477
 Colorimetric procedures, RMS, 419
 Colorimetric testing of core samples, measuring rack for, XXI, 1480
 Coloring agents in sediments, XXV, 1929
 Colors, rock, XXVIII, 128
 Colson, William E., XXIX, 221
 Colton, Earl G., GAS, 1079; XI, 659
 memorial of Henry Arthur Nedom, XXIV, 1150
 natural gas in Arkansas basin of eastern Oklahoma, GAS, 511
 Colton, George, X, 941, 944
 Columbia, West, salt dome and oil field, Texas, STR II, 451
 Columbia County, Arkansas, oil and gas in, XXVIII, 259
 Calhoun field, XXIX, 459
 Dorchest pool in, deepest in Arkansas, XXIV, 738
 Columbia field, Ark., XXVIII, 259
 Columbia lava flows, beginning of, SV, 44; XX, 1590
 Columbia limestone, West Columbia field, Texas, STR II, 454, 459, 466
 Columbia oil field, Texas, I, 47; V, 212
 Columbia Plateau, GAS, 221; XXIX, 1379, 1388, 1411
 Columbia River basalt, GAS, 225
 in Washington, nitrogen in, GAS, 1059
 Columbia River Basin, CAL, 285
 Columbia River lavas, XXIX, 1394
 Columbia River lavas, thickness and

- (Columbia)
lithologic character of, XXIX, 1389
Columbian Carbon Company (wells 422, 424), SBP, 349-379, 410
Columbiana County, Ohio (well 422), SBP, 349-379, 410
Columbite, RMS, 602
Columbus formation, XXV, 810
Columnar section, Wind River Canyon, Wyoming, XXIII, 481
Colusa County, California, outcrop section, SBP, 167-194, 410
Colusa County field, California, PROB, 184, 229
Colusa gas field, XXVIII, 743
Colver, XII, 88
Colvin storage pool, XXVIII, 1585
showing limits of production in Mursysville sand, XXVIII, 1586
Co-magmatic regions and the Wegener hypothesis, CD, 155
Co-magmatic similarities on two sides of Atlantic, CD, 118
Comales, MEX, 43, 124, opp. 143
Comanche, GAS, 53, 449, 655, 656, 660, 662, 666, 671, 753, 758, 759, 779; MEX, 16, PROB, 378, 576, 578
Arkansas and Louisiana, XXV, 1697
Big Lake field, Texas, STR II, 506, 508, 516
Carterville-Sarepta and Shongaloo fields, XXII, 1480
central Texas, XXV, 1692
Germany, XVIII, 723
Homer field, Louisiana, STR II, 198, 201
Louisiana, XXII, 1666
Mississippi, XXVIII, 35; XXIX, 826
Pine Island field, Louisiana, STR II, 170, 171, 182
Russia, XXIII, 496
Schuler field, XXVI, 1475
Stephens field, Arkansas, STR, II, 2
Texas, STRAT, 781
Texas and Louisiana, XXI, 1068
Yates field, Texas, STR II 482, 486, 493
Yates field, Texas, domal anticline fold in, STR II, 493
Comanche and Gulf series in South Texas, boundary between, XXIX, 1467
Comanche and older rocks in South Texas and Mexico, formation tops in, XXIX, 1420
Comanche and Tertiary in Coke County, Texas, XXI, 472
Comanche Cave, view showing Cragin's two gypsum beds, Medicine Lodge and Shimer, separated by Jenkins clay, XXIII, 1794
Comanche field, IV, 280
Comanche Peak clays, ammonites abundant in, XXIV, 1182
Comanche Peak formation, XXVII, 487
Comanche Peak limestone, III, 168, 302, 359; V, 17; XXIX, 1419, 1454 in trans-Pecos Texas, XXII, 1430
Comanche Point, MSC, 28, 119, 254 Fig. 14 (in pocket)
Comanche rocks of northern Louisiana, northeast Texas, and southern Arkansas, possibilities for oil in, XX, 527
Comanche section of Texas and Mexico, extension into New Mexico, XXII, 524
Comanche shale, uppermost, type sec-
- (Comanche)
tion in Cherokee County, Texas, XXIX, 177
Comanche series, XXV, 1692
boundary between Fredericksburg and Washita groups of, XXVII, 1078
Cotton Valley field, Louisiana, XIV, 987
Hugoton field, STRAT, 84
southern Arkansas, XXII, 956, 968
Sugar Creek field, XXII, 1509
Texas, XXVI, 1812
Walnut Bend pool, STRAT, 779, 781
Comanche source beds, Pine Island field, Louisiana, STR II, 182
Comanche strata, northwestern Louisiana and southwestern Arkansas, XXV, 1030
Comanche syncline at Pecan Gap time, map showing, GAS, 655
Comanchean, Big Lake field, Texas, X, 368
Glass Mountains, Texas, X, 878
Gulf Coastal area, XII, 1070
Louisiana, X, 225, 227
possible source of salt, SD, 37; IX, 867
Texas, X, 770
western Kansas, IX, 1105
Comanchean Cretaceous, Lisbon field, Louisiana, XXIII, 284
Luling field, Texas, STR I, 256, 273
San Marcos quadrangle, Texas, XI, 832
Comanchean Cretaceous and older rocks in Arkansas-Louisiana-Texas area, XXIII, 285
Comanchean formation, IV, 75; VI, 70, 551
Comanchean fossils, Kansas, X, 561
Comanchean strata of Central Kansas, new data on, X, 553
Comatulids, XXVI, 1192
Comatulids, Tertiary, XXVI, 1194
Combined surface and seismic exploration party, XXIX, 1781
Combs-Worley pool, wells of, producing from three zones, XXIII, 1005
Combustion methods of determining carbon, SBP, 21, 22
Commercial and structural oil and gas possibilities of central valley region California, XVI, 361
Commercial gases in United States, production of, GAS, 1139
Commercial Testing and Engineering Company, analyses of coals, XXVII, 1211
Comminuted shells, RMS, 292
Commissions in Air Corps, change in applications for, XXVI, 1695
Committee on geologic names and correlations, Permian sub-committee of, XXIII, 1430
on geological personnel, organization of, XXVII, 1551
on sedimentation, RMS, iii, 1, 2, 3, 29 on sedimentation, 1940-1941, report of, XXVI, 1294
on statistics of exploratory drilling, XXIX, 630
Communication plan at Keokuk pool, XXIII, 237
Como anticline, XXV, 889
Como Bluff, exploration of dinosaur remains, XXVIII, 1215
structure of, XXVIII, 1208
- Como Bluff anticline, Albany and Carbon counties, Wyoming, XXVIII 1196
bibliography on, XXVIII, 1215
geologic map, XXVIII, 1206
gypsum deposits in, XXVIII, 1214
oil possibilities of, XXVIII, 1214
topography of, XXVIII, 1198
Como Bluff anticline and thrust, origin of, XXVIII, 1211
Como Bluff area, Wyoming, stratigraphic section, XXVIII, 1200
Como Ridge, drainage of, XXVIII, 1199
Comodoro Rivadavia, Argentine, Patagonia, occurrence of oil at, review, IX, 181
Comodoro Rivadavia district, Argentina, XI, 263; XXIX, 505
Comodoro Rivadavia oil field, Argentina, faults in, XVI, 556; XXIX, 557
Compacting, differential, cause of certain Claiborne dips, VII, 370
Compacting experiments, X, 916
Compaction, PROB, 79, 98, 228, 241, 244, 255, 270, 274, 277, 278, 280-282, 306, 462, 466, 468, 471, 479, 599, 618, 619, 679, 689, 807, 812, 838; RMS, 4, 192, 583
as a cause of migration of petroleum, PROB, 258, 279, 461; XII, 1049
caused by uplift, PROB, 821
density, and porosity of sedimentary rocks, XIV, 1
differential, PROB, 622, 624
differential, studies in, XIII, 1, 179
effect of gravitational, on structure of sedimentary rocks, X, 1036
effect of gravitational, on structure of sedimentary rocks, discussion, XI, 875
effect on cracking, PROB, 242
in core sampler while collecting sample, RMS, 646, 647
in folds of Mid-Continent area, PROB, 822
of clays in Great Salt Lake, XXII, 1341
of muds or shales, function of circulating water in, PROB, 259
of muds, sands, and calcareous oozes, PROB, 813
of sediments, PROB, 247, 305, 360, 463, 814; XV, 271
of sediments and depth of burial, relation between, PROB, 620, 817
of shale of East White Point field, XXV, 1997
of source sediments, XXV, 1710
quantitative effects of, PROB, 622
Compaction and closure over buried hills, XIV, 16
Compaction and its effect on local structure, PROB, 811
Compaction and oil migration, XIV, 25
Compaction-depth relations, STRAT, 49
Compaction folds on top of Oswego lime at South Burbank pool, XXI, 576
Compaction-hydraulic theory, XXIV, 116
Compaction theory, XI, 621
Compania de Petrola Ganzo Azul, Ltd., XXIII, 688
Companies, major, and independents, comparison of exploratory results in Oklahoma during 1940, XXV 1098

- (Companies)
 operating in Mexican oil fields, list of, MEX, 256, 257
 operating in Orange field, GC, 886; XX, 537
 Comparative exploratory statistics for southern states, XXVIII, 715
 Comparator for color determinations, SBP, 75, 76
 Comparison of Cragin's classification of redbeds with Norton's, XXIII, 1755
 of Permian ammonoid zones of Soviet Russia with those of North America, XXII, 1014
 of Upper Cretaceous deposits of Gulf region and western interior region, XXII, 1629
 outcrop samples and well samples, California, SBP, 185-189
 outcrop samples and well samples, Rocky Mountains, SBP, 252
 Comparisons of Upper Cretaceous sequence in east-central Texas with sequence in Great Plains, XXII, 1634
 Compass-pendulum, XIV, 574
 Compensating current, RMS, 125
 Compensation level, CD, 13
 Competence, relative, of beds a factor in horizontal-shift faulting in Trinidad, XXIV, 2119
 Competency of streams, RMS, 12, 34, 35
 Competency variations, influence on direction of overthrusting, XXIII, 1487
 Competent and incompetent units, stratigraphic columns showing, Wind River Canyon area, Wyoming, XXIII, 1452
 Competent beds, effect of, XXVII, 59
 Competent stratum, XI, 33
Compilación de los estudios geológicos oficiales en Colombia—1917 a 1933. Tomo 1, review, XVIII, 1377.
 Completeness of combustion in the determination of reduction number, effect of, on oxidation factor, SBP, 58
 Completion difficulty, how overcome, at Amelia field, XXIII, 1661
 Completion practice in eastern Kansas gas pools, XXIV, 1781
 Completion practices at North Cowden field, XXV, 627
 at Wasson field, XXVII, 520
 Completions at Amelia field, summary of, XXIII, 1664
 in Ohio in 1944, XXIX, 680
 Complexity of oil and gas geology of any sedimentary region, XXVII, 912
 Component of gravity, effect of, on currents in sea, RMS, 110, 111
 Composite and complex reservoirs, XXIX, 1549
 Composition, average, of all gases in Appalachian region, XXII, 1180
 chemical, of calcareous sediments, RMS, 287
 chemical, of Cambrian shale from Manchuria, RMS, 509
 chemical, of glauconite, RMS, 504
 chemical, of mud from upper part of tidal flats, RMS, 200
 chemical, or organic constituents of sediments, RMS, 445
 chemical, of plankton and organic sediments, RMS, 443
 chemical, of sea water, RMS, 62, 143
 chemical, of sea water, as affected by (Composition)
 organisms, RMS, 147
 chemical, of sea water, methods of determinations of, RMS, 61
 chemical, of shells, RMS, 288
 chemical, of water of inland seas, RMS, 143
 chemical, uniformity of, of ocean, RMS, 52
 of Atlantic shelf sediments, RMS, 234
 of Bartlesville and Burbank sands, XXI, 254
 of continents different from that of ocean floor, CD, 191
 of gas, GAS, 27, 229, 237
 of natural gas in Appalachian province, regional variations in, XXII, 1153
 of oil shales, VII, 296
 of oil-field waters of Appalachian region, PROB, 841
 of organic constituents of sediments, inferences about origin of oil as indicated by, XXIV, 506
 of organic matter in sedimentary rocks, PROB, 30, 31
 of sea water, PROB, 850
 of sedimentary components, XXVI, 1704
 of significant groups in Vance well, XXIV, 690
 percentage, of deep oil under theory of migration and evaporation, XXI, 936
 percentage, of heavy residues of Kulnura, Muree, Braxton, and Ravensfield rocks, XXIV, 644
 percentage, of minerals in cores from deep wells, XXIX, 1030-1033
 Composition—Thw diagram for Oriskany gas, XXII, 1164
 Compressibility of sand, experiment on, XIX, 1053
 of sea water, RMS, 64, 68, 70
 Compression, PROB, 44, 255, 449, 812, 817
 lateral, shallow oil and gas in redbeds on structures in Anadarko-Ardmore geosyncline caused by, XXV, 20
 of sediments, experimental, X, 1048
 renewed crustal, during and after formation of Boysen fault, XXIII, 1481
 tangential, PROB, 611
 Compression theory of Wayland, XXI, 114
 Compressive strength data, XXV, 858
 Computation of bed load in streams, RMS, 27
 of drift currents, RMS, 120
 of Phi moments, RMS, 575
 of total load in streams, RMS, 26
 Computed densities in sea, RMS, 115
 Compton, J. H., XI, 913
 Comstock, T. B., XXIV, 148
 Comyn formation, XXIV, 85
 Conant, L. C., XXVIII, 1342
 Concentration, RMS, 553
 increase of, with depth, PROB, 867, 868
 of Big lime waters, PROB, 871
 of connate water in Bradford sand, PROB, 852
 of dissolved organic matter in sea, RMS, 440
 of dissolved substances in sea water, RMS, 61, 64
 of glauconite by sorting, RMS, 512
 of heavy minerals in beach deposits, (Concentration)
 RMS, 212
 of hydrogen ions in sea, RMS, 144
 of ions in sea water, RMS, 64, 65, 143
 of oil-sand waters, hypothesis of Mills and Wells, PROB, 851
 of oil-well waters, PROB, 910
 of salts in water, PROB, 834
 of sea water, PROB, 286
 of suspension in mechanical analyses, RMS, 548
 of waters in relation to structure, PROB, 934
 time rate of change of, RMS, 72
 Concentration gradients, RMS, 28
 Concentric structure, RMS, 292
 Concentrically folded beds, Busk method of measuring thickness of, XXII, 483
 Concepción field, GAS, 1008
Conchifera beds, XXIV, 262
 at Kazan, XXV, 1402
 Concho, Electra, and Muenster arches, XXIV, 101
 Concho, Electra, and Muenster arches, Bend flexure, and Ouachita-Marathon overthrust in north-central Texas, structural map on top of San Saba formation, showing, XXIV, 107
 Concho arch, XXIV, 54, 71, 98, 99; XXV, 1662
 in eastern Menard County, Canyon deposits progressively overlapping earlier Carboniferous and Ordovician beds on, XXIV, 109
 Concho axis, XXIV, 105
 Concho Bluffs of Crane, Ector, and Winkler counties, Texas, XIII, 1069
 Concho County, Texas, Permian ledge-makers in, XVIII, 1577
 Conclusions from chemical evidence, XXVII, 1613
 Concord field, XXVII, 784
 gravity of oil at, XXVII, 784
 Concord formation, MSC, 65, 163, 188, 189, 191-194, 205, 222, 228, 305
 upper, MSC, 185, 186
 upper, faunules from, MSC, Fig. 14 (in pocket)
 Concord Quadrangle, MSC, 65
 Concord salt dome, Anderson County, Texas, XXVIII, 1537
 Concord sandstone, MSC, 65
 Concordia Parish, Louisiana, oil in, XXVIII, 269
 Concretionary and pisolitic zones, XXVI, 51
 Concretionary zones in Coldwater shales, XXV, 723
 Concretions, MEX, 45, 169; RMS, 526
 from Saratoga wells, SD, 512; IX, 274
 in Baltic sediments, RMS, 300
 in Honda beds, XXVI, 814
 organic content of, SBP, 189-190
 Condensate, gas reserves processed for, occurrence in post-Eocene beds, XXV, 1042
 in South Texas, XXVI, 1006
 processed in South Texas in 1940, XXV, 1042
 Condensate recovery, XXV, 1322
 Condensation of gas to a liquid by adsorption, XXVIII, 1515
 Condensed section of Agua Nueva, MEX, 53
 of Albian, Cenomanian, and Turonian, MEX, 37
 type Méndez as, MEX, 74

- Condit, D. Dale, CAL, 153; MSC, 78, 101; V, 615; VII, 176; X, 445, 987; XVI, 873; XVII, 12, 149, XVIII, 435, 1657, 1658, 1662, 1665, 1673; XIX, 415, 1196, 1198, 1199; XX, 220; XXI, 720, 732; XXIII, 86, 89, 97, 481; XXV, 389, 391; XXVIII, 955
discussion of geology of McKittick field, XVII, 12
memorial of L. G. Putnam, XX, 996
natural gas and oil in India, XVIII, 283
Permian in India, IX, 1269
stratigraphical and structural studies in mining regions, XIX, 416
Condit, D. Dale, and Rudd, Eric A., XX, 1031
Condit, D. Dale, Raggatt, H. G., and Rudd, Eric A., XXV, 374
geology of Northwest Basin, Western Australia, XX, 1028
Conditions of sedimentation and sources of Oriskany sandstone as indicated by petrology, XXII, 541
Condon, Thomas, CAL, 292
Condra, G. E., PTNM, 689, VI, 78; XII, 201, XVIII, 1599, 1604, 1605, 1608, XIX, 1285, XXIV, 80, 248, 296, 1008; XXVI, 689, 1518
stratigraphy of Pennsylvanian system in Nebraska, review, XII, 869
Condra, G. E., and Dunbar, C. O., XIII, 890, 898; XVIII, 947, XXV, 1667
Condra, G. E., and Moore, R. C., XXI, 506
Condra, G. E., and Reed, E. C., XXIII, 102; XXIV, 312, XXVI, 1518, XXIX, 167
Condra, G. E., and Upp, J. E., XVII, 171
correlation of Big Blue series, Nebraska, review, XVI, 495
Condra, G. E., Reed, E. C., and Scherer, O. J., XXVI, 1518
Condra, G. E., Schramm, E. F., and Lugin, A. L., XXVI, 1518
deep wells of Nebraska, review, XV, 976
Conduction of heat in water, RMS, 67
Conductivity of rock, effect of water in increasing, XXI, 1197
Cone Canyon, Monterey of, XXV, 235
near boundary between Caliente Mountain and Carrizo Plain, XXV, bet. 224 and 225
Cone-in-cone structure, X, 556
in Restin limestones in Peru, XII, 15
Cone-in-cone structures, XXII, 872
Cone Peak, XXVIII, 453
Conejo field, PROB, 754, 756
Conemaugh formation, PROB, 453; XXIV, 293
Gay-Spencer-Richardson trend, STRAT, 809
map of West Virginia showing thickness of, XXVII, 1204
Scenery Hill gas field, Pennsylvania, STR II, 444
Conemaugh group, XXIX, 166
Ohio, GAS, 900
Conemaugh-Monongahela boundary, XXIX, 166
Conemaugh series, XXV, 797
Copley pool, West Virginia, STR I, 446
Conewango group, Music Mountain pool, STRAT, 495
Congeria beds, Europe, VI, 526
Conglomerate, RMS, 215, 227; SBP, 413
basal in Tuxpan beds, MEX, 138
basal, Pennsylvanian, GAS, 465, 467, 470-472
Boles, Arkansas, XVIII, 1045; XXII, 895
edgewise, XXVI, 41
flint, RMS, 332
from oyster bank near Burkeville, Texas, XXVIII, 989
green, in wells of Barrancas field, XXVIII, 1465
in beds overlying El Abra limestone, MEX, 62
in Tamaulipas limestone, MEX, 32
interbedded, XXVI, 47
red, XXVIII, 1462
Conglomerate beds in Puente Hills, California, nomenclature of, XXIV, 651
Conglomerate granite in Whittier conglomerates, XXIV, 659
Conglomerates, Franciscan, XXVII, 140
marine, marine unconformities, and thicknesses of strata, XX, 677
of southern California, references on, XXIV, 670
Conglomeratic limestone, MEX, 62, 85
Congo, Belgian, geological notes on, V, 661
Congo Basin, evolution of, review, XX, 226
Congo River, RMS, 379, 519
Congrès de Forages, Second International, XIV, 323
Conhaim, Howard J., STRAT, 436
Coniacan, MEX, 17, 44, 49, 53, 55-57, 59-62, 68
Coniacan and Santonian in Mexico, XXVIII, 1100
Coniacan-Santonian fossil localities in Central America and Mexico, XXVIII, 1101
Conifera, MEX, 16
Coning, effect of, on deliverability of a storage pool, XXVIII, 1590
Coning effect on rock pressure of input and output operations in East End Tioga storage pool, graph, XXVIII, 1591
Conkling, R. A., I, 114, 116; II, 103; III, 137, IV, 48; VI, 238; IX, 1214
Conkling, R. C., IX, 1069
Conkling, Russell C., and Jones, E. L., XXIV, 19
Conkling, Russell C., and Jones, E. L., Jr., basement rocks in Shell-Humphreys well, Pecos County, Texas, XIV, 314
Conn, J. E., and ZoBell, C. E., XXVII, 1186
Connate water, PROB, 142, 259, 275, 277, 286, 469, 481, 482, 834, 837, 846, 875; STRAT, 749; XXVI, 110
chemical alteration of, PROB, 850
concentration of, PROB, 868
from Oriskany sandstone and Upper Devonian oil sands, composition of, XXII, 263
in Dakota sandstone, PROB, 275
in Woodbine sandstone, PROB, 276
influence of, on permeability of sands in oil, XXII, 1248
movement of, PROB, 274
production of, from oil sand, XXII, 1248
retreat and advance of, as theory of (Connate) oil and gas accumulation, XXI, 951
Connate waters, STRAT, 826
Conneaut group, STRAT, 495
Music Mountain pool, STRAT, 495
Connecticut Valley sandstone, III, 291
Connell pool, XXIII, 854
Conner, XI, 1293
Connors, T. P., XXVIII, 53
Conodont, XXV, 655
Conodont fauna, XXV, 131
Conodonts, XXII, 871, 901, 1567; XXV, 129, 130, 132
found in shale and siltstone members of Whitewood formation of northern Black Hills, XX, 1334
from novaculite in Black Knob Ridge, Oklahoma, XXI, 11
of Bigfork chert, XXI, 8
of lower Kinderhook, XXIV, 777
Zenith pool, STRAT, 148
Conrad, Timothy Abbott, CAL, 140, GC, 337, 338, 339, 340, MSC, 173, SC, 17; XIX, 531, 1647, 1648, 1649, 1650, 1652, 1659; XX, 218, 220, 1563; XXI, 808; XXII, 999, XXVII, 250
with particular reference to his work in Alabama one hundred years ago, review, XX, 321
Conrad, Timothy Abbott, and Blake, W. P., XII, 978
Conrad area, Canada, Jurassic in, XXIX, 659
Conrad Butte field, XXVII, 855
Conrad-Midway region, XXVII, 855
Conroe and Cleveland structures in coastal Texas and Louisiana, GC, 463, XIX, 683
Conroe oil field, Montgomery County, Texas, GAS, 724, GC, 789, XX, 763
data on, GC, 831; XX, 778
discussion, XX, 985
reserves, GC, I; XXVIII, 500
shadowgraphic treatment of map of, XXV, bet. 2166 and 2167
stratigraphic section in, GC, 794; XX, 742
Conroe Operators Association, GC, 790; XX, 737
Conroe sand, Conroe field, GC, 805, 811; XX, 752, 758
Conroe trend in Gulf Coast, production during 1938, XXIII, 876
production from Wilcox and Cockfield-Vegua beds, XXIV, 1083
strike faults important factor in creation of traps throughout, XXIII, 888
Consequent streams, XII, 515
relation to structure, XII, 515
Conservation, VII, 617
effective, program of, XXV, 1285
of oil and gas, in California, IV, 17
of petroleum resources, requirements of, XXI, 707
Conservation and maximum recovery, proration essential to, in oil fields with divided ownership, XXIII, 1318
Conservation and stabilization, distinction between, XXII, 572
Conservation laws, XXII, 1086
Conservation laws and practices of Texas, development of, XXIII, 1315
Conservation measures, GAS, 1096
Conservation principles building up large underground reserves, XXV, 1266

- Consolidated field in Wilbarger County, Texas, XXIV, 1052
- Consolidated Gas Service Company, GAS, 415, 478
- Consolidated Natural Gas Company data on active storage pools operated by subsidiaries of, XXVIII, 1567
- effect of storage on operations of, XXVIII, 1581
- graph showing increasing importance of gas taken from storage as relates to gas sales and supply, XXVIII, 1582
- storage cycle, XXVIII, 1580
- storage pools of, XXVIII, 1562
- storage projects, XXVIII, 1568
- Consolidated Royalty Oil Company, GAS, 297
- Consolidation in Pennsylvanian of Oklahoma, evidences of slumping previous to, VIII, 505
- Constitution, la, geologique des Antilles*, review, XX, 1497
- of the earth's interior, CD, 10-20
- Constitutional committee, report of, April, 1940, XXIV, 923
- Construction of shadowgraphic contour maps, basic rules controlling, XXV, 2167
- Constructive imagination, XXVI, 767
- Consumers' demands, GAS, 1112
- Consumers Power Company, GAS, 805; XXV, 1134
- Consuming centers, relation of world oil production to, XXV, 354
- Consumption of natural gas in United States, GAS, 1127, 1132, 1134
- of oil in far eastern area, XXV, 356
- Consumption and production of metered natural gas in United States, GAS, 1099
- Contact between Cambrian and pre-Cambrian in Vance well, XXIV, 691
- between Upper Miocene and Pliocene series in Ridge Basin, XXIII, 548
- differences in lithology above and below, XXVI, 49
- gradational, MEX, 25, 52, 56
- of Honey Creek and Reagan formations with igneous rocks in Arbuckle and Wichita mountains, Oklahoma, XXIII, 1094
- of Méndez and Tamesi, unconformable, MEX, 90
- undulatory surface of, XXVI, 56
- Contact metamorphism, PROB, 395; MEX, 149, 153, 154, 200
- Contact prints from flight negatives, XXIX, 1756
- overlapping, stereoscopic vision with, XXIX, 1756
- Contact rocks, pneumatolytic, types of, XXVII, 175
- Contacts of Topango, lower Modelo, upper Modelo formations and Quaternary alluvium, MSC, 126
- Contamana Mountains, XXI, 1349
- Contamination of minerals in provenance studies, RMS, 610
- Contemporaneous deformation, XIX, 272
- Contemporaneous erosion in Mesón beds, MEX, 136
- Contemporaneous generation of petroleum, PROB, 679
- Contemporaneous nature of different structural trends in Northern fields, MEX, 172
- Content, C. S., XXVI, 1826
- Content of detritus in streams, RMS, 28
- of hydrogen sulphide in fiords, RMS, 361
- of organic matter in sediments, RMS, 261, 429, 441, 445-450
- of organic matter in sediments, in Baltic, RMS, 309, 314
- of siliceous organisms in Atlantic sediments, RMS, 379
- Continental Air Map Company, GAS, 118
- Continental area, equality in each hemisphere before the Tertiary period, CD, 213
- Continental borderland, RMS, 246, 262
- Continental crust sheets, comparison with ice sheets, CD, 160
- Continental deposits, SBP, 143, 175, 336, 344
- high oxidation factors in, SBP, 59
- overlying Ellis group on Sweetgrass arch, XXIX, 1268
- Continental displacement, hypothesis of, CD, 104
- Continental drift, CD, 76
- absolute and relative, CD, 207
- circumstantial nature of geological, paleontological, and paleoclimatic arguments for, CD, 191
- compared to ice floating on flowing waters, CD, 200
- delay until Cretaceous, not explained, CD, 187
- directions of, CD, 206
- geological facts favoring, CD, 54
- no adequate force assigned to overcome resistances, CD, 108
- not confined to late geological period, CD, 203
- not convincing explanation of mountain building, CD, 190
- objection to Wegener's theory based on supposed glacial deposits within his tropical belts not justifiable, CD, 97
- possible reversals of, CD, 206
- problem of, CD, 1
- problem of, résumé by W. A. J. M. van Waterschoot van der Gracht, X, 1002
- relation of problem to petroleum geology, CD, 5
- relative to an assumed fixed Africa, CD, 62
- two notes concerning Wegener's theory of, CD, 97
- variable for different continents, CD, 72
- Continental drift theory, criticisms directed in the main against Wegener's conception, CD, 197
- of horizontal shift faulting in Trinidad, XXIV, 2121
- possibility of verifying by astronomical observations, CD, 100
- Continental facies, RMS, 173
- Continental masses not always concentrated in the northern hemisphere, CD, 213
- some horizontal movement evidenced in structure of Alps and Asiatic mountains, CD, 157
- Continental Motors Corporation, GAS, 804
- Continental movement, CD, 88
- Continental Oil Company, GAS, 118, 186; SC, 120; XX, 1666; XXI, 979, 994, 997, 968, 1009; XXII, 287, 686, (Continental)
- 687, 738, 742, 1561; XXIII, 805, 935, XXIV, 735, 1086, 1090; XXVI, 1043, 1067, 1145, XXVII, 799; XXVIII, 796, 861; XXIX, 794
- Bixby 2, 6 (wells 90, 91), SBP, 130-153, 404
- Continental 1 (well 236), SBP, 194-243, 407
- Selover 16, 22, 24 (wells 87-89), SBP, 87-153, 404
- Travis 3 (well 240), SBP, 194-243, 406
- Continental-Petroleum Producers, XXIII, 848
- Continental-Petroleum Producers, State Asylum No. 1, XXIII, 851
- Continental plateau, XXV, 9
- Continental platform, RMS, 219
- Continental sediments, RMS, 154, 161, 174
- Continental shelf, CAL, 1, 3, 9, 31, 146, 270, SC, 1; XX, 1547
- effect of, on transport of debris by tides, RMS, 134, 136
- off east coast of United States, references on sedimentary conditions on, RMS, 244
- off east coast of United States, summary of sedimentary conditions on, RMS, 230
- Continental shelf sediments, RMS, 219
- references on, RMS, 229
- Continental shelves, elevations and subsidences of, PROB, 56
- Continental sliding, Daly theory, CD, 38
- Continental slopes, RMS, 446
- Continental spreading, new theory of, XIX, 1806; discussion, XX, 317
- Continents, framework of, developed in pre-Cambrian time, CD, 204
- Continents and oceans, distribution possibly due to vertical movements, CD, 94, 210
- origin of, review, IX, 916
- Contour, method of representing structure, PROB, 18
- Contour-type map, generalized, lines of maximum slope superimposed on, XXIX, 1253
- Contour-type map and its properties, XXIX, 1250
- Contour-type sedimentary maps, classification of, XXIX, 1254
- Contoured structural maps, constructing, from dip observations, XVI, 92
- Contouring Gulf Coast region, datum planes for, XXIII, 1404
- Contra Costa, California, outcrop sections E, F, SBP, 167-194, 410
- Contra Costa Basin, MSC, 2, 180, Fig. 14 (in pocket)
- Contra Costa County, CAL, 289; MSC, 23, 47, 65, 109, 119, 123, 124, 127, 128, 133, 136, 155, 167, 185, 186, 188-194, 204, 205, 210, 222, 228, 231, 234, 235, 237, 248, 249, 252, 255, 262-264, 266, 278, 288, 304, 309, 311, 313, 323, 328, 329, 331, 343, 344.
- check list of foraminifera from, MSC, 62
- Miocene foraminifera from, MSC, 56
- molluscan fauna of, MSC, 155
- Contract, gas-purchase, GAS, 1013, 1015, 1016, 1097, 1104
- Contract rigs, XXIII, 1659
- Contraction, due to rearrangement of

- (Contraction)
 material in interior of earth, significance of, CD, 87
 of earth's crust and resulting adjustment, XXIII, 1323
 of nucleus, CD, 9
 through packing of planetesimal matter, CD, 9
 Contraction and expansion of outer crust at each great revolution favorable to continental drift, CD, 88
 Contraction theory, objections, CD, 8
Contribuições para a geologia do petróleo no Recôncavo (Bahia), XXI, 273
 Contribution to geology of eastern Osage County, II, 118
 discussion, II, 122
 Contribution to Jurassic stratigraphy of Rocky Mountain region, XXIII, 1153
 to stratigraphy of redbeds, II, 114
 Control of gas in wells, XXII, 1241
 Convection and diffusion, processes of, explanation of distribution of salt in Woodbine waters, XXVIII, 1641
 Convection and diffusion currents, explanation of distribution of salt in Woodbine sand, XXVIII, 1635, 1639, 1641.
 Convection currents, RMS, 96, 108, 111, 117, 124, 145, 357, 361, 368
 balance of forces in, RMS, 109
 effect of friction on, RMS, 116
 effect on distribution of salt, XXVIII, 1639
 velocity of, RMS, 116
 Convective mixing, RMS, 96
 Convent field, XXIII, 886
 Convergence above Cross Cut sand, STRAT, 557
 application to local structure, XI, 668
 Greasewood field, STRAT, 31
 of Pennsylvanian of north Texas and of Oklahoma, comparison of, XI, 675
 Convergence data of north-central Texas and eastern Oklahoma, XI, 680
 Convergence studies in Mid-Continent region, XI, 657
 Convergent light observations, RMS, 604
 Converse County, Wyoming (well 222), SBP, 194-243, 406
 Converse field, Louisiana, gas in lower Glen Rose at, XXI, 1072
 Converse sandstone, XXV, 1845
 Conversion by primary radium, XXVIII, 946
 by radioactive material in sediments, efficiency of, XXVIII, 942
 in layered sediment, XXVIII, 944
 in uniform homogeneous sediment, XXVIII, 943
 Conversion reaction, importance of CO₂ and H₂O formed during XXIV, 1889
 Convex trap reservoirs, XXIX, 1547
 complex, XXIX, 1553
 composite, XXIX, 1553
 simple, XXIX, 1551
 simple, section, XXIX, 1550
 subsurface relation of, XXIX, 1552
 Conybeare, W. D., and Phillips, W., XXIV, 285, XXIX, 130
 Coochie Brake dome, Louisiana, SD, 215, 222, 338-342; X, 286
 Cook, VIII, 699
 Cook, Carroll E., GC, 532; XI, 825;
 (Cook)
 XVII, 530, 544
 Darrow salt dome, Ascension Parish, Louisiana, XXII, 1412
 Cook, Charles W., PROB, 284; X, 1028; XIV, 27; XVI, 146; XXI, 1272
 tractionation and decomposition of petroleum during capillary migration, review, XI, 997
 Cook, Charles W., and Stearns, M. D., XXII, 132, 135
 Cook, Harold J., and Cook, Margaret C., XIX, 526
 Cook, M. B., Dean, E. W., and Bauer, A. D., properties of typical crude oils from producing fields of Kansas, VI, 370
 Cook, Margaret C., and Cook, Harold J., XIX, 526
 Cook Mountain age, early Middle Eocene clastic facies of, XXVIII, 1695
 of Tempoal, MEX, 114
 Cook Mountain beds, Louisiana, GC, 394, V, 625, XVII, 624; XXII, 819, XXV, 1375
 increase in thickness toward south in Mexico, GC, 604; XIX, 1373
 Cook Mountain fauna, XXV, 1375
 Cook Mountain formation, GC, 765; XX, 76; XXI, 1429; XXII, 1508; XXIV, 2142, XXVI, 261; XXIX, 41
 conformable on Mount Selman formation in Rio Grande near Las Comitas Ranch, Mexico, GC, 602; XIX, 1391
 East Texas, XII, 541; XIII, 1359
 fossils of, XXVI, 262
 Laredo district, Texas, STR I, 392
 Louisiana, GC, 394; XVII, 624
 microfossils from Milams member of, XXIX, 42
 Monroe field, GAS, 747
 new zone in, the *Crassatella texalta* Harris-Turritella cortezi Bowles zone, XXIV, 1663
 south Arkansas, XXII, 981
 vertebrate fossil from, XXIX, 41
 Webb and Leon counties, Texas, and Winn Parish, Louisiana, correlation of, XXIV, 1671
 Cook Mountain sand, Clay Creek dome, GAS, 706; XV, 49
 Government Wells field, GC, 638; XIX, 1138
 Cook Mountain-Yegua contact in Mexico, GC, 603; XIX, 1372
 Cook sand, XXIII, 855
 Cooke, C. Wythe, GC, 287, 346, 347, 348; MEX, 116, 120-123, 130, 139; RMS, 290; SD, 589; I, 73, VII, 519, 525, 612; IX, 1050; XV, 532, 546; XVII, 488, 912, 921, 958; XIX, 334, 527, 529, 1152, 1656, 1657, 1658, 1659, 1660; XXI, 92, 93, 95; XXII, 312, 794, 796, 797, 807, 808; XXVI, 1196; XXVII, 597, 600; XXVIII, 14, 1318, 1319, 1325, 1326, 1339, 1344, 1345, 1350, 1676, 1679; XXIX, 917, 918
 Ackerman formation in Alabama, XVII, 192
 boundary between Oligocene and Miocene, XXIII, 1560
 definition of Cocoa sand member of Jackson formation, XVII, 1387
 notes on Vicksburg group, GC, 358; XIX, 1162
 (Cooke)
 relative dependableness of fossils, VII, 183
 scenery of Florida, review, XXIV, 504
 Cooke, C. Wythe, and Mossom, Stuart, GC, 406; XVII, 636; XXV, 269; XXVIII, 1341, 1723
 Cook, C. Wythe, and Munyan, Arthur C., stratigraphy of Coastal Plain of Georgia, XXII, 789
 Cooke, C. Wythe, Adams, George I., Butts, Charles, and Stephenson, L. W., PROB, 666
 Cooke, C. Wythe, Gardner, Julia, and Woodring, W. P., XXVIII, 1358; XXIX, 929
 Cooke, M. B., Smith, N. A. C., Bayer, A. D., PROB, 109
 Cooke County, Texas, XXI, 1019, 1024; XXIII, 853; XXVI, 1044
 developments during 1940, XXV, 1076
 Ordovician production in, XXIV, 1052
 Walnut Bend pool, STRAT, 776
 Cool-water types of foraminifera, RMS, 410
 Cooley, Ralph S., XXV, 75
 Coolhaas, C., XV, 445, 446, 449, 452
 Cooling of Canaries current, RMS, 411
 Coons, Anna, XIX, 490
 Cooper, Byron N., review, XXII, 934; XXIV, 1498
 Cooper, C. G., and Anderson, R. S., XXVII, 509
 Cooper, Chalmers L., GAS, 582; XVI, 119; XVIII, 975, 986, 999, 1029, 1032, XXI, 11; XXIV, 67; XXV, 1651; XXVI, 313; XXIX, 136, 1152
 Cooper, Chalmers L., and Clark, G. C., PROB, 770; XVI, 120; XVII, 247, 248
 Cooper, G. Arthur, PTNM, 643, 650; XVIII, 998; XX, 1335; XXI, 311, 316; XXVI, 643, 650; XXVIII, 185; XXIX, 1770
 Cooper, G. Arthur, and Warthin, Aldred S., Jr., XXIV, 1964; XXVIII, 181
 Middle Devonian subsurface formations in Illinois, XXVIII, 1519
 Traverse rocks of Thunder Bay region, Michigan, XXVII, 571
 Cooper, Herschel H., STRAT, 730; XVII, 454; XXI, 133; XXIV, 1807
 occurrence and accumulation of oil in Laredo district, Texas, XXI, 1422
 Cooper, J. G., XXVI, 163
 Cooper, William, X, 1236
 Cooper, et al., XXIII, 857
 Cooper Cove area, Wyoming (well 223), SBP, 194-243, 406
 Cooper Creek field, West Virginia, XXII, 182
 Cooper Creek limestone, XXV, 63, 65, 69, 71
 Cooper Gas Company, XXV, 630
 Cooper marl, MSC, 240; XXII, 792
 Cooper-Page pool, Schleicher County, Texas, XXIV, 1038
 Cooper pool, Lea County, New Mexico, correlations, elevations, and interval changes of Permian beds between two wells in, shown by comparison of gamma-ray and electric logs, XXV, 1785
 radioactivity logs in, showing correlation, interval changes, and ex-

- (Cooper)
 pression of potash beds, XXV, 1786
 Cooper sand, IV, 306
 Cooperation between advanced students and men of the petroleum industry, XXIV, 604
 between arms in prospecting, XXIII, 1741
 between universities and the oil industry, XXVII, 946
 need of, XXVII, 935
 Cooperation and integration of geological, geophysical, and paleontological sciences, need for, XXVIII, 907
 Cooperative arrangement useful between American Association of Petroleum Geologists and Securities and Exchange Commission, XXV, 1301
 Cooperative Well Velocity Group, XXV, 1343
 Coora field, Trinidad, XXIII, 963
 Coordination of data for oil discovery, XXVII, 921
 Coorongite, XX, 289
 Copano Oil Company, XXIII, 868
 Cope and Marsh, X, 835
 Cope, E. D., SD, 373, 397; I, 29; II, 71; VIII, 664; IX, 256, 773; XXIII, 1228; XXIV, 305; XXV, 2109; XXVII, 622; XXVIII, 1001
 Copeland water, PROB, 221
 Copelin, L. S., XXI, 584
 Copepods, RMS, 421, 444, 445
 chemical composition of, RMS, 442
 Copley, Ralph, XXV, 1228
 Copley field, PROB, 338
 Copley formation, XXVI, 1818
 Copley oil pool of West Virginia, PROB, 340, 341; STR I, 440; XI, 581
 geologic section, XI, 585
 Coppard, V., SC, ix; XX, 1535
 Copper, RMS, 148, 149, 435
 in sea water, RMS, 143
 precipitation of, RMS, 423
 radiation in X-ray studies, RMS, 617, 621
 Texas, III, 25
 Copper-bearing shales, MEX, 16
 Copper Dick fault, XXII, 531, 539
 Copper foil, RMS, 596
 Copper Mountain, XXIII, 1441
 Copper Mountain granite ore, V, 187
 Copper ores, MEX, 144
 Coprolites, relation of, to glauconite, RMS, 514
 Coprolitic muds, RMS, 201
 off coast of Africa, RMS, 519
 Coquand, SD, 140; IX, 153
 Coquat field, XXVIII, 862
 Coquina, RMS, 235
 sandy, MEX, 99, 104
 Coquina-like limestones in Tanlajás section, MEX, 103
 Cora horizon, XXIV, 251
 Coral, RMS, 145, 212, 235, 248, 287, 288, 291, 398; XXIV, 618
 in East Indies, RMS, 354
 coral bioherms, XXV, 2126
 Coral fauna, XXVI, 307
 Ordovician, XXVIII, 305
 Coral fragments, RMS, 258, 259
 Coral-like brachiopods, Permian, XXIII, 1675
 Coral limestone, III, 135, 142
 Coral mud, RMS, 283, 286
 Coral ooze, RMS, 397
 Coral reef problem, review, XIII, 691
 Coral reefs, MEX, 136, 137; RMS, 286, 348, 349, 397
 developed during Anahuac time around salt domes, XXVIII, 1357
 geology of, review, XIX, 300
 in Oligocene of Texas, X, 976, XXVIII, 1357
 Jurassic, CD, 64
 lateral spreading of, XXVI, 55
 near coasts, RMS, 400
 Triassic, CAL, 70
 Coral sand, RMS, 400
 in East Indies, RMS, 349
 Corallinaceae, RMS, 286
 Coralline algae, Guadalupe Mountains, XIII, 1079
 Coralline beds, XXVIII, 1151
 Corals, PROB, 395; VII, 184; XXII, 908; XXIII, 639; XXIV, 176, 1984; XXV, 130, 679; XXVI, 15
 from Mesón in Hacienda Cuestecitas, MEX, 137
 in El Abra limestone, MEX, 38, 41, 134, 136, 137
 in Jackson formation, GC, 401; XXVII, 632
 in Temporal beds, MEX, 111
 Mississippian, from a central Kansas well, XI, 1329
 of Vicksburg, GC, 404
 Corbett sandstone, XXII, 533
Corbula munda faunule, XXIX, 1022, 1024
 Corcovado, MEX, 50, 52, 63, 65, 66, 154, 164, 185, 197, 201; PROB, 392
 Corcovado field, Cretaceous in, GAS, 999
 Corcovado pool, MEX, 185
 Corcovado syncline, MEX, 49, 172, 185
 Cordele field, XXIII, 868; XXVII, 745
 Cordes pool, Washington County, Illinois, correlation of radioactivity logs in, XXV, 1788
 Cordier, XII, 556
 Cordierite, RMS, 602, XXVIII, 75
 Cordillera, sandstone tongues along eastern side of, XXI, 910
 Cordillera Central, XXIX, 1106
 East Slope of, XXVI, 795
 Cordillera Central and Cordillera Occidental areas, structural pattern, XXIX, 1081
 Cordillera de la Costa, 1568
 Cordillera de San Antonio, XXVI, 812
 Cordillera Oriental, XXIX, 1077, 1090, 1106
 faulting in foothills of, XXIX, 1132
 northern, Republic of Colombia, map showing distribution of Girón series, XXV, 1792
 of Colombia, pre-Cretaceous sediments in, XXV, 1789
 West Slope of, XXVI, 799
 Cordillera Oriental and Magdalena Valley area, XXIX, 1078
 Cordilleran basin, XIV, 774
 Cordilleran Basin region, XXVIII, 301
 Cordilleran Branch of the Geological Society of America, annual meeting of, X, 449
 Cordilleran geosyncline, PROB, 721; XV, 493; XXIII, 1138, 1327
 northern, and its relation to petroleum accumulation, XI, 19
 occupying wide area through Utah, Wyoming, Idaho, and Montana (Cordilleran)
 from Algonkian to end of Upper Cretaceous, XXIII, 1134
 Cordilleran revolution, effect on Great Basin district, XVI, 9
 Cordilleran section of the Geological Society of America, MSC, 1
 Cordilleran structure, relation of Central Montana to, VII, 2
 Cordilleras de Colonche, XIV, 264
 Córdón de Abibe, XXIX, 1133
 Cordry, C. D., STRAT, 802; XXIII, 1680; XXIV, 9, 20, 129
 Ordovician development, Sand Hills structure, Crane County, Texas, XXI, 1575
 Cordry, C. D. and Upson, M. E., Silurian production, Shipley field, Ward County, Texas, XXV, 425
 Cordry, C. D., Cole, Taylor, and Hemphill, H. A., McKee and Wad-dell sands, Simpson group, West Texas, XXVI, 279
 Core, large, method of preparing, XXVII, 65
 taken from sea bottom in Gulf of California showing annual interval of deposition, XXVI, bet. 154 and 155
 Core acidizing apparatus, XXV, 859
 Core acidizing data, XXV, 860
 Core analyses, graph of, showing physical characteristics of sand in typical Eola Wilcox producer, XXV, 1378
 Core analysis, Schuler unit, XXVIII, 220
 Core-analysis methods, value of, XXIV, 1371
 Core drill, use of, in Oklahoma, XXVII, 794
 Core drill work in Kansas, XXI, 1000
 Core drilling, VII, 124; X, 520, 526; XXI, 710; XXIV, 1391; XXVII, 933
 for structure in North Mid-Continent area, X, 513
 with rotary tools in California, VII, 250
 Core drilling and geophysical prospecting in southeastern New Mexico during 1938, XXIII, 840
 Core-drilling method of exploring structure, XXIV, 1393
 Core graphs, Schuler unit, XXVIII, 222, 224
 Core holders in which oil sand is sealed, XXIV, 2169
 Core orientation, XXIII, 679
 magnetic, XXIII, 664
 new mathematical and stereographic net solutions to problem of two tilts—with applications to, XXIII, 663
 value of, XXIV, 1372
 Core recoveries, pseudo-stratification in, XII, 1167
 Core samples, SBP, 13, 88
 Core-testing in Michigan fields, XXVI, 1106
 Cores, RMS, 246, 252, 254-257, 264, 278
 apparatus for extracting oil from, XXVII, 66
 from deep well at Rodessa, Caddo Parish, Louisiana, XXII, 764
 large, advantages for testing oil sand, XXVII, 64
 large, of oil sands, technique of testing, XXVII, 64

(Cores)

- length of, RMS, 650-655, 658
 of known orientation tested by magnetic core orienter, curves from, XXI, 595
 of sediments, means of taking, RMS, 528
 of sediments of fiords, RMS, 359 on continental slope, RMS, 241
 orientation of, XIV, 559, 563
 samplers forced into sediment by power other than momentum, RMS, 653-662
 samples from, RMS, 255, 275
 samples from, in Baltic, RMS, 321
 Corey, William H., SC, 122; XX, 1668; XXV, 194
 age and correlation of schist-bearing clastics, Venice and Del Rey fields, California, XX, 150
 Corey, William H., and Loel, Wayne, MSC, 9, 23, 33, 39, 73, 97, 114, 152, 153, 171, 172; XVIII, 377, XIX, 521, 522, 524, 526, 527; XX, 219, 1664; XXV, 198, 216, 228
 Corfitzen, W. E., RMS, 9
 Coring, adequate, value of, for use in making correlations, GC, 674; XVIII, 529
 Coring operations, time data in, XXIII, 1823
 Coring tube sampler, RMS, 646
 Corioli's force, RMS, 106, 107, 110, 119, 121
 Cornell, Lee H., review, XXVII, 555
 Cornet, F., XII, 799
 Cornet, J., V, 670
 Corniferous, XXV, 1147, XXIX, 683
 at Irvine, Estill County, Kentucky, XXVIII, 531
 bibliography on, XXVIII, 539
 Corniferous in Kentucky, GAS, 835, 929, 930, 941, 944
 in Lee-Estill-Powell oil field, Kentucky, XI, 482
 map showing areal distribution of shales overlying, XXII, 1453
 relationship of overlying shales to, XXII, 1454
 Corniferous and Ohio Big lime, XXV, 809
 Corniferous fields, STRAT, 167, 196, 197
 Corniferous lime, eastern coal field, Kentucky, STR I, 88
 eastern Kentucky, XI, 490
 (SI) (Silurian), SBP, 351, 355, 357-379, 415
 Corniferous limestone, PROB, 103, 490, 494; XXV, 686; XXVI, 1095; XVII, 852, XXIX, 681
 Campton field, Kentucky, STR I, 79
 Elliot County field, Kentucky, STR I, 85
 Lee-Estill-Powell field, Kentucky, STR I, 79, 81; XI, 482
 Owsley County gas field, Kentucky, STR I, 82, 84
 productive in Kentucky, XXVIII, 531
 productive in Martinsville pool, XXIII, 817
 Corniferous oil in eastern Kentucky, source of, XXII, 1452
 Corniferous pools of eastern Kentucky, XXII, 1449
 Corniferous sand, II, 42; III, 22; IV, 29; V, 95, 653; VI, 25
 Corning, California, outcrop section B, SBP, 167-194, 410

(Corning)

- (well 2) SBP, 130-153, 403
 Cornish, V., and Kendall, P. F., PROB, 395
 Cornucopia Mountains, XXI, 854
 Cornudas Mountains, Yesso sediments near, XXI, 854
 Cornwall, South, foraminifera of, MSC, 12
 Corona Company, GAS, 1002, 1010
 Corona Petroleum Company, GAS, 1000
 Coronado Corporation, XXV, 317
 Coronado Exploration Company, XXIII, 868
 Coronado submarine canyon, RMS, 259
 Corond salt dome, Transylvania, SD, 115
 Corpus Christi area, South Texas, rôle of diastrophism in topography of, GC, 205, XVII, 907, 1281
 Corpus Christi area, Texas, XXII, 755
 conditions in 1940, XXV, 1042
 disseminated oil in Pleistocene sands of, XVI, 385
 Pleistocene in, GC, 285
 regional isosalinity lines for Pleistocene water sands of, GC, 276; XIX, 325
 regional structure of, GC, 275, XIX, 322
 Corpus Christi district, post-Eocene production in, XXIV, 1077
 Corpus Christi pay sand, XXIV, 1815
 at Saxet field, XXIV, 1818
 Corpus Christi structural basin postulated from salinity data, GC, 270; XIX, 317; discussion, XX, 315
 Corral Hollow, MSC, 127, 133
 Corrections for dip, XXI, 341
 Correlation, Bendian and Mississippian, XVIII, 1020
 between Eocene beds of Chico Martinez Creek area and strata of nearby areas, XXVII, 1379
 between later Cenozoic deposits of California and of Europe, XV, 555
 between radioactivity and carbon content, XXIX, 11
 between Sarmatian-Pontian sequence of Europe and Delmontian-Lower Pliocene sequence of California, MSC, 174
 between three wells at Rodessa, Louisiana, using temperature curves, XXI, 805
 between Wandagee of North-West and Nooncanbah of Kimberly, XXV, 391
 between wells by means of temperature measurements, XXI, 800
 between western and eastern Wyoming sections, XXI, 754
 by age identity of fossils, XXIV, 1764
 by environment identity of fossils, XXIV, 1769
 by matching assemblages of fossils, XXIV, 1764
 by means of foraminifera, methods of, X, 562
 by means of organisms and minerals, XXVII, 943
 by use of fossils, methods of, XXIV, 1764
Cameras jacksonensis zone in Gulf Coast, especially useful for, XXII, 1002
 direct, MSC, 173
 Fort Scott-Wetumka, X, 810
 general, of late Paleozoic ammonoid-

(Correlation)

- bearing beds of U.S.S.R. with those of western Texas, XXII, 1016
 Gulf Coast stratigraphic, XXV, 744
 Correlation, heavy-mineral, of some Permian sedimentary rocks, New South Wales, possibilities of, XXIV, 636
 discussion, XXIV, 1682
 Correlation, in Oklahoma, use of insoluble residues for, XX, 1086
 in two cased wells at Tepetate, Louisiana, using temperature curves, XXI, 804
 lithologic subsurface, in the "Bend series" of North-Central Texas, abstract, V, 99
 long-distance, from field to field, use of electrical logging in, XXIII, 1304
 mechanical analyses of sand samples for, XXI, 1311
 near-surface, use of electrical logging in, XXIII, 1304
 north-south, of Pennsylvanian of Oklahoma, I, 134
 of Altuda, Capitan, and Gilliam formations, PTNM, 661; XXVI, 661
 of basal member of Sundance formation with Nugget sandstone, XXI, 747
 of Bend formation, III, 71
 of Bitter Creek with Santa Monica Mountains, XXV, 250
 of Bluejacket sandstone, Oklahoma, XX, 312
 of Callytharra and Fossil Cliff series, XXV, 389
 of Catahoula formation with Chattanooga formation, GC, 406; XVII, 636
 of Catahoula outcrop in Duval County with Catahoula sediments at Buckeye, GC, 750; XIX, 393
 of Cedar Hills sandstone of Kansas with Duncan and Piedmont sandstones of Oklahoma, XXIII, 1790
 of Chariton conglomerate of Appanoose County, Iowa, with a lower Pleasanton conglomerate of Putnam County, Missouri, XXV, 70
 of Chester of Indiana and Illinois, XXII, 268
 of Cimarron strata of Kansas with those of Oklahoma, XXIII, 1789
 of Claiborne of East Texas with Claiborne of Louisiana, XIII, 1335
 of coals, XXIII, 1376
 of Cook Mountain formation in Webb and Leon counties, Texas, and Winn Parish, Louisiana, XXIV, 1671
 of Cretaceous formations of Central America and Mexico, XXVIII, 1082-1088
 of Cross' La Plata sandstone, southwestern Colorado, XXV, 1745
 of crude oils with special reference to crude oil of Gulf Coast, XXV, 561
 of Del Valle and Newhall-Potrero oil fields, XXVI, 196
 of deviations of A.P.I. gravity and percentage content for light fractions and residuum, from values normal for depth and geologic age of crude oil, XXI, 932
 of Devonian in Brazil and other areas of South America, XX, 1234

(Correlation)

- of Devonian and subadjacent Silurian formations of western Kentucky, XXV, 709
- of different zones in Paleozoic limestone in Turner Valley, XXIV, 1624-1626
- of divisions of Upper Cretaceous of Great Valley, California, with Texas Cretaceous groups, XXIX, 960
- of downip Wilcox, XXIV, 1915
- of drill cores, Irvine pool, Estill and Powell counties, Kentucky, chart, XXII, 1450
- of Eocene strata, SC, 22; XX, 1568
- of European and American late Paleozoic crustal movements, XIX, 1296-1303
- of foraminiferal zones in fourteen key sections in California areas, XXIV, 1933
- of formations by means of electric log, XXIII, 1608
- of formations in Brazil and Peru, XXI, 1347
- of formations in Williston basin, eastern Wyoming, and western Iowa, XXVI, 1583
- of formations of Barbados with formations of Trinidad, Venezuela, Dutch Leeward Islands, and West Indies, XXIV, 1564
- of formations of Coastal Plain between New Jersey and Florida, XXIX, 929
- of formations of Guadalupe series in Glass Mountains, with Guadalupe Mountains section, PTNM, 658; XXVI, 658
- of Guadalupe series of Delaware basin, PTNM, 699; XXVI, 699
- of Gulf Coast formations with European standard section, difficulties, XXII, 988
- of Hamilton group of New York with Traverse beds in western Michigan, fauna of Four Mile Dam formation basis for, XXVII, 589
- of Helderbergian, XXV, 676
- of Hoffman with up-dip section, XXIV, 2140
- of Jurassic formations in part of Rocky Mountain region, chart showing, XXIII, 1176
- of Jurassic formations of Gulf region, XXVII, 1437, 1473
- of Jurassic formations of Utah, New Mexico, and Colorado, XXI, 723
- of Jurassic formations of Western Interior region, XXIX, 1020
- of Leonard series of Delaware basin, PTNM, XXVI, 685
- of logs across long distances, radioactivity logs of wells in Creek, Pottawatomie, Carter, and Marshall counties, Oklahoma, illustrating, XXV, 1787
- of Lonsdale, Plasa, Cutler, and Bankston Fork limestones in Illinois coal basin, XXIII, 1521
- of lower Chester in Kentucky, Indiana, and Illinois, XXII, 269
- of Lower Coal Measures of New South Wales with middle Ecca of South Africa, XXV, 406
- of Lower Cretaceous formations of Coastal Plain of Arkansas, Louisiana, and Texas, XXIX, 1418

(Correlation)

- of Lower Oligocene of South and Central America with that of Southern Mexico, MSC, 110, 177, 179
- of lower part of Word formation, problem of, PTNM, 659, XXVI, 659
- of marine Jurassic of Montana, XXI, 720
- of measured sections of Upper Cretaceous formations between Putah Creek, Yolo County, and Logan Creek, Glenn County, California, XXVII, 298
- of middle and upper parts of Word formation, PTNM, 660, XXVI, 660
- of Middle Devonian outcrops of Illinois Basin area, XXVIII, 1520
- of Midway faunas of Gulf province with those of Africa and Brazil, Trinidad, and Venezuela, XXV, 648
- of minable coals of Illinois, Indiana, and western Kentucky, XXIII, 1374
- of Mississippian and Pennsylvanian sections across Adair County, Oklahoma, XXIV, 414, 424, 433
- of New Zealand and Australian Tertiary stages, XXV, 1814
- of nitrogen-reduction ratios and oil content in sediments, XXI, 1398
- of Ochoa series in Delaware basin, PTNM, 710, XXVI, 710
- of Oligocene deposits of Mississippi, Alabama, and Florida, XXVIII, 1315
- of *Parafusulina rothi* beds, PTNM, 704; XXVI, 704
- of Pecan Gap, Wolfe City, and Annona formations in East Texas, XXVIII, 522
- of Pecan Gap chalk in Texas, XVIII, 1506
- of Pennsylvanian in Appalachian states, XV, 119
- of Pennsylvanian in Mid-Continent states, XV, 129
- of Pennsylvanian in Mississippi Valley states, XV, 124
- of Pennsylvanian in Oklahoma and Kansas, XXIV, 719
- of Pennsylvanian in Ouachita Mountains with Pennsylvanian in Ozark region, Ardmore basin, and Arbuckle Mountains, XVIII, 987
- of Pennsylvanian in western Illinois and southern Iowa, XXVI, 1586
- of Pennsylvanian in western states, XV, 134
- of Pennsylvanian and top of Mississippian in Oklahoma and north Texas, XI, 658
- of Pennsylvanian formations of Texas and Oklahoma, XIII, 883
- of Pennsylvanian-Permian of Glass Mountains and Delaware Mountains, XIII, 903
- of Pennsylvanian rocks of New Mexico, XXIV, 173
- of Pennsylvanian rocks of New Mexico, chart, XXIV, 174
- of Permian of Kansas, Oklahoma, and northern Texas, X, 144
- of Permian formations of Pecos Valley with those on eastern side of Permian basin in Texas and southwestern Oklahoma, XXI, 878

(Correlation)

- of Permian outcrops on eastern side of West Texas basin, XIII, 945
 - of Permian subdivisions, problems of, XXIV, 342
 - of Permian system of West Texas, methods of, PTNM, 668; XXVI, 668
 - of Permian system of western United States, XXV, 437
 - of Permo-Carboniferous of Irwin River and Northwest Basin, XX, 1052
 - of Pleistocene, CAL, 268
 - of pressure of wells with hydrostatic head, XII, 361
 - of producing sands in southeastern Kansas and northeastern Oklahoma, V, 293
 - of radioactivity logs in Cordes pool, Washington County, Illinois, XXV, 1788
 - of reflecting horizons with lithology, XXV, 1349
 - of reflection seismograph records in California, XVII, 257
 - of rock facies in Ouachita and Arbuckle mountains, Oklahoma, XXI, 15
- Correlation of samples, SBP, 82, 83
- Appalachian area, SBP, 351
 - Baker-Glendive anticline, XXIII, 464
 - basic data of, SBP, 412
 - by means of organic content, SBP, 360
 - California, SBP, 91, 92, 168
 - East Texas, SBP, 296
 - Gulf Coast, SBP, 338
 - Los Angeles Basin, SBP, 91, 92
 - Mid-Continent, SBP, 261
 - Rocky Mountains, SBP, 193-199
 - West Texas, SBP, 286
- Correlation of San Andres with formations south and west of Permian basin, XXV, 74
- of sands at Kettleman Hills, California, heavy-mineral studies on, XVIII, 1559
 - of sands by means of index charts, XXI, 1325
 - of sections from western Wyoming to north-central Colorado, XXI, 755
 - of sections of Osage subseries from Wyandotte southward to Marble City, Oklahoma, XXIII, 337
 - of sections, scheme of, of lower Permian of western Urals and Preduralie, XXII, 775
 - of sediments between northern end of Oscura Mountains and southern end of Franklin Mountains, XXIV, 163
 - of sediments between Silver City, New Mexico, and El Paso, Texas, XXI, 161
 - of sediments by petrographic methods, review, VIII, 97
 - of Shoal Creek limestone with La-Salle limestone, XXIII, 1520
 - of standard series of Permian, XXIII, 1677
 - of strata, by minerals, RMS, 609-612
 - of strata, use of clay minerals in, RMS, 488
 - of stratigraphic nomenclatures used in Honda district, XXVI, 800
 - of stratigraphic sections in Colorado Plateau, southern Nevada, and western Texas, XX, 1200

(Correlation)

- of stratigraphic units of Gulf Coast, bibliography on, XXV, 743
- of subdivisions of Mississippi lime in central Kansas with formations in Missouri, XXII, 1594-1596
- of subsurface Devonian of Sandoval pool, Marion County, Illinois, with Devonian outcrop of southwestern Illinois, XXVIII, 1528
- of subsurface mineral zones with formations exposed at surface and interpretation, XXIV, 2094
- of subsurface nomenclature of Chester in southwestern Illinois and in Indiana and Kentucky, XXV, 881
- of subsurface rocks of Florida and southern Georgia, XXVIII, 1678
- of subsurface subdivisions of Lower Cretaceous and Upper Cambrian limestones and dolomites in north-central Texas, sections XXIX, Plates 3-10, preceding 413
- of Sundance formation across Wyoming, XXI, 719
- of Sundance sand of Wyoming with Entrada sandstone of Utah, XXIII, 1155
- of surface and subsurface formations in two typical sections of Gulf Coast of Texas, XXIII, 1603
- of surface sections of Travis Peak, XXIII, 629
- of Tertiary formations, GC, 1043; XIII, 1351; XXIX, 1402
- of Texas and New Mexico Permian, XIII, 997
- of Texas coastal fields, GC, 670; XVIII, 525
- of top of San Andres formation from east to west side of Permian basin through Back Reef zone, XXIV, 37
- of Traverse beds, Thunder Bay region, with type Traverse and with Devonian of New York, XXVII, 574
- of Upper Cretaceous in Louisiana, STR II, 208
- of upper part of Wichita group and Clear Fork group, PTNM, 696; XXVI, 696
- of West Virginia Big lime with Greenbrier and Maxville formations, XXV, 800
- of Western Australian sequence with that of eastern Australian Kambilaroi system, XXV, 397
- of Whitehorse group, PTNM, 705; XXVI, 705
- of "Wilcox" sand in Okmulgee district with Osage, Oklahoma, V, 399
- of Wolfcamp series, PTNM, 673; XXVI, 673
- paleontological methods of, PTNM, 670; XXVI, 670
- paleontological zones of, in Gulf Coast, XXII, 989
- Pennsylvanian, in Illinois coal basin, significant uncertainties in, XXIII, 1507
- physical, PTNM, 668; XXVI, 668
- preliminary, of Texas and New Mexico Permian, XIII, 997
- short-distance, of oil fields, use of electrical logging in, XXIII, 1303
- standards in, XV, 367
- stratigraphic, in east-central United States, XXII, 1520
- subsurface, by means of heavy minerals, XI, 359

(Correlation)

- subsurface, in Los Angeles Basin, MSC, 79
- subsurface Tertiary zones of, through Mississippi, Alabama, and Florida, XXII, 984
- tentative foraminiferal of Eocene formations in California, XXIV, 1929
- transcendent value of graptolites for, demonstrated, XXII, 221
- use of convergence in, XI, 665
- use of gamma ray logs for, XXV, 1787
- use of microfossils in, GC, 425; XIX, 689
- utilization of drilling time in, XXIII, 1830
- Correlation and age of Monterey shale of Reliz Canyon, MSC, 20
- Correlation and age assignments of late Paleozoic rocks of western Texas, XXIV, 307
- Correlation and classification of the type Permian, XXIV, 237
- Correlation and distribution of Mississippian of Oklahoma, XI, 1307
- Correlation and identification of some McLeansboro limestones and interpretation of the sedimentary history of Illinois coal basin, uncertainties in, XXIII, 1524
- Correlation and nomenclature of Permian rocks in United States, diversity of opinion and usage in, XXIV, 337
- Correlation and paleogeography of upper Paleozoic of Western Australia, XXV, 371, 1809
- Correlation and stratigraphy of beds in Chinati Mountains, XXIV, 184
- Correlation and time classification of rocks, XXIII, 1086
- Correlation chart, Bendian, XXII, 854
- Eocene, Sparta-Wilcox trend, XXIV, 702
- for lower Claiborne, Wilcox, and Midway groups of Texas, Louisiana, Mississippi, and Alabama, XXIX, 47
- for southern Mid-Continent, XXVI, 220
- for West Texas and New Mexico, XXIV, 4
- geologic, of Oligocene strata of East White Point field, XXV, 2004
- of Cretaceous-Jurassic beds in Colombia and Venezuela, XXIV, 1613
- of geologic formations and formation members in Rocky Mountain region, XXV, 1840
- of Gulf Coast, tentative, XXV, 742
- of logs in Navarro and Limestone counties, Texas, STR I, 334
- of members of Mannville formation, XXIX, 1610
- of Middle and Upper Carboniferous formations in U.S.S.R., United States, and South China, based chiefly on fusuline zones, XXIV, 266
- of Miocene foraminiferal assemblages from the California Province, MSC Fig. 14 (in pocket)
- of Mississippian formations exposed on borders of Eastern Interior basin, XXIV, 766
- of Permian in West Texas region, insert, PTNM, Prec. 535; XXVI, prec. 535

(Correlation)

- of Reef Ridge-Kreyenhagen Hills area, XXIII, 28
- of Sacramento Mountains area, XXV, 2154
- of Upper Cretaceous formations in Rocky Mountain area, XXI, 904
- of West Texas formations, XXIV, 1041; XXV, 1060
- Permian and post-Permian rocks, West Texas and southeastern New Mexico, XXVI, 1013
- regional, of Permian from Texas to Nebraska, XXIII, 1708
- stratigraphical, of Tertiary and Cretaceous in Antillean-Caribbean region, XXIV, 1578-1582
- surface to top of Ste. Genevieve in Illinois, XXII, 77
- Correlation charts of Upper Cretaceous of Great Valley, California, XXIX, 974, 978
- Correlation diagram, composite, showing relation of Devonian and subjacent Silurian formations in western Kentucky, XXV, 695
- composite, showing relation of Permian deposits in parts of Rocky Mountains and Colorado Plateau region, XXIV, 633
- Correlation index numbers for crude oil, XXVII, 1306
- for oils based on average boiling-point and specific-gravity characteristics of distilled fractions, XXVII, 1306
- Correlation indices for Hempel fractions, XXVII, 1323
- Correlation line, base of Ste. Genevieve limestone across Illinois and at top of basal Paint Creek limestone across Indiana and Kentucky, XXV, 879
- Correlation meeting, Permian, Centennial, Wyoming, September, 1940, XXV, 429
- Correlation problems at Buckeye field, GC, 749; XIX, 393
- Correlation table for Atlantic Coastal Plain formations, XXIX, 888
- for Mid-Continent region, GAS, 391, 538
- for Texas Gulf Coast, XXIII, 1631
- post-Cook Mountain formations of Texas Gulf Coast between Colorado and Nueces rivers, XXIII, 1633
- time-stratigraphic, between England and Texas, on basis of ammonites, XXVII, 1070
- Correlations, alternative, of surface Catiboula and subsurface section, XXIII, 175
- Australasian upper Paleozoic, XXV, 399
- between Laramie Basin and western Wyoming, XX, 1195
- between Laramie Basin, Great Plains, and Black Hills, XX, 1194
- between northern Moore County, Texas, and southern Grant County, Kansas, columnar section, XXIII, 1064
- Black Hills-Mid-Continent, XXV, 435
- Black Hills-Wyoming, XXV, 431
- Chocoy to Tamisimolon, MEX, Fig. 9 (in pocket)
- electrical well-log, of Edna producing sands, XXV, 114

(Correlations)

- foraminiferal, echinoid, and molluscan, MSC, 166
- foraminiferal, in Eocene of San Joaquin valley, California, XXIV, 1923, 2049
- foreign, of Paleozoic of Western Australia, XXV, 401
- formational, within California Province, MSC, 159
- geological, in East White Point field, XXV, 2002
- in drill holes and cementation control, use of temperature measurements for, XXI, 789
- in Eocene north of Coalinga, Fresno County, California, XXIV, 1724
- interregional, MSC, 181
- middle Devonian, XXV, 692
- not empirical, XXIV, 1770
- of Alberta shale, XVIII, 1408
- of Antrim, Ellsworth, and Coldwater shales in Michigan, XXV, 732
- of Bainbridge formation of Missouri, XXIII, 600
- of California Middle Tertiary formations, MSC, Fig. 6 (in pocket)
- of Canadian series, XXIV, 1652
- of Cretaceous beds, MEX, 20, 21
- of formations of southern Alberta and northern Montana, ALTA, 3
- of Fredericksburg group, XIX, 1529
- of Hugoton gas field, Kansas, with Texas Panhandle gas fields, XXIII, 1065
- of Knox dolomite group, XXIV, 1656, 1657, 1659
- of Middle Jurassic beds in Oaxaca and Guerrero, XXVII, 1502
- of Missouri-Tennessee Niagaran sections, XXVI, 4
- of Pennsylvanian strata in Arkansas and Oklahoma coal fields, XVIII, 1050
- of Permian from subsurface to surface, XXIII, 1707
- of Permian from Texas to Nebraska, XXIII, 1697
- of Permian, regional, PTNM, 664; XXVI, 664
- of pre-Stones River rocks and graph of samples and insoluble residues, XXIV, 1646
- of pre-Tertiary section between oil fields of northern Mendoza, XXVIII, 1464
- of sand and shale intervals in East White Point field, electrical well logs used for, XXV, 1979
- of sections in New Mexico, trans-Pecos Texas, and central Texas, PTNM, 672; XXVI, 672
- of shallow Pennsylvanian formations in vicinity of Olympic pool, cross section showing, XXII, 1582
- of Stones River group, XXIV, 1649
- of subsurface rocks by use of insoluble residues, XXIX, 424
- of Tumey formation, XIX, 1203
- of zones of Mississippi lime of Kansas with Boone limestone of Missouri, XXII, 1591
- pre-Barnett, based on character and percentages of insoluble residues, XXIV, 72
- some Silurian, in lower Mississippi drainage basin, XXVI, 1
- some tentative, on the basis of graptolites of Oklahoma and Arkansas, XX, 301

(Correlations)

- tentative Lower Paleozoic, on basis of graptolites, table of, XX, 1252
- up to 1934, of beds above St. Peter sandstone in Upper Mississippi Valley, XIX, 1113
- up to 1934, Ontario, New York, Kentucky, Tennessee, Minnesota, XIX, 1116
- Velasco to Cahuayotes, MEX, Fig. 10 (in pocket)
- Western Australian, XXV, 388
- Correlative criteria of Word formation, XXIX, 1771
- Correlative value of heavy minerals, VIII, 158
- Correns, Carl W., RMS, 1, 3, 375, 383, 397, 403, 469, 483, 484, 486, 488, 496, 500, 551, 564, 579, 625, 627, 628, 649, 660
- pelagic sediments of North Atlantic Ocean, RMS, 373
- Correspondence, III, 433
- Corrigan formation in Texas, XVII, 531
- Corrigan sandstone, IV, 130; V, 102, 223
- Corrin, J. B., Jr., Finn, F. H., and Schmidt, J. J., problems of underground gas storage in Ohio, West Virginia, and Pennsylvania, XXVIII, 1561
- Corrosion surfaces, XXVI, 47
- Corsicana Deep Well Development Company (well 386), SBP, 292-335, 410
- Corsicana district, Texas, PROB, 60; GAS, 651, 667, 677
- Corsicana field, III, 96; IV, 8
- Texas (well 383), SBP, 292-335, 409
- Corsicana formation, PROB, 421
- Corsicana marl, XXV, 637
- Corsicana-Powell district, Texas, shallow pools in, STR I, 360
- Corsicana sand, PROB, 422, 423
- in Mexia fault zone, Texas, STR I, 330
- Cortes, Henry C., XVI, 255
- memorial of Russell Fossler Ryan, XX, 240
- Cortes Bank, California, RMS, 257, 259
- Corthel, E. L., XIV, 912
- Cortright, W. D., XXIII, 38
- Corundum, RMS, 593, 602
- Coryell, H. N., XVIII, 1659; XXII, 1053; XXV, 1219, 1234, 1250
- Coryell, Lewis Samuel, memorial of, XXVII, 105
- Cosden, J. S., XXVIII, 1674
- Cosden field, XV, 784
- Cosden Petroleum Corporation refinery, XXVI, 216
- Cosmogony, XVIII, 13
- Cosmopolitan floras and faunas, lack of, an argument against Wegener's Pangaea, CD, 139
- Cosmos sand, GAS, 257; PROB, 711
- Border-Red Coulee field, STRAT, 292
- Cosmos sandstone, XXIX, 1269
- Coso Mountains horizon, CAL, 303
- Cossmann, M., CAL, 157; VII, 519
- Cost of a completed well in Edna gas field, XXV, 119
- Cost of drilling, Amarillo district, XVII, 906
- Big Sinking field, STRAT, 204
- Bryson field, STRAT, 547
- Bush City field, STRAT, 56
- Cut Bank field, STRAT, 372
- Davenport field, STRAT, 399

(Cost)

- Dora pool, STRAT, 433
- East Texas, STRAT, 629
- Edison field, STRAT, 5
- Greasewood field, STRAT, 41
- Hitchcock field, STRAT, 642, 643
- Hull-Silk field, STRAT, 678-679
- Lopez field, STRAT, 694
- Red Fork shoestring sand pool, STRAT, 490
- South Cotton Lake field, XXV, 1913
- Cost of drilling and completing, California, during 1949, XXV, 1162
- Cost of drilling gas wells, GAS, 53, 290, 411, 415, 563, 566, 810, 840, 1105
- Cost of finding and development, relation to well spacing, XXVIII, 252
- Cost per barrel of oil discovered, XXVI, 1154
- Cost and nature of pipe-line transmission system, GAS, 1109
- Cost accounting in prospecting, importance, XXI, 713
- Cost factors, GAS, 1014
- Cost study, Tariff Commission, deficiencies in, XXVII, 988
- Costa Rica, Amoura shale, XXVI, 1647
- geology, IV, 263
- map, XXVI, 1648
- microfauna from Nicoya Peninsula, XVI, 1653
- Miocene on Pacific coast of, XXVI, 1653
- Miocene fossils from, XXVI, 1650
- Oligocene fossils from, XXVI, 1650
- petroleum possibilities of, review, VII, 455
- references on Amoura shale, XXVI, 1655
- stratigraphy, III, 363
- Costa Rica and Panama, notes on stratigraphy of, III, 363
- Coste, Eugene, GAS, 2, 35, 60, 75; SD, 14, 18, 19; VII, 605; IX, 844, 858, 849, 852
- theory of origin of salt domes, IX, 844, 850
- Cotangent method of solution of problem of secondary tilt, XXII, 1259
- Côte Blanche salt dome, St. Mary Parish, Louisiana, SD, 380-382; IX, 780
- late Recent history of, GC, 1026; XX, 179
- sections, GC, 1028, 1029
- Cotner, Victor, and Crum, H. E., GAS, 1094; STRAT, 101; XXIV, 1798
- geology and occurrence of natural gas in Amarillo district, Texas, GAS, 385; XVII, 877
- Cottage Grove sandstone, XXIV, 726
- Cotter, CD, 46; XXII, 67
- Cotter and Powell, XX, 1092
- Cotter, G. de P., XI, 557, 561; XXIII, 106; XXV, 406
- Indian Peninsula and Ceylon, review, XXIII, 105
- Cotter dolomite, XXVII, 1628
- Cottingham, Kenneth, SBP, 356; STRAT, 385
- structural conditions in portions of eastern Ohio, STR I, 124; XI, 945
- Cottingham, V. E., XXVII, 523
- Cottle County, Texas, Custer formation in, XXI, 457, 458
- Cotton, C. A., geomorphology: an introduction to study of landforms, review, XXVII, 551
- landscape and climatic accidents, review, XXVII, 1013

- (Cotton)
volcanoes as landscape forms, review, XXIX, 1046
- Cotton Lake field, South, Chambers County, Texas, XXV, 1898
- Cotton Valley, Louisiana, XXII, 722
lower Trinity marine production at, XXI, 1069
- Cotton Valley beds of northern Gulf Coastal plain, stratigraphy of, XXVIII, 577
- Cotton Valley field, Webster Parish, Louisiana, XXIII, 896, XXIV, 1093, 1099, XXV, 1036; XXVIII, 579; XXIX, 808
discovery of oil in Bodcaw sand in, XXII, 1603
production from, XXIV, 1099
- Cotton Valley formation, XXII, 723, 1488, 1502, 1503; XXIII, 896, 902; XXVI, 1256, 1275, 1473, 1494; XXVII, 1230, 1414, 1458; XXVIII, 34, 268, 276; XXIX, 806
boundaries of, due to truncation, XXII, 982
comparison of fossils from, XXVII, 1471
correlated with Kimmeridgian stage, XXVII, 1471
correlated with Morrison formation of Western Interior and Eagle Mills-Smackover-Buckner sequence of southern United States, XXVII, 1474
equivalent to La Casta formation, XXVII, 1472
in Alabama, section, XXVII, 1463
in Bellevue field, XXII, 1665
in Louisiana, section, XXVII, 1462
in Louisiana and Texas, distribution of Jurassic fossils of, XXVII, 1470
in north Louisiana, XXII, 724
in south Arkansas, XXII, 966
in Texas, section, XXVII, 1461
origin of, XXVII, 1475
productive in Arkansas and Louisiana, XXIV, 1093
productive of gas and distillate at Shongaloo and Carterville-Sarepta fields, XXII, 1484
- Cotton Valley gas-distillate and oil production, Macedonia field, XXVIII, 263
- Cotton Valley gas-distillate production, XXVIII, 261
- Cotton Valley group, XXVIII, 579, 591
distribution of producing sands of, XXVIII, 613
electrical log cross section, XXVIII, 593
regional structure of, XXVIII, 580
stratigraphic sections, XXVIII, 586-590
- Cotton Valley oil field, Webster Parish, Louisiana, PROB, 417; VIII, 244; IX, 875
deep sand development in, XIV, 983
Cotton Valley time, early, major faulting in, XXVII, 1469
- Cottonwood Creek, CAL, 111, 288, 309; MSC, 67
- Cottonwood limestone, II, 74
- Cottonwood pool, V, 82
- Couch et al., SD, 620
- Coulee du Portage, point stream near Bayou Teche, XXIII, 1225
- Council Grove group (Ccg) (Permian), SBP, 194, 258, 261, 263-280, 413; V, 508; XXI, 505; XXIV, 271
Hugoton field, STRAT, 84
- Counter currents, RMS, 290
- Counties, completions in Ohio in 1941 by, XXVI, 1125
containing oil and gas fields in East Texas, XXV, 1082
important oil-producing, in south Texas, XXIII, 860
in Arkansas in which development was active in 1938, XXIII, 898
in Illinois basin, XXVII, 816
in Texas including western Edwards Plateau, XXVI, 380
in Texas showing Mississippian limestone, XXV, 1656
included in Basin fields in Illinois, XXIII, 1493
included in Hugoton field, XXIII, 1056
productive, in Illinois, XXIV, 853; XXIX, 688
productive in Kansas, XXII, 667; XXV, 1108; XXVIII, 768, 771; XXIX, 704-706
productive, in Michigan, XXII, 659, XXV, 1128, 1133; XXVI, 1102, 1103, 1106-1108; XXVII, 829-832; XXIX, 696
productive, in Mississippi, XXIX, 831
productive, in New Mexico, XXIV, 1034
productive, in New York, XXV, 1137
productive, in north and west-central Texas, XXIII, 844-859, XXIV, 1056-1059
productive, in Ohio, XXVII, 847-850
productive in Oklahoma, XXV, 1091; XXVI, 1059, 1060; XXVII, 796
productive, in Pennsylvania, XXV, 1137, 1140
productive, in South Arkansas, XXVI, 1251
productive, in south Texas, XXIV, 1071
productive, in West Texas, XXIV, 1034
- Country Club pool, Oklahoma, PROB, 763, STR I, 211
- Coup geologique le long du chemin de Mucuchachi a Santa Barbara dans les Andes venezueliennes*, abstract, XII, 1123
- Courtier, W. H., and Pierce, W. G., STRAT, 64
Englevalle channel sandstone of Pennsylvanian age, southeastern Kansas, XIX, 1061
- Covert-Sellers field, STR I, 60; STR II, 677; V, 118, 144, 507, VI, 429
- Covert-Sellers pool, PROB, 317, 410, 770
- Covington County, Mississippi, subsurface data on, GC, 369; XIX, 1148
- Covington oil sand in Garber field, Oklahoma, STR I, 178
- Cow Bayou bed, XXIX, 57
- Cow Creek beds of Travis Peak formation, XXIII, 627, 632
- Cow Creek limestone, XXIX, 1419
- Cow Run sands, PROB, 501; III, 21
- Cowaneseque syncline, XXII, 253
- Cowden and Fletcher members of Salado, thickness of, XXVI, 70
- Cowden anhydrite member of Salado formation, XXIII, 1689; XXIV, 27; XXV, 603; XXVI, 69, 253
- Coweta pool, PROB, 763
- Cowles, A. H., SD, 19; IX, 849
theory of origin of salt domes, IX, 849
- Cowley County, Kansas (well 262), SBP, 255-285, STRAT, 95
- Cowlitz-Arago Gulf, XXIX, 1407
- Cox, Dake, and Mullenburg, field methods in petroleum geology, review, V, 425
- Cox, Ben B., SBP, 7, 8; XXIV, 769, 1448, XXVII, 1175
- Cox, E. T., XXIII, 1375; XXV, 684
- Cox, F. C., XXI, 1072
- Cox, Guy Henry, memorial of, VI, 566
- Cox, H. M., XXVIII, 579
- Cox, L. R., XV, 152, 157
- Cox pool, PROB, 776
- Coxe, Daniel, SD, 6; IX, 836
- Coy, Burgis G., XVIII, 16
- Covote field, VI, 303
- Coyote Gulch, MSC, 36, 127, 235, 294
- Coyote Hills, CAL, 46
- Coyote Hills field, PROB, 229, IV, 21
- Coyote Hills uplift, GAS, 172, 203
- Coyote Mountain, CAL, 20, 203, 237, 288, 309
- Cozy Dell foraminifera, check list of, XXVII, 11
- Cozy Dell shale, CAL, 141, XXVII, 10 (Eocene) (Tcz), SBP, 95, 97, 168-194, 415
- Crab, MEX, 113, 114
- Crab Orchard-Ohio shale interval, XXVIII, 535
- Cracking, PROB, 79, 80, 154, 236, 239, 242, 244, 245, 261; XXI, 178
- Cracks produced by Long Beach, California, earthquake, XVII, 739
- Craddock, W. N., Talaferro, N. L., and Hudson, F. S., oil fields of Ventura County, California, VIII, 789
- Cragin, F. W., I, 31; II, 71, 76, 77, 79, VIII, 319, 322, 328, 330, 334, X, 623, 797, 799; XIV, 166, 171, XV, 410; XX, 1474; XXI, 423, 424, 425, 426, 427, 428, 430, 433, 1528, 1558; XXIII, 626, 1751, 1752, 1754, 1755, 1757, 1758, 1766, 1773, 1775, 1785, 1787, 1789, 1792, 1793, 1794, 1802, 1811, 1815, 1817
classification of Cimarron series, XXI, 423
- Cragoe, E. J., XIII, 156
- Craig, E. H., Cunningham, SD, 113, 114; XVI, 792, XXI, 293, 1110; XXIV, 1874
geophysical surveys as aids to the geologist, IX, 165
kerogen, IX, 180
oil finding, review, VI, 485
- Craig, E. K., XIII, 509; XVIII, 1348
- Craig, E. K., and Hudson, F. S., geologic age of Modelo formation, California, XIII, 509
- Craig, Homer, GAS, 1002
- Craig, W. F., Jr., XV, 927
- Craig gas field, PROB, 171
- Craig section of Ellis group, XXIX, 1296
- Cram, Ira H., PROB, 764; STRAT, 436, 446; III, 355; XIV, 1511, 1537; XVII, 241; XVIII, 568, 1136, 1138, 1148, 1156, XX, 1113, 1114; XXI, 474, 1517; XXII, 602; XXIII, 738; XXV, 1638, 1646, 1652, 1657; XXVII, 922; XXVIII, 196
announcement and rules of president's award, XXIX, 118
definitions of geology, XXIX, 470
discussion of Custer formation, XXI, 474

(Cram)

- early Paleozoic stratigraphy of Wichita Mountain uplift, Oklahoma, XIV, 623
- Fernvale limestone, STRAT, 448
- Fite limestone, STRAT, 449
- geology of Sec. 14, T. 8 N., R. 6 E., Bowlegs field, Oklahoma, STR II, 351
- memorial of Arthur Albert Wedel, XXV, 2230
- memorial of William Armstrong Patterson Graham, XIX, 1082
- minutes, thirtieth annual business meeting, XXIX, 573
- report of committee on geologic names and correlations for 1934, XIX, 743, XX, 115, for 1935, XX, 654, for 1936, XXI, 663
- report of president for 1944, XXIX, 581
- report of secretary-treasurer for 1937, XXII, 593, for 1938, XXIII, 728
- resources and resourcefulness, XXIX, 857
- review, XIV, 640
- Talihna chert section at Atoka, Oklahoma, XIX, 1231
- Cramer, A., XXIV, 1890
- Cramer, E., PROB, 41
- Cramer, Rudolph, *Internationaler Geologen und Mineralogen Kalender*, review, XVII, 198
- Cramm north pool, Kansas, XXIII, 804
- Cranberry Lake gas field, Michigan, XXVIII, 765; XXIX, 699
- Crandall, K. H., XIII, 999, 1018, 1021, 1023, 1024; XIV, 975, 979; XIX, 233, 1131; XXI, 859, 866, 882, XXVI, 84
- Permian stratigraphy of southeastern New Mexico and adjacent parts of western Texas, XIII, 927
- Crane, Ector, and Winkler counties, Texas, Concho Bluffs of, XIII, 1069
- Crane County, Texas, Ordovician development, Sand Hills structure, XXI, 1575
- Sand Hills area, XXIV, 119
- Silurian graptolite zone in, XXVI, 857
- two more Ordovician well-core graptolites, XXVI, 1771
- Cranfield field, Mississippi, XXVIII, 804; XXIX, 827
- Cranfill-Reynolds Company, GC, 861; XVIII, 1637
- Crania limestone, XXVII, 270
- Craniocephalus* zone, XXIX, 1026
- in Montana, XXIX, 1023
- Crary, A. B., XXIX, 79
- Crary, A. P., XXIX, 950
- Crassatella texalta* Harris—*Turritella cortezi* Bowles zone, new zone in Cook Mountain formation, XXIV, 1663
- Craters formed by air blowers, XVIII, 813
- Craver, M. P., VII, 608
- Crawford, F. M., and Gabriel, C. L., PROB, 925
- Crawford, James G., GAS, 275; STRAT, 315, 855; XXVI, 865
- oil-field waters of Montana Plains, XXVI, 1317
- oil-field waters of Wyoming and their relation to geological formations, XXIV, 1214
- Crawford, James G., and Larsen, R. M.,

(Crawford)

- occurrence and types of crude oils in Rocky Mountain region, XXVII, 1305
- Crawford, R. D., XVII, 366
- Crawford County, Missouri, diamond-drill core from Bourbon High, XXVIII, 1386
- Pennsylvania (well 415), SBP, 349-379, 410
- Crawford County sands, Illinois, amount of oil calculated in, PROB, 566
- Crawford, Sir John, XIX, 475
- Crazy Mountain syncline, PROB, 680, 702; XXVII, 429
- Creasey, S. C., SBP, 6
- Crebbs, C. M., MEX, ix
- Creek, C. W., MEX, ix
- Creek, Pawnee, and Tulsa counties, northeastern Oklahoma, Red Fork shoestring sand pool, STRAT, 473
- Creek, Pottawatomie, Carter, and Marshall counties, Oklahoma, radioactivity logs of wells in, illustrating correlation of logs across long distances, XXV, 1787
- Creek and Osage counties, Oklahoma, discussion of origin of faults in, X, 727
- Creek County, Oklahoma, PROB, 438, 764; STRAT, 451
- East Tuskegee pool, STRAT, 436
- structure in, STRAT, 451
- Creep down an inclined surface, XXVII, 1258
- of alabaster in different chemical environments, Griggs' curves for, XXVII, 56
- of Chicotepec beds on shelving shore line, MEX, 103
- Cremer, Leo, XXIV, 1757
- Crenshaw, J. L., and Allen, E. T., XV, 268
- Crenshaw, J. L., Allen, E. T., and Johnson, John, X, 1282
- Crenshaw, S. H., Allen, E. T., Johnson, John, and Larson, Esper S., PROB, 909
- Creole field, XXIII, 883
- Crescent field, XXI, 1013
- Crescent pool, Oklahoma, production in, XXVII, 798
- section showing limited extent of Big Pay zone in Second Wilcox sand, XXVIII, 250
- Crescent-Salt Valley area, XXVII, 858
- Crespin, Irene, XX, 1054, 1058; XXV, 375
- note on present knowledge of Tertiary sequence in Papua and the Mandated Territory of New Guinea, review, XXVII, 1266
- stratigraphy of Tertiary marine rocks in Gippsland, Victoria, review, XXVIII, 278
- Crespin, Irene, and Raggatt, H. G., possibilities of heavy-mineral correlation of some Permian sedimentary rocks, New South Wales, discussion, XXIV, 1682
- Cress pool, Kansas, XXII, 674
- Cretaceo de Sergipe*, review, XXI, 1211
- Cretaceous, CAL, 1 7, 8, 10, 12, 13, 15 17-25, 31, 36, 45-47, 52, 54-56, 74, 78, 80, 83, 86, 87, 89-96, 98-121, 123, 125-127, 130, 133, 134, 139, 142, 144-146, 152, 166, 177, 184, 202, 227, 235, 241, 243, 244, 262, 274, 276, 278, 281, 283, 286, 292-

(Cretaceous)

- 300, 302; GAS, 25, 26, 222, 238, 279, 299, 324, 325, 330, 754; MEX, 7, 17, 20, 21, 83, 84, 143, 159, Fig. 12 (in pocket); MSC, 101, 109, 114, 119, 123, 127, PROB, 57, 60, 110, 302, 382, 390, 391, 931; RMS, 244, 269, 272; SC, 12, 79; STRAT, 85, 275, 618; XX, 1558, 1625; XXV, 2035
- a period of strong folding and block faulting in North Andes, XXIX, 1082
- Alaska, FOP, 12, 23; GAS, 10, 22, 1060, XI, 240; XXII, 1135; XXV, 1444, 1455. (See Alberta)
- Alberta, XXVIII, 871
- Anacapan district, SC, 107; XX, 1653
- Antillean-Caribbean region, XXIV, 1578
- Argentina, X, 857
- Argentina and Chili, paleogeography of, XXIX, 504
- Arizona, VI, 47
- Arkansas, V, 8; VI, 54, 194, 196, 352, 363, 556
- Arkansas and Louisiana, XXII, 723
- Bahrein Island, XXIII, 964
- Balcones fault zone, X, 1261; XIV, 1177, XXI, 1042
- Baluchistan, XVIII, 389
- Baster Basin, GAS, 329
- Belgian Congo, V, 663
- Big Lake field, Texas, STR II, 516, 517
- Big Sand Draw field, Wyoming, XII, 1140
- Border-Red Coulee field, STRAT, 274, 283, 285
- boundaries of, XXVII, 269
- Bowers field, Texas, XXVII, 29
- British Columbia, VI, 112
- Caliente Range, XXV, 213
- California, VI, 305, 482; XXIII, 943; XXIV, 1732, 1941, XXVI, 1141, 1816
- California, bibliographic history of, XXVII, 252
- California, earliest paleontologic work on, XXVII, 254
- California, geologic units of; XXVII, 251
- California, introduction to, XXVII, 249
- California, isopach map, XXVII, 259
- California, paleontologic map, XXVII, 258
- California, scientific significance of, XXVII, 256
- Canada, FOP, 18, 19; IV, 250; XV, 1450, 1451
- Carpathian Mountains, XV, 4
- Cartersville-Sarepta and Shongaloo fields, XXII, 1478
- Central America and Mexico, references on, XXVIII, 1190
- central Texas, section of, XXIII, 626
- China, XXVIII, 1424
- coal measures and arid regions, CD, 31
- Colombia, X, 383, 384; XXV, 1789; XXIX, 1075, 1084
- Colorado, XXI, 989, 1246; XXII, 1025
- Como Bluff anticline, Wyoming, XXVIII, 1204
- cores from, XXV, 1851

(Cretaceous)

- Covington County, Mississippi, GC, 379, XIX, 1158
 Cuba, II, 140
 Darst Creek field, XVII, 23
 Delaware, XXII, 804
 distribution of Rudistae, CD, 33
 d'Orbigny's stages of, XXVII, 263
 East Indies, XXII, 19
 east side Sacramento Valley, Shasta and Butte counties, California, XXVII, 306
 East Texas, STRAT, 605
 East Texas, Louisiana, and Arkansas, XXVII, 1231
 Europe, VI, 526
 Fairport field, Kansas, STR I, 38
 Florence field, Colorado, STR II, 78
 Florida, III, 359
 fossils extinct at end of, XXV, 640
 Franciscan debris in, XXVII, 126
 Georgia, XXII, 809
 German salt anticlines, SD, 155; IX, 430
 Grass Creek field, Wyoming, STR II, 626
 Greasewood field, STRAT, 23
 Great Basin district, XVI, 10
 Guatemala and British Honduras, XXVIII, 1117
 Gulf, Lisbon field, stratigraphic sequence of, XXIII, 293
 Gulf Coast salt domes of Texas, XIII, 1065
 Gulf embayment province, XIII, 429
 Hugoton field, STRAT, 83-85; XXIII, 1058
 Idaho, VI, 472
 in Morelos, Puebla, Guerrero, and Mexico, XXVIII, 1124
 in Tyler basin, northeast Texas, revision of stratigraphy of part of, XXIX, 170
 Jackson field, GAS, 883, 891
 Kansas, STRAT, 85, 141; V, 508; VI, 69, 90; XXIII, 1054;
 Kansas, XXIV, 1797
 Kentucky, IV, 304
 Kevin-Sunburst field, Montana, STR II, 257
 late Upper, Mexico, map, XXVIII, 314
 Los Angeles Basin, California, X, 755
 Lost Soldier district, Wyoming, STR II, 643
 Louisiana, IV, 124; V, 8, 298, 305, 343, 631; VI, 156, 181, 250, 259; X, 7, 225, 227, 262; XXII, 1478, 1507, 1660
 Louisiana, volcanic rocks in, VIII, 344
 Lower, MEX, 11, 19, 31, 94; PROB, 61, 183, 354, 418, 419; SC, 88; XX, 1634; XXII, 799, 928
 Lower, Alberta, STRAT, 285; VII, 148
 Lower, Anzoategui, XXI, 235
 Lower, Bellevue field, Louisiana, STR II, 233, 237, 238
 Lower, Brazil and Peru, XXI, 1347
 Lower, in Caddo field, Louisiana, STR II, 186
 Lower, Canada, XXIX, 659
 Lower, clastic beds in Florida, XXVIII, 1722
 Lower, Colombia, XXIX, 1084
 Lower, Colorado, STRAT, 23
 Lower (Comanche), rocks of southeastern Oklahoma and southwest-

(Cretaceous)

- ern Arkansas, XI, 443
 Lower, comparison of waters in Mexia fault zone, Texas, STR I, 379
 Lower, East Texas, XXII, 728, XXIX, 774
 Lower, exploration in Sugar Creek area, XXII, 1505
 Lower, Florida, XXVIII, 804, 1721
 Lower, fossils in Northern Mexico, XXVIII, 1144
 Lower, Fredericksburg group of, with special reference to North-Central Texas, XIX, 1508
 Lower, Fredericksburg-Washita boundary of north Texas, bearing of foraminifera and ostracoda on, XXVII, 1060
 Lower, Freezeout Mountain-Bald Mountain area, XXV, 886
 Lower, Gulf Coastal Plain, X, 10
 Lower, Hanjens-Obershagen-Nienhagen field, XVI, 1146
 Lower, Homer field, Louisiana, STR II, 201
 Lower, Irma field, Arkansas, STR I, 6
 Lower, limestone in Little Hatchet Mountains, XXII, 536
 Lower, limestones in Mexican fields, production from, XXVIII, 315
 Lower, Lost Soldier district, Wyoming, STR II, 640
 Lower, Louisiana and Arkansas, XXVII, 911
 Lower, Magdalena valley, XXV, 1794
 Lower, Maryland, XXII, 805, XXIX, 903
 Lower, Mexia fault zone, Texas, STR I, 332
 Lower, Mississippi, XXII, 928
 Lower, Montana, STRAT, 285, 335; VII, 171; XXVII, 855
 Lower, Monterrey-Cienega El Toro-Saltito area, section, XXVIII, 1150
 Lower, northeast Texas, XXI, 1066
 Lower, northwestern Colorado, STR II, 96, 107
 Lower, Oklahoma, XXI, 12
 Lower, Peru, XXIII, 689
 Lower, possible source of salt, IX, 867
 Lower, rocks near Miquihuana, Tamaulipas, section, XXVIII, 1142
 Lower, Rocky Mountain fields, VII, 405
 Lower, Roumania, IX, 7111
 Lower, Russia, XXIII, 496
 Lower, Salt Flat field, Texas, XIV, 1407
 Lower, sediments, XXIX, 73
 Lower, sequence, Galeana-Montemorelos-Linares area of Nuevo León, XXVIII, 1149
 Lower, southeastern Virginia, XXIX, 79
 Lower, Stephens field, Arkansas, STR II, 2
 Lower, stratigraphy in trans-Pecos Texas, XXII, 1426
 Lower, Sugar Creek field, XXII, 1509
 Lower, Tampico district, Mexico, IX, 137
 Lower, Texas, X, 7
 Lower, to Recent in Virginia, XXII, 805
 Lower, Venezuela, XXVIII, 3

(Cretaceous)

- Lower, Wietze field, XVI, 1146
 Lower, Wyoming, VII, 138, 488, XXIV, 1101, XXV, 1150
 Lower, Wyoming and Montana, XVI, 866
 Lower, and Jurassic, boundary between, XXVII, 255
 Lower, and older rocks, Florida and parts of Georgia and Alabama, map, XXVIII, 1724
 Lower, and Permian, unconformable on Pennsylvanian in Anadarko-Ardmore province, XXV, 10
 Lower and Upper, in New Jersey, XXII, 803
 Mexican fields, GAS, 997, 999
 Mexico, V, 8, 398; IX, 127
 Mexico, compared with Cretaceous in Texas, MEX, 17, 21
 Mexico, oil possibilities, V, 5
 Mid-Continent, XXV, 1688, 1691
 Middle, MEX, 22, 31, 36, 204, 206, 222
 Middle, Anzoategui, XXI, 235
 Middle, Colombia, XXIX, 1088
 Middle, north-south seaway in, CD, 129
 Midway dome, XXII, 821
 Minnesota, X, 195
 Mississippi, FOP, 152; V, 491; XXV, 1584; XXVIII, 35, 804
 Mississippi and Alabama, XXVII, 906
 Monroe field, GAS, 750, 758, 774
 Montana, FOP, 42, IV, 314; V, 258; VI, 145; IX, 886; XXI, 989, 991; XXIII, 922; XXV, 1474; XXVI, 1326
 Montana, helium in, GAS, 1057
 Moose Mountain area, XXVII, 41
 Nebraska, XXV, 1696
 Nebraska, thicknesses and elevations used on isopach and structural maps of, XXVI, 1520
 New Mexico, XXI, 995; XXII, 527
 New Mexico fields, GAS, 368, 379; IV, 76, 95; VIII, 519
 North and South Dakota, FOP, 77; XXV, 1509
 North Carolina, XXIX, 916
 North Cowden field, Texas, XXV, 599
 North Dakota, XXIII, 926; XXVI, 350, 1418; XXVII, 1568
 North Louisiana, XXVI, 1251
 North Sea, RMS, 332, 334, 335
 north-central Texas and southern Oklahoma, XXI, 1017
 northern California, XVI, 363
 northern Mexico, comparison with Texas section, XV, 872
 Northwest Basin, Australia, XX, 1053
 northwestern Colorado, PROB, 947
 northwestern Louisiana, V, 298
 northwestern New Mexico, typical, PROB, 950, 951
 Oklahoma, STRAT, 85; III, 254, 256, 263; V, 34; VI, 6; XXV, 10
 Oklahoma Panhandle, XXV, 1694
 Oligocene, and Eocene fossils of Florida, plates, XXVIII, bet. 1688 and 1689
 on Edwards Plateau of southwest Texas, regional structure of, XVI, 691, 944
 or post-Cretaceous faulting in Kentucky, XXV, 2046
 Osage field, STRAT, 849

(Cretaceous)

- paleogeographic map of California at or near close of, XXVIII, 518
 Pánuco field, Mexico, XII, 416
 Pánuco River Valley, Mexico, X, 671
 Peru, V, 598
 Poland, XVIII, 897; XXI, 1186
 post-, in Alberta, GAS, 10
 production from, at Bellevue field, XXII, 1660
 recent studies of, XXVII, 255
 Redding district, stratigraphy of, XXVII, 307
 Redding Quadrangle, generalized columnar sections, XXVII, 310
 Redding region, XXVII, 306
 Richland field, Richland Parish, Louisiana, XII, 993; XV, 942
 Rock River field, Wyoming, STR II, 614
 rocks underlying, in Balcones fault zone in central Texas, XV, 819
 Rocky Mountain basin province, XIII, 432
 Rocky Mountain region, XXI, 993, 1262; XXVII, 424, 465
 Rocky Mountain region, paleogeography of, XXI, 1263, 1266
 Roumania and Poland, XVIII, 739
 Russia, XI, 507
 Salt Creek field, Wyoming, STR II, 593, 594
 Santa Lucia Range, XXVII, 256
 Santa Lucia Range, divisions of, relation to European stages, XXVIII, 475
 Santa Maria field, California, XXIII, 68; XXVII, 1338
 section of, from Vassy to Vertus, France, XXVII, 265
 south Arkansas, XXVI, 1251
 South Carolina, XXII, 808; XXIX, 918
 South Dakota, VI, 552
 south Texas, XXIII, 860
 south Texas domes, IX, 559
 south-central Montana, oil produced from, FOP, 44; XXV, 1476
 southeastern United States, FOP, 144, XXV, 1576
 southern California, VII, 413
 Southern fields, MEX, 107, 108. (See El Abra limestone)
 southwestern Arkansas, XIV, 833
 stratigraphic demarcation of stages of, XXVII, 267
 sub-Andean trough, XXIX, 519
 Sugar Creek field, XXII, 1507
 Switzerland IV, 88
 Szechuan, China, non-marine origin of petroleum in North Shensi and, XXV, 2058
 Tennessee, V, 171
 Texas, GAS, 655; STRAT, 605; III, 132, 168, 251; V, 5, 27, 326, 380; VI, 59, 323, 475; X, 613, XVI, 742; XXII, 1426; XXVI, 1812; XXVII, 895
 Texas, Oklahoma, and Arkansas, XXV, 1692
 to Pleistocene and Recent in North Carolina, XXII, 806
 Turner Valley, XXIV, 1623
 unconformities in, PROB, 778
 Upper, MEX, 43, 90, 96; PROB, 57, 167, 172, 175, 288, 403, 409, 417, 420, 578, 688, 724, 728, 780, 893; SC, 11; STRAT, 849; XX, 1557; XXIX, 920
 Upper, Alberta, ALTA 155; STRAT,

(Cretaceous)

- 274, 283; VII, 148; XV, 1283
 Upper, Alberta gas fields, FOP, 20, XXV, 1452
 Upper, alternating sandstone and shale units of western half of Rocky Mountain area in, XXI, 905
 Upper, Anzoategui, XXI, 235
 Upper, Bellevue field, Louisiana, STR II, 237
 Upper, Cache Creek section of, Yolo County, XXVII, 290
 Upper, Caddo field, Louisiana, STR II, 189; XIV, 175
 Upper, Cartersville-Sarepta structure, an anticline, XXII, 1490
 Upper, chalk in Antigua, XXIV, 1599
 Upper, chalk in cap rock of McFaddin Beach salt dome, Jefferson County, Texas, XXIII, 339
 Upper, clastic facies of Navarro age in Florida, XXVIII, 1709
 Upper, Colorado, STRAT, 23; XXII, 1025; XXIV, 1104
 Upper, Colorado group of, in northern New Mexico, stratigraphy of, XXIX, 232
 Upper, Cotton Valley field, XIV, 986
 Upper, cross section of, XXI, 902
 Upper, Cuba, XVI, 538
 Upper, deposits in Mississippi, XXV, 1601
 Upper, deposits of Gulf region and western interior region, comparison of, XXII, 1629
 Upper, deposits of northern Santa Ana Mountains, Orange County, California, map, XXVI, 168
 Upper, division of, into Pacheco and Asuncion groups, XXVIII, 474
 Upper, Dixie pool, XIV, 752
 Upper, East Texas, XXVIII, 522; XXIX, 774
 Upper, eastern Colorado, XVII, 397
 Upper, eastern Gulf region, XXI, 806
 Upper, extension eastward of uplifted Cordilleran highland, XXIII, 1150
 Upper, faunas of southern California, XXVI, 176
 Upper, five sandstone units of, in western part of Rocky Mountain area, XXI, 905
 Upper, Florida, XXIII, 1712
 Upper, Florida and southern Georgia, XXVIII, 1708
 Upper, foraminiferal zones in Great Valley, California, diagrammatic cross sections, XXIX, 997
 Upper, foraminiferal zones in Great Valley, California, diagrammatic map of areal distribution of, XXIX, 995
 Upper, formations, correlation of measured sections of, between Putah Creek, Yolo County, and Logan Creek, Glenn County, California, XXVII, 298
 Upper, formations in Mississippi and Alabama, geologic map of, XXII, 1640
 Upper, formations in Mississippi and Alabama, stratigraphic and age relations of, XXII, 1642
 Upper, formations in Rocky Mountain area, correlation chart of, XXI, 904
 Upper, formations in Rocky Mountain area, isopach maps of, SBP, 202

(Cretaceous)

- Upper, formations, macrofossils in, XXXI, 1652
 Upper, formations of southwestern Arkansas, review, XXIII, 1572
 Upper, formations of Texas and Arkansas, correlation of, XI, bet 2 and 3
 Upper, formations of Texas and Arkansas, stratigraphy of, XI, 1
 Upper, formations and faunas of southern California, XXVI, 162
 Upper, fossils from wells in Mississippi, significance of, XXIX, 1008
 Upper, fossils in Gulf and western interior regions of United States, ranges of identical and analogous species of, XXII, 1637
 Upper, Georgia, XXII, 790; XXIII, 1712
 Upper, Grass Creek dome, Wyoming, STR II, 624
 Upper, Homer field, Louisiana, STR II, 207
 Upper, in Great Valley, California, stratigraphic relations of, XXIX, 956
 Upper, index fossils in wells in Eucuttia field, Wayne County, Mississippi, XXIX, 1011
 Upper, index fossils in wells in Heidelberg field, Jasper County, Mississippi, XXIX, 1012
 Upper, Iraq, XXIII, 962
 Upper, Irma field, Arkansas, STR I, 6
 Upper, Jackson, Mississippi, XVII, 41
 Upper, Lance Creek field, Wyoming, STR II, 605
 Upper, Lost Soldier district, Wyoming, STR II, 640
 Upper, Louisiana, X, 7, 227
 Upper, Louisiana, bentonite in, VIII, 342
 Upper, Louisiana, correlation of, STR II, 208
 Upper, Louisiana and Arkansas, XXVII, 911
 Upper, Luling field, Texas, STR I, 273
 Upper, marine basin, great extent of, in United States and Canada, XXI, 901
 Upper, marine shale, FOP, 72; XXI, 911; XXV, 1504
 Upper, Mexia fault zone, Texas, STR I, 325, 332; VII, 226
 Upper, Mississippi, XXIV, 1027
 Upper, Mississippi embayment, XXIII, 1401
 Upper, mollusks of southern California, stratigraphic distribution of, XXVI, 178
 Upper, Montana, FOP, 43; STRAT, 274, 283, 331; VII, 159; IX, 886; XXV, 1475
 Upper, northwestern Colorado, STR II, 96, 107
 Upper, of Rocky Mountain area, XXI, 899, 1592; XXIII, 1146; XXV, 1841; XXVII, 902, 903
 Upper, of southern California, bibliography on, XXVI, 187
 Upper, of southern California, correlation of, XXVI, 186
 Upper, paleogeography of Montana, notes on, VIII, 554
 Upper, Pine Island field, Louisiana, STR II, 169; XIV, 175

(Cretaceous)

- Upper, Putah Creek section of, Yolo, Napa, and Salano counties, California, XXVII, 288
- Upper, regional cross section correlated on base of, showing angular unconformity at base of Upper Cretaceous and presence of Buda limestone and Maness shale in subsurface of Tyler basin, Rusk County to Cooke County, Texas, XXIX, bet. 172 and 173
- Upper, relation of, to Eocene structures in Louisiana and Arkansas, VII, 379
- Upper, Richland gas field, Louisiana, XV, 945
- Upper, Rio Grande embayment, XIV, 1428
- Upper, Rocky Mountain fields, VII, 404
- Upper, Roumania, IX, 1171
- Upper, Sacramento Valley, XXIX, 980
- Upper, Salt Creek section of, Colusa County, XXVII, 292
- Upper, San Marcos quadrangle, Texas, XI, 831
- Upper, San Rafael Mountains and along north flank of Santa Ynez Mountains, SC, 90; XX, 1636
- Upper, Santa Ana Mountains, generalized columnar sections, XXVI, 177
- Upper, Santa Anita Canyon, XXVII, 6
- Upper, Santa Lucia Range, XXVIII, 471
- Upper, sea in United States and Canada, map of Rocky Mountain and Great Plains area showing, XXI, 900
- Upper, sedimentation and diastrophism in Montana, IX, 886
- Upper, sediments, XXIX, 73
- Upper, sediments along west side of Sacramento Valley, distribution and locations of measured sections of, map, XXVII, 286
- Upper, sediments, great thickness in United States and Canada, XXI, 901
- Upper, sediments in Coastal Plain and western interior regions, map showing areas of outcrop of, XXII, 1630
- Upper, sediments in eastern Gulf region, XXII, 1639
- Upper, sediments in Gulf and western interior regions, sections of, correlated with European section, XXII, 1631
- Upper, series in Mississippi and Alabama, stratigraphy of, XXII, 1639
- Upper, series of Texas, unconformities in, XIII, 1323
- Upper, Shannon sand zone, XXII, 684
- Upper, Sites section of, Colusa County, California, XXVII, 294
- Upper, southeastern United States, XXVII, 905
- Upper, southeastern Virginia, XXIX, 80, 87
- Upper, southern Nicaragua, XXVIII, 1107
- Upper, Stephens field, Arkansas, STR II, 5
- Upper, stratigraphy in trans-Pecos Texas, XXII, 1431

(Cretaceous)

- Upper, stratigraphy of west side of Sacramento Valley south of Willows, Glenn County, California, XXVII, 279
- Upper, Sugar Creek field, Louisiana, XXII, 1508
- Upper, Tampico district, Mexico, IX, 139
- Upper, Texas, X, 7, XXV, 637
- Upper, varied material and nomenclature, XXI, 903
- Upper, Wyoming, PROB, 160; STRAT, 849; VII, 95, 138, 488; XXIV, 1220; XXV, 1151, 2027
- Upper, Wyoming and Colorado, FOP, 58, XXV, 1490
- Upper, Wyoming and Montana, XVI, 866
- Upper, zones in Great Valley, California, paleogeographic maps of, XXIX, 1000
- Upper, zones in Great Valley, California, paleogeography of, XXIX, 1002
- Upper, and Eocene epochs, development of orographic elements in Antillean-Caribbean region during, XXIV, 1598
- Upper, and Pennsylvanian production in Rattlesnake field, FOP, 75; XXV, 1507
- Upper, and Tertiary in New Zealand, divisions of, XXV, 1813
- Utah, VI, 204, 220, 244; XXIII, 125, 126; XXVII, 858
- Venezuela, XXII, 1226; XXIII, 959; XXVIII, 26
- Venezuelan Andes, XIX, 791
- Virginia, XXIX, 904, 906
- Vermilion area, XXIX, 1608
- Vermilion Creek area, XIV, 1038
- Washington and Oregon, FOP, 27; XXV, 1459
- Wasson field, Texas, XXVII, 487
- West Texas, FOP, 105; XXV, 1537
- West Texas, and its oil possibilities, V, 5
- western Kansas, altered volcanic ash from, XII, 1015
- Wind River Canyon area, XXIII, 1450
- Wyoming V, 195, 201, 408; VI, 514; VIII, 515, XXI, 995, XXIII, 481, 483, 915, 1447; XXV, 1734, XXVII, 855
- Wyoming, nitrogen in, GAS, 1059
- Wyoming, typical, PROB, 941, 944
- Yates area, Texas, XXIV, 141
- Zenith pool, STRAT, 141
- Zumpango del Río area of Guerrero, XXVIII, 1123
- Cretaceous and Eocene in Denver Basin, XX, 1328
- Cretaceous and Eocene strata of trans-Pecos Texas, columnar section of, XXII, 1428
- Cretaceous and Eocene stratigraphy of Barrilla and eastern Davis mountains of trans-Pecos Texas, XXII, 1423
- Cretaceous and fault-line discoveries in Texas, 1937-1938, XXII, 751
- Cretaceous and Jurassic rocks, folding of, in Sierra Madre, section, MEX, 160
- in Mexico, section, XXVII, 1467
- Cretaceous and later sand and clay dikes suggestive of faults, XXV, 2054

- Cretaceous and Mississippian formations, abrupt transition between, XXV, 2053
- Cretaceous and Paleocene of Santa Lucia Range, California, XXVIII, 449
- Cretaceous and post-Cretaceous sediments of Colombia confined to two geosynclines, XXIX, 1075
- Cretaceous and Quaternary in Lost Soldier district, GAS, 306
- Cretaceous and Tertiary of Antillean-Caribbean region, stratigraphical correlation chart of, XXIV, 1578-1582
- of southern Texas and northern Mexico, discussion, XII, 949
- Cretaceous and Tertiary coals of United States, carbon ratios of, PROB, 87
- Cretaceous and Tertiary geosynclines in Colombia, XXIX, 1075
- Cretaceous and Tertiary sediments in North Carolina, unconformity between, XXII, 807
- of Kentucky, Illinois, and Missouri, XIV, 845
- Cretaceous and younger rocks of Coastal Plain, relation of Ouachita belt to, XVIII, 1069
- Cretaceous ammonites, Lower, XXIV, 1618
- Cretaceous ammonoids in Texas area, paleontological factors controlling distribution and mode of life of, XXIV, 1164
- Cretaceous Austin chalk of Terlingua district, Brewster County, Texas, algal reefs in, XXVIII, 123
- Cretaceous basin of deposition, PROB, 690
- Cretaceous beds in New Jersey, XXII, 801
- of Austin age, Florida and parts of Georgia and Alabama, map, XXVIII, 1716
- of Navarro age, Florida and parts of Georgia and Alabama, map, XXVIII, 1710
- of Prowers County, Colorado, fossil sink holes in, XVIII, 1493
- of Taylor age, Florida, and part of Georgia and Alabama, map, XXVIII, 1712, 1714
- of Tuscaloosa formation, Florida and parts of Georgia and Alabama, map, XXVIII, 1720
- oil from in Colorado, FOP, 60; XXV, 1492
- Cretaceous chalk, XXIX, 831
- Cretaceous chalks, Texas and Arkansas, XV, 965
- Cretaceous clays, RMS, 483
- Cretaceous columnar sections, Colombia, XXIX, 1086
- Mexico, XXVIII, 1108-1115
- Cretaceous contacts in La Borrega Cañon, MEX, 26
- Cretaceous crudes of Texas, Louisiana, and Arkansas, comparisons of, XXV, 575-577
- Powell district, Texas, variation in, XXV, 579
- Cretaceous deformation, Kansas, XXI, 954
- southeastern Utah, XIX, 1498
- Cretaceous-Eocene contact, GC, 593; XIX, 1362
- north of Coalinga, California, XV, 697

- Cretaceous-Eocene transition in Anzoategui, XXI, 235
- Cretaceous-Eocene transition beds, MEX, 76
- Cretaceous-Eocene unconformity of Venezuela, XIII, 617**
- Cretaceous exposures, map of vicinity of Los Angeles, California, showing location of, XXVI, 164
- principal, map of Redding Quadrangle showing, XXVII, 308
- Cretaceous fault line in South Texas, XXIX, 782
- Cretaceous fault line trend in South Texas, XXVII, 743
- Cretaceous faunas of Santa Ana Mountains, XXVI, 180
- of Santa Monica Mountains, XXVI, 184
- of Simi Hills, XXVI, 185
- Cretaceous field trip, May, 1940, Mississippi Geological Society, XXIV, 759
- Cretaceous flora, CAL, 114, CD, 64
- Cretaceous folding episodes, SC, 11; XX, 1557
- Cretaceous foraminifera, CAL, 106, 110; GC, 774, MEX, 69, 73, 78-88; LX, 1048
- Cretaceous formation of pre-Gulf age in South Texas, range in thickness of, XXIX, 1424
- Cretaceous formations, abrupt thickening of, XXV, 2052
- Brazilian, XXI, 1211
- Central America and Mexico, XXVIII, 1077
- Central America and Mexico, correlation of, XXVIII, 1082-1088
- Colorado and Utah, GAS, 366, 368
- correlations of, GAS, 658
- in key wells, thickness of, XXVI, 1521
- Montana, GAS, 248
- northeastern Colorado, XVII, 411, 423
- Poland, XXI, 1188
- Rocky Mountain area, calcium carbonate content of, SBP, 210
- San Juan Basin area, GAS, 367
- Santa Ana Mountains, XXVI, 166
- Cretaceous fossil cephalopoda, XXIV, 1169
- Cretaceous fossils, V, 326, XXVII, 1085. (*See Fossils*)
- Coahuila, XXVIII, 1159
- in Fleming beds, XXIII, 185
- in Monroe gas field, Louisiana, GAS, 749, 751, 752
- in northern California, XXVII, 250
- in Prothro dome, SD, 300
- in salt domes, south Texas, SD, 741
- in Trinidad, XX, 1442
- Cretaceous front ranges, MEX, 5
- Cretaceous gas in California, XXVII, 260
- in Colorado, New Mexico, and Utah fields, GAS, 364, 369
- Cretaceous history of South fields ridge, MEX, 204
- Cretaceous-Jurassic beds in Colombia and Venezuela, correlation chart of, XXIV, 1613
- Cretaceous-Knoxville, map of California showing surface exposures and stratigraphic thicknesses of, XXVII, 259
- Cretaceous limestone as petroleum source rock in northwestern Venezuela, XV, 229**
- (Cretaceous)
- reply to discussion, XV, 475
- Cretaceous limestones in Yates area, Texas, XXIV, 142
- Cretaceous localities in Simi Hills, XXVI, 186
- Cretaceous marine shale, FOP, 82, XXV, 1514
- Cretaceous mollusks of Pasayten formation, XXIX, 1393
- Cretaceous ocean, transgression over tropical and mid-latitude lands, CD, 175
- Cretaceous oil, PROB, 98, 140, 143, 144, 151, 155, 167, 743
- in Miocene beds of Forest sands, XXVII, 1617
- in Moreno formation in California, XXVII, 260
- in Rocky Mountain region, XIII, 1249
- Cretaceous oil-bearing zone of El Dorado field, VII, 354
- Cretaceous oils, XXVII, 1317
- of Barco area, XXIX, 1136
- Cretaceous paleogeography, Lower, SC, 9; XX, 1555
- Cretaceous plants in Wind River Mountains, XXV, 138
- Cretaceous-pre-Cretaceous contact in Edwards Plateau, XXVI, 382
- Cretaceous production, Edwards limestone, in south Texas, XXI, 1047
- Cretaceous redbeds, Red basin, China, XXVIII, 1431
- Cretaceous reservoirs, PROB, 59
- Cretaceous rocks, intrusions in, MEX, 145, 146, 148, 149
- of Coalinga district, SC, 57; XX, 1603
- radioactivity studies on XXIV, 1538
- Cretaceous salt domes, SD, 168, 170, 218, 219, 279
- Cretaceous samples, Austin chalk (Ka), SBP, 292-335
- California outcrop sections, K, T, SBP, 167-194, 411
- carbon content, SBP, 27-31
- carbon-nitrogen ratio, SBP, 34, 35
- Carille shale (Kf), SBP, 197-243
- Chico formation (Kcl, Kcm, Kcu), SBP, 87-194
- Dakota sandstone (Kd), SBP, 193-292, 414
- Eagle Ford shale (Kef), SBP, 292-335
- Edwards limestone (Ke), SBP, 292-335
- Fox Hills sandstone (Kfh), SBP, 197-243
- from Great Valley, California, map showing locations, XXIX, 961
- Frontier formation (Kf), SBP, 197-243
- Glen Rose limestone (Kg), SBP, 292-335
- Horsetown formation (Kh), SBP, 167-194
- Knoxville formation (Kkl, Kku), SBP, 167-194
- Kootenai formation (Kk), SBP, 197-243
- Mesaverde formation (Kmv), SBP, 197-243
- Moreno shale (Kmo), SBP, 167-194
- Mowry shale (Kmn), SBP, 193-243
- Navarro group (Kn), SBP, 292-335
- Niobrara formation (Kln, Knn), SBP, 193-243
- Paluxy sand (Kp), SBP, 292-335
- (Cretaceous)
- Panoche formation (Kpn), SBP, 167-194
- Paskenta beds of F. M. Anderson (Kpa), SBP, 167-194
- Pierre shale (Klp, Kup), SBP, 193-243
- Purgatoire formation (Kpu), SBP, 193-243
- Steele shale (Klp, Kup), SBP, 193-243
- Taylor marl (Klt, Kut), SBP, 292-335
- Thermopolis shale (Kt), SBP, 193-243
- Trinity group, lower part (Ktl), SBP, 292-335
- undifferentiated Chico (Kcu), SBP, 167-194
- Upper, undifferentiated (Ku), SBP, 285-292, 415
- Washita group (Kwa), SBP, 292-335
- Woodbine sand (Kw), SBP, 292-335
- Cretaceous-San Andres contact, XXVI, 383
- Cretaceous sandstones most widespread oil and gas zones in Rocky Mountain region, XXVII, 470
- Cretaceous seas, Gulf Coastal Plain, XXIII, 195
- Cretaceous section, area between Sierra del Burro and Rio Grande, XXVIII, 1181
- Arivachi area of eastern Sonora, XXVIII, 1186
- Baril Viejo, XXVIII, 1176
- between Cuchillo Parado and Aldama, XXVIII, 1184
- Cabullona area of northeastern Sonora, XXVIII, 1187
- Cerro Muleros in northern Chihuahua, XXVIII, 1185
- El Tigre area of northeastern Sonora, XXVIII, 1187
- in mountains of east-central Coahuila, XXVIII, 1175
- near Ojinaga, XXVIII, 1184
- northern Nuevo León and parts of Tamaulipas and Coahuila, XXVIII, 1177
- of southwest Bexar County, Texas, subsurface, X, 768
- Potrero de Menchaca, XXVIII, 1176
- San Pedro del Gallo area, XXVIII, 1168
- Santa Elena area of eastern Chihuahua, XXVIII, 1172
- Santa Eulalia and San Pedro Conchoc, central Chihuahua, XXVIII, 1183
- Sierra de la Paila, eastern Coahuila, XXVIII, 1174
- Sierra de Parras, Coahuila, XXVIII, 1158
- Sierra del Rosario, eastern Durango, XXVIII, 1167
- Sierra Mojada-Mohóvano-Piedra de Lumbre area, XXVIII, 1170
- Sierra Sombrerillo, XXVIII, 1154
- Veracruz, XXVIII, 1127
- Cretaceous sections along Cañon Taraises, Coahuila, XXVIII, 1160-1163, 1165
- in Great Valley, California, XXIX, 972-978
- Cretaceous sediments in Crowleys Ridge, southeastern Missouri, XVII, 1003
- on east flank of Wind River Mountains, Wyoming, XXV, 137

- Cretaceous shales, marine, the probable source of oil and gas in the Wall Creek and Dakota sands in Elk Basin field, Wyoming and Montana, STR II, 585
- Cretaceous source beds, PROB, 172
- Cretaceous sources for oil in Canada, XI, 26
- Cretaceous stages in Europe, XXVII, 268
- world-wide, XXVII, 268
- Cretaceous strata, SC, opp 86; XX, opp 1632
- in Peninsular Range area, SC, 117; XX, 1663
- Cretaceous stratigraphy of Vermilion area, Alberta, Canada, XXIX, 1605
- of Vermilion area, bibliography, XXIX, 1628
- Santa Monica Mountains, XXVI, 176
- Simi Hills, XXVI, 176
- Cretaceous structure, Page field, XXV, 632
- Cretaceous subsidence, areas and rate of, SC, 65; XX, 1611
- Cretaceous surface, topography of, in Great Valley, contour map, XXIX, 999
- Cretaceous surface exposures, distribution of, XXVII, 258
- Cretaceous system, bibliography on standard of, XXVII, 277
- Dakota basin, XXVI, 1560
- divisions of, XXVII, 271
- map of type area of, XXVII, 264
- Nebraska, isopach map, XXVI, 1529
- Nebraska, thickness and structural study of major divisions of, XXVI, 1517
- Nebraska, wells used in isopach and structural studies of, XXVI, 1519
- original definition, XXVII, 263
- series, subranges, zones, and sub-zones of, XXVII, 272
- southern Permian basin, XXIV, 64
- standard of, XXVII, 262
- type localities of d'Orbigny's stages of, XXVII, 266
- Cretaceous-Tertiary boundary problems, XXVII, 271
- Cretaceous-Tertiary contact in Santa Ana Mountains, XXVI, 175
- Cretaceous-Tertiary oil-bearing belt in Brazil and Peru, XXI, 109
- Cretaceous-Tertiary unconformity, XXV, 641
- Cretaceous trough of southern Patagonia and Tierra del Fuego, XXIX, 503
- Cretaceous units, map of Adelaida, Bradley, Bryson and San Simeon quadrangles showing relations between, XXVIII, 476
- Cretaceous waters of eastern Colorado, typical, PROB, 948, 949
- of Montana, typical, PROB, 945
- Cretaceous zones in Rocky Mountain fields, XXVII, 472
- Crevasse and distributary channels, XXIII, 1214
- Crevasse-distributary patterns, XXIII, 1218
- Crevasse, RMS, 159, 164, 169
- deposits from, RMS, 167, 169, 173
- in levee system of Mississippi River, relation to ediments of Lake Pontchartrain, XXIII, 11
- Crevasing, RMS, 161-163
- Crevice limestone, Pine Island field, Louisiana, STR II, 181
- Crevice in limestone, form of induced porosity, MEX, 166
- Stephens County, Texas, STR II, 478
- Crevice in reservoir rock, Pine Island field, Louisiana, STR II, 170
- Crevice in shale, Salt Creek field, Wyoming, STR II, 596
- Crevice and cavities, rôle of, STR II, 708
- Crews oil sand in Garber field, Oklahoma, STR I, 178
- Crickmay, C. H., 66, 72, 75, 76, 77, 90, 91, 92, 93, 110, 264, 281; MEX, 94; SC, 8; STRAT, 300, 302, XXVII, 156, 161; XX, 862, 1554; XXI, 219, 715, 719, 728, 732, 747, 748, 749, 750, 751, 754, 757, 758, 759, 760, 770, XXV, 884, XXVII, 191, 197; XXIX, 1019, 1021, 1023
- assignment of Sundance to Argovian-Kimmeridgian age in European section, XXI, 746
- Jurassic history of North America: its bearing on development of continental structure, review, XVI, 268
- Crickmay's European correlation, XXI, 757
- Crider, Archibald F., GC, 385; PROB, 607, 609, SD, 221; XIV, 983, 988, XV, 516; XVI, 652; XVII, 616, 618, 654; XXII, 816, 980
- deep Pine Island gas, IX, 171
- discussion, Tertiary stratigraphy of Louisiana, GC, 432; XVII, 654
- El Dorado, Arkansas, oil field and its relation to north Louisiana structure, VI, 193
- geology of Bellevue oil field, Bossier Parish, Louisiana, XXII, 1658
- memorial of John Young Snyder, XXIII, 454
- Pine Island deep sands, Caddo Parish, Louisiana, STR II, 168
- relation of Upper Cretaceous to Eocene structures in Louisiana and Arkansas, VII, 379
- volcanic ash in northern Louisiana, VIII, 524
- Crider, Archibald F., and Johnson, L. C., XVII, 618
- Crider, H. D., Ball, Max W., Weaver, T. J., and Ball, Douglas S., shoe-string gas fields of Michigan, STRAT, 237
- Crimea, MSC, 173
- Bournien and Martian beds of, XXII, 1018
- Permian ammonite zones of, XXII, 1016
- Crimean district, XI, 497
- Crimean folds, XVIII, 781
- Crimean Peninsula, RMS, 448
- Criner fault, GAS, 585
- Criner Hills, V, 35, 48, 175; VI, 6; XI, 1068; XV, 999, 1011; XXV, 1662, 1670
- Criner Hills orogeny, XXIX, 144
- Criner Mountains, XXV, 6
- Crinerville anticline, STR I, 193, 194, 198; XI, 1068
- map, STR I, 195
- production in, XXVII, 801
- Crinerville oil field, STRAT, 798
- Carter County, Oklahoma, STR I, 192; PROB, 340, 401, 775; XI, 1067
- Crinerville pool, XXVII, 801
- Crinerville sandstone, XXV, 1668
- Crinoid, XXIV, 818, 829
- Crinoid columnals, XXV, 130
- Crinoid-coral-brachiopod biocoenotic type in Devonian rocks, XXVI, 1735
- Crinoid fauna, XXV, 2113
- Crinoid faunas in San Andies and Sacramento mountains, XXV, 2107
- Crinoid bioherm structure, XXV, 2126
- Crinoid bioherms, XXIII, 327
- Crinoid-bryozoal limestone in Mississippian limestone in Turner Valley field, XXIX, 1159
- Crinoid facies, XXV, 2129
- Crinoid limestone, PROB, 357; XXVI, 1727
- Crinoid limestone facies in Marble Canyon, XXV, 2142
- Crinoid sand facies, XXV, 2130
- Crinoid sediment, cementation of, XXVI, 1720
- character of biocoenosis represented by fossil remains in, XXVI, 1731
- chemical composition of, XXVI, 1719
- diastrophic environment of, XXVI, 1753
- environmental progression of, XXVI, 1741
- epigenetic processes and changes affecting, XXVI, 1769
- fabric of, XXVI, 1717
- genetic analysis of, XXVI, 1703
- mass texture of, XXVI, 1721
- porosity of, XXVI, 1722
- shape analysis of, XXVI, 1710
- size analysis of, XXVI, 1707
- space arrangement of components in, XXVI, 1715
- stratification of, XXVI, 1726
- surface texture analysis of, XXVI, 1714
- transportational analysis and history of components of, XXVI, 1762
- Crinoids, XXIII, 1032; XXIV, 794, 800; XXV, 688, 723, 1717; XXVI, 7
- in Burlington limestone, XXI, 1161; XXIV, 806
- Cripple Creek, carbon dioxide at, GAS, 1061
- nitrogen at, GAS, 1061
- Crisfield sandstone, XXIII, 1788
- Crist, R. E., XIX, 770, 774
- Cristellaria mexicana* zone, GC, 426; XIX, 690
- Cristellaria nudicostata* zone, GC, 427; XIX, 691, 695
- Cristellarian lagenidae, MSC, 14
- Cristellarias, MSC, 169
- Criteria for determining time of accumulation under special circumstances, XXII, 834
- for subsurface recognition of unconformities, XXVI, 36
- fundamental, for oil occurrence, XI, 683
- necessary for oil accumulation, STR II, 669
- of unconformities, association among, XXVI, 57
- of unconformities, classification of, XXVI, 60
- of usable geophysical prospecting methods, XXIX, 866
- Criterion, possible, for distinguishing marine and non-marine sediments, XXIII, 1716
- Critical point, definition, CD, 21

- Critical survey of recent developments in geochemical prospecting, XXIV, 1464
- Critical tractive force, RMS, 9
- Critical velocity for erosion, RMS, 11 of moving water, RMS, 6, 8, 18
- Criticism of rule of ten dollar increase in barrel-day prices with every one cent increase in price of crude oil, IV, 189
- Critzer limestone, nodular limestone possible equivalent of, XXV, 32
- Crocker Flat area, sketches showing historical evolution, XXVI, 1621 structure in, XXVI, 1620
- Crocker Flat landslide, Santa Margarita unconformable on all older rocks and on, XXVI, 1620
- sediments involved in, XXVI, 1623
- Crocker Flat landslide area, Temblor Range, California, XXVI, 1608
- foraminiferal Miocene faunas, in, XXVI, 1614
- fossils in, XXVI, 1614
- geologic map, XXVI, 1609, 1626
- references on, XXVI, 1631
- Crocker Springs Creek, MSC, 299, 344
- molds from, MSC, Fig. 15 (in pocket)
- Crockett age of Temporal beds, MEX, 113
- Crockett, XXIII, 155
- Crockett, Harry Lee, XV, 406
- Crockett County, Texas, Todd Ranch discovery, XXIV, 1126
- Crockett field, XXIII, 840
- Crockett formation in Brenham dome, GC, 786; XIX, 1336
- in Harris County, Texas, XXIII, 155 (Tcs) (Eocene), SBP, 337-349, 415
- Cromwell field, Oklahoma, PROB, 587, 589, 590, 764, 777; STR II, 300
- fissuring of rock at, STR II, 305
- geothermal variations at, PROB, 992
- isothermal contours, XIV, 547
- Cromwell pool, PROB, 411
- Cromwell sand, XXI, 1008; XXII, 1567; XXV, 1100, XXVIII, 783
- Cromwell field, Oklahoma, STR II, 301, 305, 306, 308, 309
- Dora pool, STRAT, 422
- east-central Oklahoma, map showing subsurface distribution of, XXVII, 893
- gas from, XXI, 1009
- Mid-Continent, PROB, 777, 863
- productive in McAlester basin, XXIII, 832
- Cromwell sandstone, XXII, 889
- Cromwell structure, PROB, 626
- Cromwell unconformity, XXIII, 697
- Cromwell unconformity sand, XXIII, 227
- Cromwell waters, Oklahoma, analyses of, PROB, 864
- Cronis, Carey, GAS, 555; PROB, 74, 89; XII, 810, 821; XVI, 939; XVII, 1101; XVIII, 977, 1077, 1156; XX, 302, 1086; XXI, 1420; XXII, 1685; XXIII, 601; XXIV, 418; XXV, 3, 131, 1633; XXVI, 62, 1699, 1738; XXVII, 939; XXVIII, 903; 1529, 1631
- geological "Union Now," discussion, XXVII, 1001
- geology in war and peace, XXVI, 1221
- geology of Arkansas Paleozoic area with especial reference to oil and gas possibilities, review, XIV, 1575
- micropaleontology—past and future, (Cronis)
- XXV, 1208, 1597
- natural gas in Interior Highlands of Arkansas, GAS, 533
- oil and gas possibilities in Arkansas Ozarks, XI, 279
- Pennsylvanian overlap, discussion, XV, 471
- report of committee on applications of geology for 1942, XXVII, 700
- report of editor for 1943, XXVIII, 658
- review, XXIII, 1861
- Cronis, Carey, and Funkhouser, H. J., XXIX, 1151
- Cronis, Carey, and Hoffman, A. D., XXV, 683
- Cronis, Carey, and Krumbein, William C., down to earth; an introduction to geology, review, XX, 1131
- Cronis, Carey, and McCormack, John, XXVI, 1196
- Cronis, Carey, and Roy, S. K., XXVI, 860
- Cronin, G. H., XVIII, 1475; XXIII, 122
- Cronin structure, Texas, XII, 535
- Crook, Theo, RMS, 599; XVIII, 1355
- Crookall, R., XXIV, 293
- Crooked-hole problems in Gulf Coast district, XIV, 595
- Crooked-hole report, XIV, 635
- Crooked-hole tests at Oklahoma City field, XVI, 1005
- Crooked holes, Long Beach field, California, STR II, 71
- methods of surveying, XIII, 1141
- problem of, XIII, 853, 1095, 1227
- Crooked River Basin (Oregon), Chaney on, CAL, 154
- Crookedness of holes, effects of, XIII, 1125
- Crooks, H. F., stratigraphic distribution of petroleum, discussion, XI, 1121
- Crooks, William, SD, 372; IX, 772
- Crosby, I. B., XVI, 1264; XXVI, 1798
- Crosby, W. O., XII, 918, 921, 927; XXVI, 1797
- Cross, C. M., XXVII, 279, 299; XXIX, 958
- Cross, C. M., and Taff, J. A., XXVII, 256
- Cross, C. W., XIV, 792
- Cross, R., XIII, 76, 80
- Cross, Rodman K., XXVII, 2
- Cross, Whitman, VI, 218; VII, 391; XI, 114, 382, 795, 797, 798; XIII, 851, XIV, 780; XVII, 126, 377, 387, 966; XXIII, 1171; XXV, 1745
- Cross, Whitman, and Larsen, E. S., XXIII, 1170
- Cross, Whitman, and Ransome, F. L., VII, 385
- Cross' La Plata sandstone, southwestern Colorado, correlation of, XXV, 1745
- Cross-bedding, RMS, 4, 154, 215, 525 in beaches, RMS, 215
- in Dozier Mounds dolomite, XXI, 455
- in tidal muds, RMS, 202
- in Verden sandstone, XXIII, 570
- Cross Cut-Blake district, Brown County Texas, STRAT, 548, 552
- accumulation of oil and gas, STRAT, 553, 562, 563
- Cross Cut pool, XXIV, 87
- Cross Cut sand, XXVII, 774
- convergence above, STRAT, 557
- Cross Cut-Blake district, STRAT, (Cross)
- 549, 554-556
- Cross faulting, MEX, 191, 194, 210, 212, 213, 215, 217, 222
- Cross folding in Santa Ynez Mountain region, SC, 97; XX, 1643
- Cross-lamination, aeolian, XXVI, 41
- Cross Plains pool, XXIII, 849
- Cross section of Chester of Illinois basin, XXV, 871
- south-north, from Pecos County through Winkler County, Texas, to Roosevelt County, New Mexico, XXIV, 29
- Cross section and columnar section, Clarke and Wayne counties, Mississippi, XXI, 81
- Cross section, cooperative, XVI, 949
- Refugio field, XXII, 1201, 1210
- Cross trend in Southern Fields, MEX, 206
- Crossett pool, XXIX, 748
- Crossite, XXVII, 172
- Croton Falls section in Stonewall County, Texas, XXI, 463
- Crouse, C. S., GAS, 937; XVII, 1214
- Crow Creek, MSC, 133
- Crow Mountain formation, XXV, 135
- Crowley, A. J., possible criterion for distinguishing marine and non-marine sediments, XXIII, 1716
- Crowley, A. J., and Hendricks, Leo, Lower Ordovician and Upper Cambrian subsurface subdivisions in north-central Texas, XXIX, 413
- Crowley, A. J., and Thiel, G. A., pre-Cambrian relations in east-central Minnesota, XXIV, 744
- Crowley Oil & Mineral Co., SD, 348, 412
- Crowleys Ridge, southeastern Missouri, Cretaceous sediments in, XVII, 1003
- Crown Oil & Ref. Co., SD, 611
- Crown Point, CAL, 287
- Crow's Run storage project, XXVIII, 1573
- Crowther, Benjamin, MEX, 1, 154
- Crowther, J. G., about petroleum, review, XXIII, 106
- Crozet Islands, RMS, 402, 406
- Crozet Ridge, RMS, 398, 401
- Cruce, Doyle, Milroy, Hanbury, Nellie, and Wheeler pools, redbeds in, GAS, 586
- Cruce pool, GAS, 576
- Crude evaluated on an ultimate-yield basis, XXV, 1173
- Crude assay, XXV, 1170
- Crude fiber, RMS, 442
- Crude oil. (See oil, crude)
- change of base with depth, XXI, 922
- character, at Homer field, Louisiana, STR II, 225
- correlation between percentage content and A.P.I. gravity, XXI, 934
- correlation of deviations of A.P.I. gravity and percentage content for light fractions and residuum, from values normal for depth and geologic age of, XXI, 932
- correlation index numbers for, XXVII, 1306
- criticism of rule of ten dollars increase in barrel-day prices with every one cent increase in price of, IV, 189
- determination of law of change in

- (Crude)
 character of, with increasing geologic age, XXI, 926
 efficient production of, XXIV, 368
 Goldsmith field, analysis of, XXIII, 1545
 Gulf Coast, argument against evaporation theory of origin of, XXI, 938
 Gulf Coast, argument against oxidation theory of origin of, XXI, 938
 Gulf Coast, argument against surface influence on origin of, XXI, 939
 Gulf Coast, evolution of, from naphthenic to paraffinic, as effect of temperature, pressure, and time, XXI, 941
 Gulf Coast, law of variation of, XXI, 941
 Gulf Coast, methanation theory of evolution of, XXI, 943
 in Oriskany horizon at Allen anticline, New York, XXI, 1584
 nature of, XXV, 566
 Spindletop, evidence against vertical migration of, XXI, 937
 Stephens field, Arkansas, properties of, STR II, 14
 stratification of, according to specific gravity, XXI, 944
 transportation of, XXI, 172
 variation of content of carbon and sulphur in, with depth and age, XXI, 927
 Ventura Avenue field, California, analysis of, STR II, 39
 Crude-oil and field tabulations, XXVII, 1315
 Crude oil and its products, relation of imports and exports, in 1935, XXI, 188
 Crude oil and oil-well brines, sulphate-reducing bacteria in, XXVII, 1182
 Crude oil and product price changes, sequence of, XXIII, 771
 Crude oil and product prices, relation between, XXIII, 765
 Crude oil and refined products, price data on, XXIII, 780-786
 Crude oil analyses, Cooper Creek field, XXII, 186
 Crude oil analysis, technique for, XXVII, 1598
 Crude-oil discoveries, new, shortage of man power needed in search for, XXVII, 963
 shortage of material needed for, XXVII, 962
 some factors influencing declining rate of—geologist's responsibilities in present situation, XXVII, 960
 Crude oil price and gasoline, relationship between, XXIII, 775
 Crude oil price and wholesale value of refined products, XXIII, 768
 Crude oil price changes, reason for lag of, XXIII, 771
 Crude oil prices, IX, 799
 as incentive to exploration, XXVII, 989
 in 1942, XXVII, 987
 Crude oil production by areas during 1940, XXV, 1272
 in continental Europe, XXV, 1272
 in Illinois, XXIV, 961
 in 1935, world's, by countries and areas, XXI, 153
 in United States, XXVII, 975
 in world, XXIII, 949
 in world and in United States by years, 1875-1935, chart, XXI, 155
 Crude-oil production decrease in 1942, XXVII, 975
 Crude-oil reserves, estimated proved, in United States, 1942, XXVII, 973
 in United States, XXI, 159-163
 Crude oil transportation facilities from Roumania to Germany, XXV, 1276
 Crude oils, STRAT, 309
 analyses of, by United States Bureau of Mines, XXI, 924
 application of chemical analysis of, to problems of petroleum geology, XXVII, 1595
 change of base from naphthenic toward paraffinic with increasing depth, shown by Miocene, Oligocene, Jackson Eocene, and lower Eocene, XXI, 922
 correlation of, with special reference to crude oil of Gulf Coast, XXV, 561
 decreasing specific gravity with increasing depth shown by Miocene, Oligocene, Jackson Eocene, and lower Eocene, XXI, 923
 from Burbank sand and from Bartlesville sand, curves showing similarity of, XXV, 1806
 from Polish oil pools, different types of, XXI, 1191
 Gulf Coast, depth variation of specific gravity of, XXI, 924
 Gulf Coast, gravity-interval pattern types in, XXV, 583-592
 Gulf Coast, variation of heaviness in, XXI, 940
 Miocene, Oligocene, Jackson Eocene and lower Eocene, XXI, 923
 occurrence and types of, in Rocky Mountain region, XXVII, 1305
 of Forest sands of Bernstein field, Trinidad, B W. I., study of, XXVII, 1595, 1601
 of Forest sands, variations in characteristics of, XXVII, 1617
 of United States, general applicability of law of decrease of specific gravity of Hempill distillations to all, XXI, 943
 Polish, stratigraphic comparison of, XXI, 1182
 quantity of radon and radium in, highly variable, XXIV, 1540
 radioactivity of, XXIV, 1532
 Rocky Mountain region, XXVII, 1331
 use of gravity-interval pattern in identification of, XXV, 565
 variation of percentage content of fractions in, with depth and age, XXI, 917
 variations of certain characters of, independent of depth and age, XXI, 930
 Crude oils and sediments, need for future research on radioactivity of, XXIV, 1546
 Crude oils and stratigraphy, relationship of, in parts of Oklahoma and Kansas, XXV, 1801; XXVI, 284
 Crude petroleum, action of bacteria on, PROB, 263
 in United States, production of, XXI, 164
 refining of, XXI, 176
 Crude petroleum and products, stocks of, in United States, XXVII, 984
 Crude price, 1934-1942, for United States, XXVII, 964
 Crude price adjustments, lag of, behind changes in prices of refined products, XXIII, 787
 Crude production, preponderance of American, British, and Dutch control of, XXV, 1272
 Crudes, Cretaceous, of Texas, Louisiana, and Arkansas, comparisons of, XXV, 575-577
 Cretaceous, Powell district, Texas, variation in, XXV, 579
 data used in evaluating, XXV, 1173
 from Boryslaw sandstone, high specific gravity of, XXI, 1190
 from various localities, Engler's data on fractions of, XXI, 1469
 of Oklahoma, comparisons of Ordovician to Permian, XXV, 572, 573
 of Oklahoma, comparisons of Pennsylvanian and Permian, XXV, 574
 Ordovician to Mississippian, of Oklahoma, XXV, 571
 Pennsylvanian, of Texas, XXV, 570
 Permian, of West Texas, XXV, 568
 Permo-Pennsylvanian, of Texas, XXV, 569
 various, quality of product obtainable from, XXV, 1171
 why they differ in value, XXV, 1167
 Crum, H. E., VII, 384
 Crum, H. E., and Cotner, Victor, GAS, 1094; STRAT, 101; XXIV, 1797
 geology and occurrence of natural gas in Amarillo district, Texas, GAS, 385, XVII, 877
 Crum, H. E., and Prommel, H. W. C., PROB, 658; XI, 786, 807
 salt domes of Permian and Pennsylvanian age in southeastern Utah and their influence on oil accumulation, XI, 373
 structural history of parts of southeastern Utah from interpretation of geologic sections, XI, 809
 Crum, L. A., STRAT, 105; XXIII, 1756
 Crum, R. W., XXVII, 1380, 1383
 Cruquius, M. S., XXV, 2162
 Cruse, J. S., Jr., XXIII, 147
 Cruse, John, XXV, 1234
 Cruse formation, XXVII, 1602
 Cruse series, XXIV, 2123
 Crushing strength and porosity as indices of regional alteration, X, 939
 Crust of earth, equatorward trend of, CD, 174
 history of, CD, 142
 Crust-moving force of external origin, CD, 170
 Crustacea, MEX, 132; RMS, 287, 289; VII, 185
 faecal pellets of, RMS, 516-521
 of Temblor and Vaqueros in Caliente Range, XXV, 221
 Crustaceans, XXII, 1635; XXV, 128; XXVI, 1197
 Crustal collapse, cause of folding and warping of superficial earth layers, XXIII, 1323
 Crustal deformation, fundamental factors of, XXIII, 1326
 Crustal movement, recent, at western end of Ouachita Mountains, Oklahoma, XIX, 1219
 Crustal movements, at close of Aptian, MEX, 95, 96, 162
 during Mesozoic time, MEX, 136
 late Paleozoic, of Europe and North America, XIX, 1253

- (Crustal)
radial and dispersive, from both poles, CD, 168
Crustal shortening, planetesimal hypothesis, CD, 87
Cruzeiro redbeds in Brazil and Peru, XXI, 105
Cryptoblastus melo zone, XXI, 1162
Cryptovolcanic structures, salt domes, and meteor craters, XXI, 629
Crystal, RMS, 617
relation of, to base exchange, RMS, 458-463
Crystal analysis by X-ray diffraction powder method of, XXI, 1333
Crystal axes, RMS, 603
Crystal dome structure, GAS, 233
Crystal Falls pool, XXIII, 849
Crystal field, XXII, 410
Crystal habit of clay mineral, RMS, 603, 608
Crystal Lake, XXV, 830, 834
Crystal lattice, RMS, 538
Crystal Mountain sandstone, XXV, 1631, 1638
Crystal-New Haven oil and gas area, Michigan, XXII, 154
cross sections of, XXII, 158
structural map of, XXII, 157
Crystal plane, RMS, 618
distances, RMS, 625
Crystal structure, of clays, RMS, 374, 478
of illite, RMS, 476
of kaolinite, RMS, 459, 477
of montmorillonite, RMS, 460, 475
Crystalline complex of Tejon Quadrangle, XXI, 213
Crystalline lime, PROB, 350
Crystalline rock in deep well in Winkler County, Texas, XXIX, 222
Crystalline rocks, RMS, 269, 335
in Colorado, occurrence of oil in, XVI, 769
of Kansas, geologic history of, II, 98
pre-Cambrian, in northwestern Ohio, GAS, 910
Crystalline swelling, RMS, 460
Crystalline-textured cements, XXVI, 1720
Crystalline textures, XXVI, 1721
Crystalline zone in limestone in Turner Valley, XXIV 1631
Ctenodonta bed, XXV, 654
Cuba, MSC, 211, 293, 306
geology of, XVI, 533
geology of oil fields, II, 133
Jurassic as a source of oil in western, VIII, 516
Jurassic in, XXVII, 1420; XIX, 116
oil in igneous rocks of, XVI, 809
oil possibilities of Jurassic formations in, XXVII, 1529
probable age of aptychus-bearing formations of, XVI, 943
results of drilling, II, 157
San Cayetano formation in, XXVII, 1515
unconformity in, VIII, 518
Viñales limestone in, XXVII, 1520
Cuba sandstone, XXII, 427
Cuban petroleum deposits, geology of, II, 133
Cubit's Gap, RMS, 164
Cucaracha formation, III, 365
Cuchara Canyon section of Jurassic, XXIII, 1166
Cuchillo formation, XXVIII, 1094, 1185
Cuchillo formation and Travis Peak (Cuchillo)
formation, correlation of Sligo formation with, XXVII, 1230
Cuchillo Parado and Aldama, Cretaceous section between, XXVIII, 1184
Cucullaea grandis faunal division, XXVI, 182
Cuellar field, XV, 765
Cuero clay and sandstone, XXIX, 1725
Cuero formation, XXIX, 1724
age and fauna, XXIX, 1726
lithology, XXIX, 1725
stratigraphic and structural relations, XXIX, 1725
Cuervo anticline, XXIX, 1127
Cuesta del Cura limestone, XXVIII, 1094, 1153, 1155, 1160
Cuesta del Cura limestone facies, XXVIII, 1096
Cuestecitas, Aragón beds in Hacienda, MEX, 106, 136, 137
Mesón beds overlapping older formations in Hacienda, MEX, 136
Culberson County, Texas, Humble deep test, Apache Mountains, XXIX, 280
Culbert, J. V., XII, 3
Culbertson, J. A., XXIV, 769; XXV, 1377
down dip Wilcox (Eocene) of coastal Texas and Louisiana, XXIV, 1891
Culebra Bluff, XXVIII, 1614
Culebra formation, MSC, 115, 178
Culey, A. G., XXIV, 645
Cullen, H. R., XVIII, 515
Cullen, Ronald J., XXII, 1235; XXIV, 721
Cullen Syndicate, SD, 627, 628
Cullison, James S., stratigraphy of some Lower Ordovician formations of Ozark uplift, review, XXIX, 296
Cullison, James S., and Ellison, Samuel P., Jr., diamond-drill core from Bourbon High, Crawford County, Missouri, XXVIII, 1386
Cultus formation, XXIX, 1391, 1392
Culver, Harold E., GAS, 221; XVIII, 848
Cum sole motion, RMS, 106, 107, 111, 119, 124, 127
Cumberland coal field, V, 648
Cumberland Mountains, PROB, 106
Cumberland oil field, XXV, 10
Cumberland overthrust block, XX, 921
Cumberland Pipe Line Company, GAS, 945
Cumberland Plateau, PROB, 515, 518; GAS, 865; XI, 916
Cumberland Plateau area, XXIX, 684
Cumberland pool, XXV, 1092, 1099
Cumberland saddle, GAS, 864
Cumberland thrust block, Virginia, Kentucky, and Tennessee, mechanics of low-angle overthrust faulting as illustrated by, XVIII, 1584
Cumings, Edgar R., GAS, 847; VII, 612; XIV, 1352, 1541; XVI, 484; XXV, 684, 685, 1226, 1233; XXVI, 1735; XXVIII, 964
memorial of Joshua William Beede, XXIV, 1855
Cumings, Edgar R., and Shrock, Robert R., XIII, 655; XVI, 645; XXV, 2126; XXVI, 1734
geology of Silurian rocks of northern Indiana, review, XIII, 181
Cummer, W. E., XIV, 1452
Cumming, Alex C., XI, 83
Cumming, Jorge, XXVIII, 1079
Cummings and Wilkerson, SD, 620, 623
Cummings, Lillian, XXVII, 419
Cummings, Maree, memorial of, XXVI, 1855
Cummings member of Mannville formation, XXIX, 1614
Cummins, R. H., I, 27, 94; II, 76
Cummins, William Fletcher, MEX, VIII, ix, 11, 29, 96, 98, 115, 116, 118, 120, 122-124, 147, 161, 173, 181; PROB, 397, SD, 506, III, 92, 134, 137; V, 465, IX, 137, 268; X, 147; XI, 1181, 1196, 1219, XII, 396, 397, 398; XIII, 949, 950, 1046, XVIII, 1018, XXI, 462; XXIV, 305; XXVII, 622
address at fourth annual meeting of American Association of Petroleum Geologists, III, 25
Cumulative curves, in mechanical analyses of sediments, RMS, 185, 193, 563, 564, 572, 582, 585
use of, for determining size distribution, RMS, 554
with Phi as independent variable, RMS, 568
Cumulative production, GAS, 1022
Cundiego series, fossils of, XXV, 381
Cunningham, C. J., McCollum, L. F., and Burford, S. O., PROB, 328, 354, 419
Salt Flat oil field, Caldwell County, Texas, XIV, 1401
Cunningham, C. M., and Hardy, Norman, geology and status of development of Seal Beach and Alamitos areas, XI, 870
Cunningham, George M., GAS, 119; X, 495; XVII, 695, 1162
memorial of Donald Alexander Fullerton, XXVII, 240
review, XIII, 1488
were diatoms the chief source of California oil, X, 709
Wheeler Ridge oil field, X, 495
Cunningham, George M., and Barbat, W. F., CAL, 168, 220; MSC, 50, 105; XVIII, 450, 467, 469; XXVII, 1368, 1369
age of producing horizon at Kettleman Hills, California, discussion, XVI, 417
Cunningham, George M., and Kleinpell, W. D., XXIV, 2023
importance of unconformities to oil production in San Joaquin Valley, California, PROB, 431, 785
Cunningham, J., RMS, 281
Cunningham, William A., dolomite in Permian limestones of West Texas, XIX, 1678
Cunningham-Craig, E., PROB, 436; VII, 621; VIII, 301; IX, 1001, 1129, 1192; XIII, 81, 327; XX, 1441
Cunningham dome, structure, XXI, 511
Cunningham field, Kingman and Pratt counties, Kansas, GAS, 467, 470, 478, 480; XXI, 500
oil and gas horizons at, XXI, 509
Cunningham gas field, Kansas, contours on top of Viola lime, XXIV, 1786
Cunningham Oil Company, XXIII, 919
Cunningham pool, XXI, 501
geologic section through, XXI, 516
stratigraphic section of, XXI, 504
structure map of, XXI, 511, 514
Cunningham structure, history of, XXI 515

- Cunningham trend, XXVIII, 770
 Cup Coral formation, VI, 7
 Cup lead sampler, RMS, 638-639
 Cupido limestone, XXVIII, 1152, 1155
 Cupiferous Permian redbeds and conglomerates of Urals, XXI, 1451
 Cupiferous sandstones, red, in Kazanian series, XXIV, 263
 Cura ao, XXIV, 1568
 Curlew limestone, XXIII, 1382, 1389
 Curran, John F., Eocene stratigraphy of Chico Martinez Creek area, Kern County, California, XXVIII, 1361
 Current ideas regarding source beds for petroleum, PROB, 51
 Current movement on an active fault in Buena Vista Hills field, Kern County, California, XVII, 694
 Currents, RMS, 5-30, 48-141, 189, 197, 228, 259, 277, 279, 289, 293, 402
 action of, RMS, 210, 241, 286
 action of, depth of, on continental shelf, RMS, 235
 action of, in Baltic, RMS, 312
 action of, on sea bottom in East Indies, RMS, 354
 along beaches, RMS, 213
 amount of water transported by, in the sea, RMS, 117
 Antarctic bottom, RMS, 404, 406
 as influenced by bottom friction, RMS, 78
 at depths, RMS, 132
 classification of, RMS, 108
 coastal, in Southern California, RMS, 116
 convection, RMS, 111
 convection, effect of friction on, RMS, 116
 convection, velocity of, RMS, 116
 discharging from pass mouths, RMS, 162
 distance of transport of detritus by, RMS, 497, 502
 drift, balance of forces in, RMS, 118
 drift, computation of, RMS, 120
 due to wind, RMS, 103, 108, 125
 effect on Atlantic sediments, RMS, 382
 effect on density, RMS, 59
 effect on deposition of organic matter, RMS, 434
 effect on deposition of tests of siliceous organisms, RMS, 379
 effect on organic content, SBP, 400
 effect on sediments in North Sea, RMS, 338
 effect on size-distribution in Baltic sediments, RMS, 310
 effect on texture, SBP, 400
 effect on tidal deposits, RMS, 202
 forces controlling, RMS, 105
 in Baltic Sea, RMS, 305, 309, 310
 in Barataria Bay, RMS, 180, 188, 189
 in deeps, RMS, 103, 377
 in deeps, in sea, velocity of, RMS, 54, 103
 in North Sea, RMS, 333, 336
 in ocean, RMS, 77, 102, 132
 in submarine canyons, RMS, 252
 induced by upwelling, RMS, 126
 influence on pelagic sediments, XXIII, 1671
 local, RMS, 105
 measurements of, RMS, 236
 meter for measuring, RMS, 102, 103
 moving ships against strong winds, RMS, 278
 near bottom, RMS, 136
 observed, in open sea, RMS, 132
- (Currents)
 of eddying slope type, RMS, 277
 on continental shelves, RMS, 227
 on deltas, RMS, 172
 reaching to bottom on continental shelf, RMS, 237
 relation to atmospheric circulation, RMS, 123
 relation to deposition of foraminifera, RMS, 374
 ripples formed by, RMS, 15, 18, 19
 river, RMS, 5-30, 167
 scour by, RMS, 243
 stationary, cause of, RMS, 106
 strength of, RMS, 179
 tidal, RMS, 103, 105, 128, 129, 236, 293
 velocity, RMS, 9, 54, 79, 81, 136
 velocity in North Sea, RMS, 326, 327
 Currents, velocity in ocean, RMS, 54
 Currie district, production, STR, I, 358
 Currie fault, STR I, 312
 Currie field, Navarro County, Texas, PROB, 422, 600, 604, 779, STR I, 312; VII, 25; X, 61
 Currie pool, in Mexia fault zone, Texas, STR I, 340
 Curry, William H., XXVII, 1242
 recent shoreline process, Brazoria County, Texas, XXIV, 731
 Curry, William H., Jr., XXIX, 1463
 Fredericksburg-Washita (Edwards-Georgetown) contact in Edwards Plateau region of Texas, XVIII, 1698
 Curry Mountain, SC, opp. 54; XX, opp. 1600
 Curry Mountain shale, XXIX, 993
 Curry pool, Stephens County, Texas, STR II, 476, 478
 Curtain, Joe (well 394), SBP, 292-335, 410
 Curtis, West Virginia (well 425), SBP, 349-379, 410
 Curtis formation, XXV, 1758
 Utah, partially equivalent to Sundance, XXI, 746
 Utah, Pony Express limestone and Bilk Creek sandstone of Colorado equivalent to, XXV, 1759
 Curtis fossils in Entrada sandstone, XXIII, 1175
 Curtman, Louis J., 1276, 1292
 Curvature of equipotential surfaces, XVI, 1250
 of fold and thickness of beds, diagram showing basic data used in graphic treatment of folds in three dimensions to determine, XXII, 486
 Curve, decline, methods, III, 421
 Curve fitting, RMS, 585
 Curves, apparent resistivity, effect of anisotropy on, XIX, 37, 1566
 areal extent, and Permian history, XXVI, 247
 from cores of known orientation tested by magnetic core orienter, XXI, 595
 on lantern-slide copy, rules for, XXVI, 1661
 showing similarity of crude oils from Burbank sand and from Bartlesville sand, XXV, 1806
 Cushing anticline formed during Pennsylvanian, STR II, 406
 Cushing field, Oklahoma, PROB, 71, 294, 319, 583, 770; STR II, 396; III, 259, 445; IV, 90; V, 120, 132, 149, 413, 445, 546, 576; VI, 61, 79, (Cushing)
 320; XXV, 21, 1626
 Cushing-Stillwater area, XXIII, 830
 Cushing structure, PROB, 583, 616
 Cushing uplift, XXIII, 830
 Cushman, and Thomas, XIX, 690
 Cushman, Joseph A., MEX, ix, 76-79, 90, 110, 123; MSC, 5, 9, 11, 12, 16, 22, 79, 81, 110, 115, 123, 125, 129, 168, 177, 178, 194, 196, 197, 199, 203, 209, 210, 212, 215, 222, 224, 226, 229, 236, 240, 256, 271, 291, 293, 295, 299, 300, 302, 306, 307, 322, 327, 329, 332, 333, 335-337; 350, Figs. 4, 14 (in pocket); RMS, 287; SC, 44; III, 290; VII, 517, 520, 522, 527; VIII, 540, 549, 552, IX, 723; X, 131, 388, 667, 700; XI, 994, 1198; XII, 979; XIV, 1325, XV, 742, 750; XVII, 631, 641; 648, 1294; XVIII, 1279, 1507 XIX, 529; 1660; XX, 433, 440; 441, 442, 443, 809, 985, 1590; XXI, 95, 809; XXII, 996, 1000, 1006, 1010, 1655; XXIII, 159, XXIV, 435, 1593, 1600; XXV, 738, 1222, 1224, 1225, 1237, 1250; XXVI, 1651; XXVII, 940, 1067, 1375; XXVIII, 14, 1078, 1131, 1356, 1674, 1677; XXIX, 71, 72, 81, 87, 886, 905, 920
 Eocene fauna from Moctezuma River Mexico, IX, 298
 foraminifera, X, 700
 foraminifera of Velasco shale of Tampico Embayment, X, 581
 foraminifera: their classification and economic use, review, XIII, 239; XXIV, 1498
 identification of foraminifera, VII, 517
 identification of fossils in Puente Hills, XIV, 1447
 use of foraminifera in geologic correlation, VII, 485
 Cushman, Joseph A., and Adams, Bradford C., MSC, 72, Fig. 14 (in pocket)
 Cushman, Joseph A., and Applin, E. R., XIV, 227; XVII, 1297, 1304; XXI, 92
 division of Jackson formation by, GC, 473; XVII, 1297
 Texas Jackson Foraminifera, X, 154
 Cushman, Joseph A., and Barbat, W. F., MSC, 50, 184, 190-194, 204, 219, 227, 230, 232, 240, 241, 243, 251, 260, 264, 290, 305, 308, 313, 316, 320, 322, 353, Fig. 14 (in pocket)
 Cushman, Joseph A., and Barksdale, J. D., XXIV, 1933
 Cushman, Joseph A., and Church, C. C., CAL, 110, 111; XXVII, 255
 Cushman, Joseph A., and Dall, W. H., XXVIII, 1675
 Cushman, Joseph A., and Dusenbury, A. N., MSC, 214, 318; XXIV, 1931
 Cushman, Joseph A., and Ellis, Alva C., XIX, 1660; XXII, 1006; XXVIII, 1357
 Cushman, Joseph A., and Galliher, E. W., MSC, 68
 Cushman, J. A., and Garrett, J. B., XXV, 738
 Cushman, Joseph A., and Goudkoff, Paul P., MSC, 78
 Cushman, Joseph A., and Grant IV, U. S., MSC, 25, Fig. 14 (in pocket)

- Cushman, Joseph A., and Hanna, G. D., XIV, 1324; XXIV, 1932
- Cushman, Joseph A., and Hanna, M. A., XXIV, 1932
- Cushman, Joseph A., and Hobson, H. D., MSC, 51, 72, 186, 188-191, 197, 199, 204, 216, 221, 222, 240, 242, 244, 259, 260, 291, 316, 341
- Cushman, Joseph A., and Kellett, Betty, MSC, 12
- Cushman, Joseph A., and Klempell, R. M., MSC, 68, 198, 209, 221, 233, 234, 272, 273, 295, 297, 321, 33, 347
- Cushman, Joseph A., and Laiming, Boris, CAL, 179; MSC, 28, 32, 85, 86, 97, 98, 111-113, 116, 186-189, 191, 192, 202, 204, 208, 211, 213, 216, 217, 221, 225-227, 230, 233, 240, 241, 243, 248, 251, 260, 261, 266, 275-277, 288, 290, 305-307, 316, 317, 321, 323, 333, 335, 342, 343, 345, 346, 352, 353, Figs. 6, 14 (in pocket); XVIII, 377; XX, 222
- Cushman, Joseph A., and LeRoy, L. W., MSC, 78, 192, 199, 204, 208, 213, 224, 226, 227, 232, 233, 248, 257, 261, 278, 283, 311, 344
- Cushman, Joseph A., and McMasters, J. H., MSC, 243; XXIV, 1931, 1932; XXVII, 1372
- Cushman, Joseph A., and Moyer, Dorothy A., MSC, 12, 169, 257
- Cushman, Joseph A., and Parker, F. L., MSC, 12, 38, 153, 192, 204, 208, 210, 214, 216, 219, 221, 225-227, 230, 232-234, 237, 241, 251, 253, 260, 262, 266, 271, 274, 275, 287, 290, 292, 305, 312, 316, 320, 324, 325, 329, 333, 342, 352, 353, Fig. 14 (in pocket)
- Cushman, Joseph A., and Ponton, Gerald M., MSC, 176; XVII, 641, 647; XIX, 1156; XXV, 264, 269, 272, 273, 275, 738
- Cushman, Joseph A. and Schenck, Hubert G., MSC, 78, 99, 102, 188, 220, 228; XX, 220, 221; XXIV, 1930
- Cushman, Joseph A., and Siegfus, Stanley S., MSC, 79; XXIV, 1933; XXVII, 1380
- Cushman, Joseph A., and Stewart, R. E., MSC, 79
- Cushman, Joseph A., and Valentine, Wm. W., MSC, 12, 16, 169, 235, 350
- Cushman, Joseph A., and Waters, J. A., XIII, 467, 885; XXV, 133, 738
- Cushman, Joseph A., and Wickenden, R. T. D., MSC, 12
- Cushman, Joseph A., Laiming, Boris, and Eaton, J. E., MSC, Fig. 14 (in pocket)
- Cushman, Joseph A., Stewart, R. E., and Stewart, K. C., MSC, 26, 193, 196, 211, 223, 230, 232, 240, 243, 251, 258, 260, 264, 266, 273, 288, 299, 301, 328, 330, 335, Fig. 14 (in pocket)
- Cushman Laboratory for Foraminiferal Research, XXV, 1236
- Cusseta sand, XXII, 790, 1649
- Custer, upper, erosional character of, XXI, 443
- Custer formation of Texas, XXI, 421 discussion, XXII, 925
- Custer group, unconformity at base of, XXI, 1566
- Cut Bank and Kevin-Sunburst areas, (Cut)
- Rierdon formation in, XXIX, 1280
- Cut Bank area, Sawtooth formation in, XXIX, 1273
- Swift formation in, XXIX, 1284
- Cut Bank-Darling area, XXIX, 1269
- Cut Bank field, Glacier County, Montana, GAS, 265; PROB, 703, 711; STRAT, 331, 332, 334, 368; XXI, 991; XXII, 684, 687; XXIII, 920; XXVII, 857; XXVIII, 791
- production from, XXIV, 1107
- stratigraphic trap at, XXI, 1244
- waters in, XXVI, 1370
- (well 198), SBP, 193-246, 406
- Cut Bank gas area, XXIII, 915
- Cut Bank monocline, XXVII, 461
- Cut Bank oil and gas field, Glacier County, Montana, STRAT, 327; XXIX, 1273
- accumulation of oil, STRAT, 349, 369
- analyses of gas, STRAT, 377
- analyses of oil, STRAT, 375-376
- analyses of water, STRAT, 377-381
- cost of drilling, STRAT, 372
- Cut Bank sand, Cut Bank field, STRAT, 349; XXVII, 461
- Cut Bank sand member of Kootenai formation productive at North Cut Bank field, Montana, XXIV, 1107
- Cut Bank sandstone, XXIX, 1269
- Cutch, PROB, 361
- Cutler, XXVIII, 235
- Cutler and Clute, VIII, 591
- Cutler, La Vern, XXIV, 1771
- Cutler, Willard W., Jr., estimation of underground oil reserves by oil-well production curves, review, IX, 361
- predictions of future of oil pools by early wells, X, 747
- production curves, review, IX, 361
- Cutler, Lonsdale, Piasa, and Bankston Fork limestones in Illinois coal basin, correlation of, XXIII, 1521
- Cutler-Bankston Fork succession, XXIII, 1522
- Cutler coal bed, XXIII, 1512
- Cutler formation, POP, 67; XXV, 1499
- redbeds of, in Utah and Arizona, XXIV, 621
- Cutler limestone, XXIII, 1512, 1522
- Cutoff shaly member, PTNM, 569, 586; XXVI, 569, 586
- Cutter heads, forms of, XIV, 572
- Cuttings from Duffer well, Ranger field, description of, III, 39
- rotary, interpretation of, XII, 69
- Cuxhaven, Germany, RMS, 200
- Cuyahoga formation in Ohio, GAS, 903
- in Scenery Hill gas field, Pennsylvania, STR II, 446
- Cuyahoga sandstone, IV 308; V, 151
- Cuyahoga shale, PROB, 460
- Cuyama Badlands, SC, 78; XX, 1624
- Cuyama fault, XXV, 261
- Cuyama formation, CAL, 303; SC, 82; XX, 1628; XXV, 256
- Cuyama Gorge-Nipomo, MSC, 2
- Cuyama-Huasma district, MSC, 155
- Cuyama region, CAL, 21, 95, 309
- Cuyama River, MSC, 73, 75, 111
- Cuyama River gorge, MSC, 102, 152, 185-190, 192-194, 203-205, 209-211, 213, 215-218, 220, 222, 223, 225, 226, 228, 229, 239, 240, 242, 246, 253, 256, 259, 275, 276, 292-295, 317, 321-323, 328, 333, 334, 337, 338, 342, 343, 346, 352-355, Fig. 14 (in pocket)
- Cuyama River gorge and Cambria, (Cuyama)
- check list of foraminifera near, MSC, 74
- Cuyama Valley, CAL, 148, 167, 203, 211, 219, MSC, 163; SC, 77, 78, opp. 80, 85, 88; XX, 1623, 1624, opp. 1626, 1631, 1634
- Monterey in, XXV, 236, 239
- oyster succession of, XXV, 248
- Phocene in, XXV, 218, 254
- Tembler in, XXV, 226
- Vaqueros in, XXV, 218
- Cuyler, Robert Hamilton, XVII, 506, 512; XXIII, 217; XXIX, 1431, 1449, 1462
- bibliography of, XXVIII, 1236
- Georgetown formation of central Texas and its northern Texas equivalents, XIII, 1291
- memorial of, XXVIII, 1233
- Travis Peak formation of central Texas, XXIII, 625
- vegetation as an indicator of geologic formations, XV, 67
- Cuyuga field, XXVII, 920
- Cyclammina clays, XXIV, 2109, 2123
- Cyclammina zone in Edna gas field, XXV, 111
- Cycle of organic matter in sea, RMS, 438-441
- Cyclical nature of sedimentation in Permian, XXVI, 254
- Cyclical variations in ocean, RMS, 58
- in properties of particles in sea, RMS, 58
- Cyclohexane derivatives, XXVII, 1596
- Cyclolobus fauna, XXII, 1019
- Cyclonic wind system, RMS, 124
- Cyclopentane derivatives, XXVII, 1596
- Cyclothem, ideally developed, diagram showing succession of members in, XXIII, 1377
- in *Conchifera* beds south of Kazan, XXV, 1401
- Cylindrical seed tester as a bottom sampler, RMS, 645
- Cynthiana beds, XXIX, 683
- Cynthiana limestone, Big Sinking field, STRAT, 178
- Cypress Bayou oil field, XXVI, 1266
- Cypress formation, XXIII, 1370
- productive in Loudon field, XXIII, 1370
- Cypress production, XXVI, 1603
- at North Noble field, XXIII, 1495
- Cypress sand, XXII, 653; XXVII, 820
- Cypress sandstone, V, 171; VI, 25; XXI, 785; XXIV, 216, 830; XXV, 878, 1119; XXVI, 1603; XXVIII, 740
- in Kentucky, XXII, 277
- productive in Loudon field, XXIII, -815
- uppermost producing zone in Basin fields, Illinois, XXIII, 1499
- Cyrtograpus shale of Bainbridge formation of Missouri, XXIII, 597
- Cystoids, XXV, 128
- Czar district, Alberta, VII, 154
- Czechoslovakia, RMS, 471
- bituminous shale in, XXIV, 392
- stratigraphy, VI, 523

da Rocha, Domingos Fleury, XX, 1208

da Vinci, Leonardo, XXIV, 1762

Dacian formation in Roumania, SD, 138; IX, 154

Dacian horizon in Roumania, XVIII, 884

- Dacite in Whittier conglomerates, XXIV, 662
 Dacite dike, V, 71
 Dagestan district, Russia, Izberbash oil field at, XXI, 1076
 Dagger Flat sandstone, XXIX, 1339
 Daghestan district, Russia, XI, 500
 Daghestanskii Ogni region, gas in, XVIII, 751
 Daguin, F., XVI, 445
 Daft, XVI, 1263
 Dahalak Islands, oil showings, XXI, 296
 Dahlgren, E. G., XVI, 1021
 Dahlgren, P. F., VII, 49
 Dahlgren, F., Lee, Cheng-San, and Block, W., *Kaledonske und variszische Probleme der West-sudeten*, review, XXIII, 1418
 Daines, L. L., XXII, 1331
 Dake, Charles Laurence, VI, 217, 219; X, 831; XI, 970, 974; XII, 188; XIII, 24, 594, 1213; XV, 1018, 1019, 1022, XVIII, 572, 598; XX, 303, 980; XXIII, 1837; XXIV, 154; XXV, 675, 2021, 2036, 2030, 2036; XXIX, 218
 discussion of pre-Carboniferous of Marathon uplift, XV, 1082
 memorial of, XIX, 144
 reviews, XIV, 1479; XVIII, 960
 Dake, Charles L., and Bridge, Josiah, XVIII, 1249; XXII, 1411; XXIV, 71, 74; XXV, 1635, XXVI, 1399
 buried and resurrected hills of central Ozarks, XVI, 629
 initial dips peripheral to resurrected hills, review, XII, 1171
 Dake, Charles L., and Brown, J. S., interpretation of topographic and geologic maps, review, X, 906
 Dake, Charles L., and Dake, L. F., rôle of cap rock in oil accumulation, discussion, XVIII, 1086
 Dake, Laurence F., XXV, 1969
 Dakota and Frontier waters, northwestern Colorado, typical, PROB, 946
 Dakota and Lakota sands, XXVIII, 796
 Dakota and Muddy sandstones, gas from, XXI, 993
 Dakota basin, PROB, 275
 Benton group in, XXVI, 1561
 Cambrian in, XXVI, 1566
 Cretaceous system in, XXVI, 1560
 Dakota group in, XXVI, 1562
 Devonian in, XXVII, 1592
 Devonian-Silurian in, XXVI, 1565
 Eocene in, XXVI, 1560
 faulting in, XXVI, 1570
 Jurassic in, XXVI, 1562
 lower Mississippian in, XXVI, 1565
 map showing structure of, XXVII, 1584
 Mississippian in, XXVI, 1564; XXVII, 1592
 of North Dakota, cross section of Tertiary strata in, from Sentinel Butte to central Burleigh County, XXVII, 1572
 of North Dakota, Tertiary geology and oil and gas prospects in, XXVII, 1567
 Oligocene in, XXVI, 1559
 Ordovician in, XXVI, 1566; XXVII, 1592
 Paleocene in, XXVI, 1560
 Permian in, XXVI, 1563
- (Dakota)
 Permo-Pennsylvanian in, XXVI, 1563
 Pleistocene in, XXVI, 1559
 possible producing zones in, XXVI, 1581
 pre-Cambrian rocks in, XXVI, 1567
 pre-Cretaceous areal geology of, XXVI, 1579
 pre-Cretaceous paleogeologic map, XXVI, 1580
 pre-Pennsylvanian areal geology of, XXVI, 1578
 pre-Pennsylvanian paleogeologic map, XXVI, 1577
 Quaternary in, XXVI, 1559
 regional geology of, XXVI, 1557
 discussion, XXVII, 90
 stratigraphy, XXVI, 1559
 stratigraphy of Tertiary in, XXVII, 1568
 structural geology of, XXVI, 1567
 Tertiary and Cretaceous structure in, XXVII, 1582
 Tertiary system in, XXVI, 1559
 tilting and uplift in, XXVI, 1577
 Triassic in, XXVI, 1563
 wells drilled for oil and gas in, XXVI, 1586
 Dakota formation, GAS, 312, 315, 318, 324-326, 329, 369, 371, 377, 380, 1059
 fauna of the so-called, of north-central Colorado, and its equivalent in southeastern Wyoming, review, VII, 306
 Rocky Mountain states, PROB, 160, 163, 168, 343, 409, 838
 stratigraphic section, XXVIII, 1205
 Dakota gas sands, Elk Basin field, Wyoming and Montana, STR II, 583
 Dakota group, FOP, 77; XXI, 1262; XXV, 137, 887, 888, 1509, XXVI, 1523; XXVIII, 1204
 Big Sand Draw field, Wyoming, XII, 1141
 Elk Basin field, Wyoming and Montana, STR II, 579, 580
 Florence field, Colorado, STR II, 79
 Greasewood field, STRAT, 26
 in Dakota basin, XXVI, 1562
 Lance Creek field, Wyoming, STR II, 607
 Lost Soldier district, STR II, 643
 Nebraska, isopach map, XXVI, 1525
 northeastern Colorado, XVII, 417
 Rock River field, Wyoming, STR II, 616
 Salt Creek field, Wyoming, STR II, 594
 sand in, productive at Fort Collins field, Colorado, XXIV, 1104
 thick development of, in central Nebraska, XXVI, 1135
 Dakota group waters, XXIV, 1251
 Big Horn basin, XXIV, 1256
 Laramie basin, XXIV, 1262
 of two classes, chloride-saline and sulphate-saline, XXIV, 1269
 Poison Spider area, XXIV, 1262
 Powder River basin, XXIV, 1264, 1270
 representative, in Wyoming fields, XXIV, 1246, 1258, 1262, 1264, 1270
 Sweetwater basin, XXIV, 1258
 Wind River basin, XXIV, 1258
 Wyoming fields, analysis of, XXIV, 1252-1254
 Dakota oil, Rocky Mountain states,
- (Dakota)
 gravity of, PROB, 168, 169
 Dakota sample from Nieber dome, XXV, 1852
 Dakota samples from Elk Basin, XXV, 1852
 Dakota sand, XXIII, 913, 1054
 Elk Basin field, Wyoming and Montana, STR I, 584
 Ferris dome, Wyoming, STR II, 658
 Grass Creek dome, Wyoming, STR II, 624
 Hogback field, XIII, 128
 Iles dome, Colorado, STR II, 99
 Lance Creek field, Wyoming, STR II, 607, 608
 Little Lost Soldier dome, Wyoming, STR II, 648, 649
 Lost Soldier district, Wyoming, STR II, 644, 663
 Mahoney dome, Wyoming, STR II, 654, 655
 Moffat dome, Colorado, STR II, 97, 103
 northwestern Colorado, source beds for oil and gas, STR II, 97
 post-Laramide erosion cause of escape of oil from, XXVII, 903
 Rangely dome, Colorado, STR II, 108
 Rock River field, Wyoming, STR II, 616
 Salt Creek field, Wyoming, STR II, 596
 Sherard dome, Wyoming, STR II, 662
 Thornburg dome, Colorado, STR II, 97, 104
 Tow Creek anticline, Colorado, STR II, 108
 Wertz dome, Wyoming, STR II, 552
 West Ferris and Ferris domes, Wyoming, STR II, 657
 Dakota sand gas producers, XXIII, 917
 Dakota sands, analysis of gas from, at Elk Basin field, Wyoming and Montana, STR II, 586
 Lance Creek field, Wyoming, water in the, STR II, 612
 Dakota sandstone, FOP, 62, 75, 82; STRAT, 28; XXI, 994; XXII, 676, 1025, 1633; XXIII, 907, 917, XXV, 1494, 1507, 1514; XXVI, 351, 1534; XXVII, 855, 858; XXVIII, 792
 Alberta, ALTA, 5; XV, 1133
 Beaver Creek, XXV, 1851
 brackish-water origin, PROB, 275
 Canada, IV, 250, 314; V, 524
 concentration of water in, PROB, 276
 gas in, XXI, 989; XXII, 686
 Greasewood field, STRAT, 23, 28, 29
 Hugoton field, STRAT, 84, 85
 Kansas, II, 80; V, 508, VI, 72, 551; IX, 1019
 (Kd) (Cretaceous), SBP, 193, 195, 200-255, 258, 261-280, 285-292, 414
 Lance Creek, XXV, 1852
 Laramie County, Wyoming, XXI, 995
 lower, XXVIII, 1198
 Montana, VI, 146
 Nebraska, structural map of top of, XXVI, 1530
 New Mexico, IV, 76, 96, 109; V, 18, 331
 Rocky Mountain area, XVI, 875; XXI, 905

- (Dakota)
 Shiprock district, XIII, 147
 South Dakota, VI, 552
 Texas, III, 96; V, 7, 20, 24
 Utah, VI, 204, 220
 Wyoming, III, 358, IV, 38; V, 196
 Dakota sandstone ridge, XXVIII, 198
 Dakota sandstone sample from Iles, Colorado, XXV, 1853
 Dakota sandstone samples from Quealy dome, XXV, 1852
 Dakota series, XXI, 994
 Dakota series in New Mexico, gravity of oil from, XXI, 995
 Dakota water, PROB, 275, 948
 Bolton Creek field, XXIV, 1263
 Spindletop dome, XXIV, 1263
 Dale, J. M., STR II, 347; XVIII, 1049
 Dale, T. N., XII, 910, 914
 Dale field, Texas, XVI, 756
 Dale-Hoodville pool, XXIX, 690
 Dale structure, XI, 838
 Daleon, Benjamin, XXIX, 956
 Daley, M. R., VIII, 698
 Dalhart basin, XXIII, 1029, 1043
 Dalhousie sand, Turner Valley, Alberta, GAS, 20, 21, 45
 Dall, W. H., MEX, 116, 120; MSC, 172; RMS, 283; I, 37; VII, 519, 520, 612; IX, 619, X, 506, XII, 116, 117, 978, XV, 374, 382; XVII, 646; XIX, 1171, 1653; XX, 220, 494, 495; XXIII, 1560 XXVIII, 978, 980, 982, 983, 998, 999
 Dall, W. H., and Cushman, J. A., XXVIII, 1675
 Dallas County, XXVIII, 849
 Dallas dome, XXV, 148
 Tensleep and Embarras waters in, XXIV, 1295
 Dallas field, history of discovery of oil, PROB, 719
 Dalleville, J. M., micromeritics, the technology of fine particles, review, XXVII, 1163
 Dalley, Claude, XVI, 959
 d'Allion, Joseph de la Roche, XIX, 476
 Dallmus, K. F., 1104; XXIII, 702
 Dallmus, K. F., XXII, 1104; XXIII, 702
 Dalloni, M., SD, 118
 Dalmanites zone, XXVI, 12
 Dalmar sand in Archer County fields, Texas, STR I, 427; X, 466
 Dalrymple pool, XXV, 1069
 Dalton, L. V., PROB, 36; SBP, 2
 Dalton, W. H., V, 464; VII, 605
 Daly, XXII, 64
 Daly, John W., how to make velocity corrections, XXVIII, 615
 Daly, M. A., V, 467
 Daly, M. R., XIV, 30; XVI, 940
 Daly, Reginald A., CD, 19, 29, 30; RMS, 241; VIII, 706; XI, 1289; 1292, 1293; XV, 503; XVI, 789; XXVIII, 15; XXIII, 1322; XXIV, 499, 504; XXV, 172; XXIX, 1393
 attitude toward displacement theory, CD, 142
 igneous rocks and the depths of the earth, review, XVIII, 151
 objections to continental drift theory, CD, 108
 strength and structure of the earth, review, XXV, 902, 1181
 theory of continental sliding, CD, 38, 151
 Dam Breccia, XXVI, 1803, 1807
 Dam failures due to defective foundations, XXVI, 1799
 Dammam field in Saudi Arabia, XXIII, 964
 Dammung, lake basins due to, XXV, 827
 Damon Humble Oil Co., SD, 620
 Damon Mound, Texas, GAS, 708; PROB, 116; SD, 25, 632, II, 23; III, 87, 323; V, 212; VI, 253, IX, 505, 860; X, 978
 comparison of secondary mounds with those of German salt domes, SD, 203
 gravity anomalies, SD, 30
 Oil & P. L. Co., SD, 620
 sulphur waters at, SD, 775
 Damon Mound dome, flank production, at, GC, 6; XVIII, 505
 Damon Mound oil field, Texas, SD, 613
 Oligocene production at, GC, 11; XVIII, 510
 Dameron Brothers, XXIV, 968
 Dams, concrete, comparative data on world's largest, XXVI, 1802
 Dana, III, 289; IX, 422; XIX, 1593; XXI, 627
 Dana, Charles, XXIX, 126
 Dana, E. S., SD, 396
 Dana, James Dwight, CD, 140; XIII, 646; XVIII, 1298; XX, 910; XXI, 1488; XXIX, 492, 1325
 Dana, James S., XIII, 592
 Dana, P. L., and Scobey, E. H., cross section of Chester of Illinois basin, XXV, 871
 Dana expedition, RMS, 51
 Danau formation, XXII, 9
 Jurassic or Triassic, in East Indies, XXII, 26
 of Borneo, XXVI, 778
 Danburite in rock salt of Choctaw salt plug, XXI, 1293
 Danbury, PROB, 115
 Danby, Arthur, XI, 396, 404
 Danby area, XXVII, 837
 Dance pool, XXV, 1070
 D'Andriment, R., V, 670
 Dane, Carle H., GAS, 779; PROB, 666; STR II, 188; XI, 1, 4, 9, 11, 12, 15, 308; XII, 41; XIII, 1414; XIV, 836; XV, 945; XVII, 963; XX, 312; 1343; XXI, 723, 1272; XXII, 974, 975, 976, 977, 978, 1478, 1509, 1669; XXVI, 1395; XXVIII, 1196, 1679
 review, XXII, 1606
 Upper Cretaceous formations of southwestern Arkansas, review, XIII, 1572
 Dane, Carle H., and Hendricks, T. A., correlation of Bluejacket sandstone, Oklahoma, XX, 312
 Dane, Carle H., and Pierce, W. G., XXIX, 1664
 Dawson and Laramie formations in southeastern part of Denver Basin, Colorado, XX, 1308
 fossil sink holes in Cretaceous beds in Prowers County, Colorado, XVIII, 1493
 Dane, Carle H., and Stephenson, L. W., notes on Taylor and Navarro formations in east-central Texas, XII, 41
 Dane, Carle H., Baker, A. A., and McKnight, E. T., PROB, 634, 658
 Dane, Carle H., Baker, A. A., and Reese, J. B., Jr., XVII, 125; XXI, 723, 724, 730, 731, 746, 753, 754, 1259; XXIII, 1167, 1170, 1171, 1172
 (Dane)
 Paradox formation of eastern Utah and western Colorado, XVII, 963
 Dane, Carle H., Dobbin, C. E., and Hoots, H. W., GAS, 305
 Dane, Carle H., Hendricks, T. A., and Knechtel, M. M., stratigraphy of Arkansas-Oklahoma coal basin, XX, 1342
 Dane, Carle H., Rothrock, H. E., and Williams, James Steele, XX, 1355, XXIX, 152
 Danesi, D., and Marino, L., X, 1281
 Danforth Hills line of folding, XXIII, 907
 Dangast, RMS, 335
 Danian, CAL, 107; MEX, 76, 85, 91, 97
 European, relation to Texas Midway, XV, 151
 Danian beds, XXVII, 270
 Danian stage, type locality of, XXVII, 270
 Daniel, Orion A., Jones County, Texas, discovery, XXIV, 2180
 Daniell, Alfred, VIII, 721
 Daniels, James I., V, 121; XVI, 655, 658; XIX, 1406; XX, 97, 101; XXIII, 1777
 Daniels, James I., and Clark, Stuart K., PROB, 775
 relation between structure and production in the Mervine, Ponca, Blackwell and South Blackwell oil fields, Kay County, Oklahoma, STR I, 158
 Daniels, James I., and Koester, E. A., XXI, 133
 Daniels, James I., Clark, Stuart K., and Richards, J. T., logging rotary wells from drill cuttings, XII, 59
 Danish coast, RMS, 329
 Danish expedition, RMS, 51
 Danish Geodetic Survey research bearing on theory of continental drift, CD, 101
 Danish investigations on the Dana, RMS, 51
 Danish Sound, RMS, 299, 312, 316, 319
 Dankali graben, XXI, 297
 Dannenbaum, J., SD, 645, 676
 Dannevig, A., RMS, 359
 Danville coal No. 7, XXIII, 1392
Daonella-Halobia fauna, XXII, 11
 Darby, William, SD, 7, 395; IX, 837; XIX, 1607
 Darby fault, XIII, 1277; XXV 1737, 1740
 Darby formation, XXV, 129
 Darby Oil Company (well 255), SBP, 255-285, 407
 Darby overthrust, PROB, 692; XXVII, 428
 Darby Petroleum Company, XXIII, 805
 Darby thrust fault, X, 106
 D'Arcy, IX, 207; XVIII, 165
 D'Arcy's law for calculation of permeability, XVIII, 164; XX, 705
 Darcy, XII, 1097; XVI, 382
 Darcy and Poiseuille, XV, 195
 Darcy's law for estimating drawdowns or recoveries of water levels, XXIX, 273
 of fluid flow through sands, XXV, 1315
 Dardanelles, RMS, 95
 Darien pool, XXIV, 999
 Dark Canyon, Tansill formation in, XXV, 1723

- Dark Victor in Tumungato field, structure of top of, XXVIII, 1472
- Dark Victor zone, XXVIII, 1468
- Darling, M. S., XIII, 784
- Darling sand, GAS, 267
- Darnell, J. L., III, 428; X, 747; XXVI, 1826
- Darrah, William C., PTNM, 684, XIX, 1547; XXIII, 1555, 1556, 1557; XXIV, 293, 313, 321, 322, XXVI, 684
- textbook of paleobotany, review, XXIV, 750
- Darrett gas production, XXII, 1517
- Darrett zone, gas and oil in porous beds in, XXII, 1516
- oil production from, XXII, 1506
- Darrow dome, cross section of, XXII, 1419
- map showing location of, XXII, 1415
- oil production at, XXII, 1422
- origin of, differential pressure from movement along fault planes, XXII, 1420
- production from flank belts at, XXII, 1422
- salt map of, with data on wells, XXII, 1417
- Darrow salt dome, Ascension Parish, Louisiana, XXII, 1412
- first successful salt dome east of Mississippi River, XXII, 1412
- Darst Creek fault, Guadalupe County, Texas, XIII, 1387; XVIII, 28
- Darst Creek field, Guadalupe County, Texas, PROB, 782, 893, 903, 904; XVI, 762; XVII, 16
- Darst Creek-Salt Flat line of faults in Guadalupe and Caldwell counties, XXIX, 1734
- Darton, N. H., GAS, 368; PTNM, 674, 676; PROB, 1013; STRAT, 849; II, 71, 82; IV, 81; V, 261; VI, 70, 77; VII, 169, 171, 176, 222; IX, 1020; X, 800, 805, 1056; XI, 791, 992, 996; XIII, 651, 918, 921, 922, 924, 933, 938, 941, 967, 980, 985, 987, 1260, 1415, 1422, 1427, 1428, 1429, 1439, 1443, 1444, XIV, 771, 772, 786; XV, 1096; XVI, 536, XVII, 124, 126, 130, 401; XVIII, 31, 36, 1479, 1538, 1599, 1655, 1656, 1657, 1672; XIX, 78, 107, 221, 226; XX, 1330, 1331, 1333, 1334, 1338; XXI, 717, 718, 732, 849, 856, 1086; XXII, 525, 536, 537, 543, XXIII, 465, 1158, 1165, 1167, 1170, 1444, 1449; XXIV, 164, 301, 308, 309, 498, 629, 1008; XXV, 132, 135, 2110; XXVI, 674; 676, 1517, 1518, 1570; XXVII, 1293, 1581; XXIX, 72, 80, 905
- geology of Big Horn Mountains, Wyoming, VII, 171
- honorary member of American Association of Petroleum Geologists, XXII, 1118
- Permian of Arizona and New Mexico, X, 819
- Darton, N. H., and Paige, Sidney, XIV, 620
- Darton, N. H., and Reeside, J. B., Jr., PTNM, 572, 573, 601, 603; XIII, 645, 650, 655, 930, 981; XXI, 868; XXVI, 572, 573, 601, 603; XXIX, 1772, 1773, 1775
- Darton, N. H., and Salisbury, R. D., GAS, 299
- Darton, N. H., and Siebenthal, C. E., XVIII, 1657, 1687, 1689, 1690; (Darton)
- XXVIII, 1196, 1201
- Darton, N. H., Richardson, G. B., and Gardner, Julia, XVII, 491
- Darwaz, Permian ammonite zones of, XXII, 1016
- Darwin, Charles, XIII, 646
- Darwin, George, XXIX, 1631
- Darwin, George, and Darwin, Horace, XXIX, 1631
- Darwin, Horace, and Darwin, George, XXIX, 1631
- Darwin, Oklahoma (well 301), SBP, 255-285, 408
- Darwinian evolutionary concepts, MSC, 79
- Daszawa gas field, XVIII, 902
- Data, basic, table of, SBP, 412
- on Hoffman field, summary of, XXIV, 2142
- Datum planes for contouring Gulf Coast region, XXIII, 1404
- Daube limestone, XXV, 1668
- Daubrée, A., XII, 850; XVI, 1097
- Davenport dome, Kentucky, VI, 31
- Davenport field, Lincoln County, Oklahoma, PROB, 441; STRAT, 386
- accumulation of oil, STRAT, 394, 407
- analyses of oil, STRAT, 406, 407
- analyses of water, STRAT, 403
- cost of drilling, STRAT, 399
- Davenport limestone, Bowers field, Texas, XXVII, 36
- Davenport pool, Oklahoma, PROB, 440, 441
- Davey, M. A., SD, 211, 244, 256; X, 3, 48; XII, 528, XVI, 585
- Davey, Richard, XX, 316
- David, Lore, Miocene fishes in well cores from Torrance in southern California, XXIV, 2182; XXV, 319
- David, Max, XXIII, 1820, 1822, 1825
- David, Max, and Howard, W. V., XXIV, 1973
- David, Max, Young, Addison, and Wahlstrom, E. A., Goldsmith field, Ector County, Texas, XXIII, 1525
- David, T. W. E., X, 1119, 1121, 1128, 1137, 1138, 1142; XI, 56, 75, 159; XVII, 1101; XIX, 1811; XX, 985, 1031; XXII, 3, 22; XXV, 386, 398, 402
- Davidson, Arthur William, SD, 469
- Davidson, C. J., and the Atlantic Refining Company, XXIII, 1526
- Davidson, George, CAL, 3, 268
- Davidson, J. P., Ben Bolt field, Jim Wells County, Texas, XXIII, 1237
- Davies, A. Morley, CAL, 301; MSC, 89, 96, 173-175, 180, 181; XV, 156; XIX, 525, 258
- Tertiary faunas, review, XVIII, 1206; XX, 505
- Davies, D. C., SD, 396
- Davies, H. F., XVII, 375, 397, 410; XVIII, 143, 1172, 1175; XXV, 1741
- structural history and its relation to accumulation of oil and gas in Rocky Mountain district, PROB, 679
- Davies, H. G., SBP, 196
- Davies, N. C., and Reeves, John R., subsurface distribution of Hamilton group of New York and northern Pennsylvania, XXI, 311
- Davies, Ralph, XXVII, 932
- Davies and Grundy counties, Missouri, Des Moines series in, section, XXV, 45
- (Davies)
- Missouri series in, section, XXV, 44
- Davila, Salvador Ortiz, memorial of, XVI, 330
- Davis, IV, 42; V, 468; XVI, 2, 15
- Davis, C. A., RMS, 641, 642; VI, 334; IX, 254, 255, 257, XXII, 1033
- Davis, C. H., XXVII, 191; XXVIII, 499, 507
- Davis, E. F., CAL, 79, 81, 89, 91, 92, 93, 196; V, 49, 60; XI, 611; XII, 752, XVI, 8; XXVII, 119, 132, 136, 147, 177; XXVIII, 467; XXIX, 957
- Davis, Harold S., SD, 717
- Davis, Harry T., XXIX, 910
- Davis, John A., and Rice, George S., XIX, 887
- Davis, John H., Jr., XXIX, 1256
- ecology and geologic rôle of mangroves in Florida, review, XXVI, 1427
- Davis, John R., XXIV, 717, 721
- Davis, Morgan J., GAS, 435
- Davis, Morgan J., PROB, 373; XIII, 999, 1021; XXIII, 1635; XXIV, 435; XXVII, 920; XXVIII, 1011, 1355, 1677; XXIX, 1417
- Artesia field, Eddy County, New Mexico, STR I, 112
- Davis, Morgan J., and Blanchard, W. Grant, Jr., XIV, 975, 977, 979; XXI, 870, 875; XXIV, 47; XXV, 93; XXVI, 85, 87, 98
- Permian stratigraphy and structure of parts of southeastern New Mexico and southwestern Texas, XIII, 957
- Davis, N. A., and Erdmann, C. E., STRAT, 303, 304
- Davis, N. B., XI, 249
- Davis, Ninetta, XXIII, 122
- Davis, R. O. E., XVI, 1273
- Davis, Ralph E., GAS, 1016, 1019, 1021, 1023; SBP, 357
- Davis, Ralph E., and Stephenson, Eugene A., synclinal oil fields in southern West Virginia, STR II, 571
- Davis, Ralph E., and Terry, L. F., GAS, 1111
- Davis, Ralph E., et al., GAS, 1136, 1140
- Davis, Thomas J., IX, 260
- Davis, Thornton, XVII, 816; XX, 392
- American Association of Petroleum Geologists, mid-year meeting, Pittsburgh, resolutions, XXI, 1611
- Davis, William Morris, CAL, 39; PROB, 358; V, 667; XII, 516; XIII, 646, 944; XIV, 711; XVI, 2, 16; XXIII, 1220; XXVI, 773, 777
- coral reef problem, review, XIII, 691
- Davis and Barrilla mountains, areal geology of, XXII, 1427
- topography of, map, XXII, 1424-1425
- Davis and DeKoven coals, XXIII, 1389
- Davis coal, XXIII, 1385
- Davis Creek, West Virginia (well 428), SBP, 349-379, 410
- Davis formation, XXV, 1632
- Davis Hill dome, effect of character of rim syncline on production at, XX, 1422
- Davis Mountains, XXV, 77
- eastern, and Barrilla Mountains of trans-Pecos Texas, Cretaceous and Eocene stratigraphy of, XXII, 1423

- Davis peat sampler, RMS, 641, 642
 Davis sand lens, Hardin field, Liberty County, Texas, STRAT, 564, 570, 571
 Hardin field, accumulation of oil, STRAT, 569, 598
 Dawson, V.I., 126
 Dawson, G. M., GAS, 27, MSC, 12, 16; XV, 1136, 1182, 1187; XVI, 798; XXIX, 1623
 Dawson, Joseph M., XX, 385, 392; XXI, Pl. B, opp. 1085; XXIV, 2068
 South Texas section, eleventh annual meeting, October, 1939, abstracts, XXIII, 1873
 Dawson, J. W., GAS, 937
 Dawson, William, and Dawson, G. M., STRAT, 285
 Dawson and Laramie formations in southeastern part of Denver Basin, Colorado, XX, 1308
 Dawson arkose, XX, 1309; XX, 1320
 Dawson field, PROB, 435
 Dawson pool, XXVI, 1084, 1085; XXVII, 813; XXIX, 707
 Dawsonites zone, CAL, 302
 Day, XI, 1296
 Day, A. L., SD, 18; X, 866; XV, 469
 Day, A. L., and Allen, E. T., XX, 279
 Day, A. L., and Becker, G. F., IX, 848
 Day, David T., III, 355; VII, 608, 610, 617, 622; VIII, 231, 465, 699; XVIII, 1455; XIX, 592
 Day, David T., and others, handbook of the petroleum industry, review, VI, 260; VII, 588
 Day, David T., Gilpin, J. E., and Gram, M. P., PROB, 148
 Day, James R., and Anderson, W. D., abstract, XXII, 1711
 Day, James R., and Lonsdale, J. T., STRAT, 725; XVII, 491
 Day, John, horizon, CAL, 155, 156, 303, 304
 Day, W. C., XI, 395
 Day Creek dolomite, XXI, 1528
 in Kansas and Oklahoma, XV, 425; XXIII, 1811
 in Weatherford area, Oklahoma, XII, 708
 of Kansas correlated with Alibates dolomite of Texas Panhandle, XXIII, 1812
 Day Creek formation, II, 74, 114
 Dayton dome, V, 336
 Dayton limestone, XXV, 815
 Dayton pool, XXV, 1062
 Daytona Beach, Florida, RMS, 609
 de Acosta, Father Joseph, XIX, 475
 De Arman *et al.* (well 309), SBP, 292-335, 408
 De Beaumont, theory of cause of orogeny, CD, 6
 De Bockh, H., XVII, 214, 217, 231; XVIII, 925, 937, 940
 De Bockh, Lees, and Richardson, XXIX, 1082
 De Bonnier, Andre Suroy, review, VII, 303
 Roumanian petroleum industry during the first quarter of 1922, review, VII, 303
 De Chambrier, Paul, VI, 346; X, 413; XVI, 1097, 1100
 de Chardin, P. Teilhard, SC, 43; XX, 1589
 De Chelly sandstone, VI, 48
 de Cizancourt, Henry, XV, 2; XXIX, 1082
 (de Cizancourt)
 geology of oil fields of Polish Carpathian Mountains, XV, 1
 memorial of François Biraud, XXI, 138
 petroleum research in northern Africa, XVI, 443
 reviews, XVIII, 381; XIX, 1706; XXI, 275
 tectonic structure of Northern Andes in Colombia and Venezuela, XVII, 211
 de Cizancourt, M., XV, 2
 de Cizancourt, M., Mrs., XXIV, 1558
 De Cousser, Kurt, XI, 635; XIII, 1523
 de Ferraris, C. I., XXVIII, 1456, 1467
 de Geer, Gerard, RMS, 312
 de Hauptpick, E., XI, 494
 de Juana, C. Gonzales, XXIV, 1565
 De la Beche, H. T., MEX, 166
 De Laat, Bart, IX, 164
 de Lapparent, XVIII, 376; XXIV, 243, 249; XXV, 1399
 de Lapparent and Munier-Chalmas, MSC, 10, 90-92
 De Lapparent, J., CAL, 89; RMS, 468, 469, 625; XIV, 1334
 De Large field, XXIII, 884; XXIX, 801
 de Launay, L., XVI, 1095, 1105, 1108
 de Laveaga, Miguel, XXVIII, 60, 62
 De Leon, XXII, 1188
 De Leon formation, XXIV, 85
 de Lóczy, L., XVIII, 935
 tectonics and paleogeography of Basin System of Hungary elucidated by drilling for oil, XVIII, 925
 de Loriol, P., and Bohm, J., XXVIII, 116
 De Lury, Justin Sarsfield, XIX, 111
 auto-traction hypothesis of crustal evolution, review, XV, 976
 De Luynes, H. T. P. J. d'A. le Duc, XX, 881
 de Macar, J., XII, 799
 De Mares Concession, Colombia, columnar section and grain size of Eocene sand, XXIX, 1115
 histograms of Lower Oligocene sand, XXIX, 1116
 map showing general structural trends, XXIX, 1110
 of Tropical Oil Company, XXIX, 1107
 pipe line from, XXIX, 1119
 production of, XXIX, 1139
 De Matheusieux, V., 662
 de Mier Restrepo, Julio, XXVI, 794
 de Montalvo, Ordóñez, VIII, 61
 de Oliveira, Avelino Ignacio, XX, 1208
 de Oliveira, Avelino Ignacio, and Leonardos, Othon Henry, *geologia do Brasil*, review, XXIX, 289
 de Paiva, Glycon, Amaral, Irnack do, and Abreu, S. Frôes, *contribuições para a geologia do petróleo no Recôncavo (Bahia)*, review, XXI, 273
 De Paiva, Glycon, Reyes, Jorge Muñoz, and Mariaca, Guillermo, geology of sub-Andean belt of Bolivia, review, XXIV, 1686
 de Raaf, J. F. M., notes on geology of southern Roumanian oil district, review, XXIX, 1355
 De Sitter, XXI, 814
 de Sitter, L. U., *le géologie des Alpes méridionales d'après les lentés récents*, review, XXIII, 1721
 De Soto Oil and Gas Company, XXII, 722
 De Soto Parish, Louisiana, Holly field, (De Soto)
 XXIX, 96
 De Soto-Red River field, IV, 127; V, 309; VI, 184, 192, 353, 363, 478, 556
 De Terra, H., XX, 876; XXII, 69
 de Verneuil, Count, XXIV, 239
 de Waldheim, Fischer, XXIV, 239, 240
 Dead Horse Coulee field, GAS, 3, 20, 28
 Dead Sea, RMS, 362
 Dead Sea and Red Sea, origin of, distinct structural depressions, XXII, 1218
 Dead Sea area, geologic map of, XX, 882
 Palestine and Transjordan, geology and bitumens of, XX, 881
 stratigraphic section of, XX, 888
 Dead Sea graben, XX, 890
 Deadman Canyon, type section of Caballero formation in, XXV, 2217
 Deadman Canyon area, map showing location of type sections of Lake Valley formation, XXV, 2115
 Deadman Canyon section, XXV, 2143, 2145
 Deadman's Island, CAL, 256, 264, 287, 309
 Deadwood formation (Cad) (Cambrian), SBP, 193, 199, 200, 243, 413
 South Dakota, XXVI, 1566
 South Dakota, Ordovician fossils from upper part of, XX, 1329
 Wyoming, XXIII, 480; XXV, 1157
 Deadwood sandstone, V, 187
 Dean, C. J., STRAT, 9; XVIII, 435
 Dean, David, and Snow, D. R., PROB, 775
 Rainbow Bend oil field, Cowley County, Kansas, STR I, 52; IX, 974
 Dean, E. W., Cook, M. B., and Bauer, A. D., properties of typical crude oils from producing fields of Kansas, VI, 370
 Dean, P. C., observations on accumulation of free oil, discussion, XXVI, 285
 Dean dome, XX, 1173
 Dean field, XXVIII, 821
 Deane oil field, Okfuskee County, Oklahoma, V, 290, 687; VI, 260
 petroleum engineering in, review, V, 687
 Deane pool, PROB, 411
 Deane sand, V, 290, 404
 Death Canyon, XXV, 1739
 Death Canyon limestone, XXV, 1731
 Death Valley, California, CAL, 24, 39, 40, 65, 257, 283, 309; RMS, 456
 DeBay, X, 436
 DeBellard, E. P., preventive medicines and health in Venezuelan oil fields, XI, 299
 Deborah sand, XXVII, 1141
 Débris, transportation of, by turbulence, RMS, 5-31, 79
 Debt of geology to petroleum industry, V, 394
 Debye, P., RMS, 617
 Decalcified deep-sea mud in East Indies, RMS, 350, 351
 Decantation, RMS, 529, 600
 methods of, RMS, 545-547
 Decapoda, RMS, 289
 Decarboxylation, XXVIII, 928
 of fatty acids, RMS, 422, 424

- Decatur area, further considerations of prospect for oil in, review, IX, 359
- Decatur field, Illinois, XXIII, 820
- Decaturville chert, XXV, 671
- DeChucias, Romaldo, MEX, 148
- DeChicichis, R., Ackers, A. L., and Smith, R. H., GAS, 451, 452, 454; PROB, 372, 373, 413, 414
- Hendricks field, Winkler County, Texas, XIV, 923
- Decibar, RMS, 63, 110, 113
- definition of, RMS, 63
- surfaces in sea, RMS, 114
- Deciles, SBP, 26
- in mechanical analyses, RMS, 572
- Decimeter, dynamic, RMS, 109
- Decker, Charles E., GAS, 581; SBP, 69; IV, 317; VII, 623; IX, 984; XII, 1069, XIV, 1539; XVI, 975, 976; XVII, 174, 866; XVIII, 577, 982; XIX, 1123, 1521; XX, 483, 954, 980, 1087; XXI, 8, 17, 18, 19; XXV, 1630, 1631, 1635, 1638
- Carbonaceous and asphaltic material in lower Arbuckle Limestone of Wichita Mountains, Oklahoma, XXIII, 1093
- contact of Honey Creek and Reagan formations with igneous rocks in Arbuckle and Wichita mountains, Oklahoma, XXIII, 1094
- discussion of pre-Carboniferous of Marathon uplift, XV, 1083
- graptolites on well cuttings, Carter County, Oklahoma, XXIX, 1043
- memorial of Daniel Franklin Higgins, Jr., XIV, 819
- memorial of Gustavus Edwin Anderson, XXIV, 1854
- memorial of John Pitts, XXVI, 1548
- memorial of Stuart Weller, XI, 1347
- report of secretary for 1922, VII, 310; for 1923, VIII, 375; for 1924, IX, 695; for 1925, X, 541
- report of treasurer for 1922, VII, 311; for 1923, VIII, 376; for 1924, IX, 696; for 1925, X, 542
- reviews, XIII, 1401; XVII, 1539; XX, 228; XXVIII, 1220
- sandstones in upper part of Arbuckle limestone, Oklahoma, XIII, 1477
- Silurian graptolite zone in Crane County, Texas, XXVI, 857
- Simpson group of Arbuckle and Wichita mountains of Oklahoma, XIV, 1493; XXV, 650
- some tentative correlations on the basis of graptolites of Oklahoma and Arkansas, XX, 301
- table of tentative Lower Paleozoic correlations on basis of graptolites, XX, 1252
- three more graptolites from Simpson of Oklahoma, XXVII, 1388
- transcendent value of graptolites for correlation demonstrated, XXII, 221
- two more Ordovician well-core graptolites, Crane County, Texas, XXVI, 1771
- Viola graptolites from well-core east of Norman, Oklahoma, XXVIII, 873
- Viola limestone, primarily of Arbuckle and Wichita Mountain regions, Oklahoma, XVII, 1405
- Viola well core from South Dakota, XXVII, 123
- Decker, Charles E., and Coleman, Mrs. Tom, graptolites from well core, (Decker) Carter County, Oklahoma, XXIX, 454
- Decker, Charles E., and Merritt, C. A., PROB, 764; XIV, 1508; XXII, 1563
- Decker, Charles E., Moore, R. C., and Buchanan, Geo. S., report of resolutions committee for 1941, XXVI, 935
- Decker gas field, PROB, 772
- Decker's correlations in Arbuckle Mountains, Oklahoma, XIX, 1121
- Decline of oil wells in California, regularity of, V, 178
- Decline and production of Ranger oil field, IV, 221
- Decline curve methods, III, 421
- discussion, III, 437
- Decline curve prediction, IV, 209
- from first day and first thirty days, IV, 209
- Decline curves, MEX, 231-234
- for oil reserves, XVIII, 345
- Declining rate of crude-oil discoveries, some factors influencing—the geologist's responsibilities in the present situation, XXVII, 960
- DeClute field, GAS, 69, 72, 75, 82
- Decomposition a cause of compaction of sediments, X, 1037
- by bacteria, RMS, 421-423
- of amino acids by micro-organisms, PROB, 39
- of carbohydrates, influence of temperature on, XXIV, 1878
- of fats, PROB, 41
- of organic material, PROB, 45; RMS, 200, 264, 266, 422, 439-441
- of organic material in sea, RMS, 421
- or organic material, in sediments, RMS, 418, 441
- of plants in sea, RMS, 147
- of proteins in sediments, RMS, 421
- of rock minerals, XXVI, 775
- Decomposition and conversion of hydrocarbons, XXIV, 1883
- Decorah shale, XXV, 2171
- Pipette analysis of, XXV, 2178
- Decorah shales in Kansas, XI, 51
- Decrease in velocity of currents with depth in North Sea, RMS, 326
- Deegan, Charles J., and MacNaughton, Lewis W., E. DeGolyer, honorary member, XXIX, 397
- Deep Blue Ridge Oil Co., SD, 611
- Deep bore in Cleveland Hills, XXIX, 1354
- Deep borings near Balcones faults, observations on, III, 124
- Deep coastal zone, discoveries in 1938, XXIII, 879
- in Gulf Coast, XXIV, 1085
- of Oligocene-Miocene production in Texas and Louisiana, XXI, 1056
- oil-bearing Miocene sediments in, XIV, 1085
- Deep currents, methods of measurement of, RMS, 104
- Deep dome at Orange field, GC, 892; XX, 543
- Deep domes in Emba salt-dome region, XXIII, 503
- more prolific than shallow domes, GC, xi
- of Gulf Coast, area of, GC, 43; XVII, 1048
- Deep drilling in Gulf Coastal region, XXI, 1061; XXII, 748
- (Deep) in New York state in 1944, XXIX, 669
- in Rocky Mountain region, XXI, 995
- in south Texas, XXIII, 869
- significance of, XXIX, 859
- Deep dry holes, XXVI, 1124
- Deep lake deposits of western area of Great Salt Lake, XXII, 1532, 1537
- Deep oil aspects in Texas Panhandle, XXIII, 1047
- Deep Oil Development Company, XXIII, 850
- Deep oil test at Salisbury, Wicomico County, Maryland, XXIX, 1196
- in Big Lake field, Texas, STR II, 525, 533
- Deep-pay discoveries in Michigan, XXVII, 829
- Deep pre-Pennsylvanian oil, promising in Texas Panhandle, XXIII, 1047
- Deep production in Government Wells field, GC, 635; XIX, 1135
- Deep production prospects in Wheeler County, Texas, XXIII, 1049
- Deep prospecting in southern Arkansas, XXII, 955
- Deep River field, Michigan, XXVI, 1102; XXIX, 694, 695
- Deep River formation, CAL, 303
- Deep sand development at Barbers Hill, Chambers County, Texas, XIV, 719
- in Cotton Valley field, Webster Parish, Louisiana, XIV, 983
- in Tioga County, Pennsylvania, XV, 925
- Deep-sand developments in Appalachian region during 1939, XXIV, 970
- in Pennsylvania, 1941, XXVI, 1120
- in Pennsylvania, 1942, XXVII, 840, 846
- in Pennsylvania, 1943, XXVIII, 730
- Deep sand exploration, Pennsylvania, map, XXV, 1136
- Deep sand horizon in Petrolia field, Texas, STR II, 553
- Deep sand possibilities at Irma field, Arkansas, STR I, 14
- Deep sea, clays of, RMS, 383
- oozes of, RMS, 286
- sediments of, RMS, vi, 50, 257, 288, 373, 408
- Deep-sea basins, origin of, in East Indies, XXII, 55
- Deep-sea deposits, volume and radioactivity of, XXIX, 1484
- Deep-sea sediments of Indian Ocean, RMS, 396
- of Indian Ocean, references on, RMS, 407
- recent, rate of sedimentation of, RMS, 409
- Deep-seated domes, characteristics of, XXVIII, 1251
- development of, XXVIII, 1305
- examples of, XXVIII, 1254
- in south Louisiana, bibliography on, XXVIII, 1312
- Deep-seated structures, diagram showing origin of, XXVIII, 1306
- Deep Spring formation, CAL, 60
- Deep test in Florida Everglades, XXIII, 1713
- in Tucker County, West Virginia, XXVII, 852
- recent, in Moore County, Texas, XXIX, 227

- Deep tests in Appalachian basin, FOP, 133, XXV, 1565
 in Illinois in 1940, XXV, 1121; XXVI, 1092
 in Illinois in 1940, map, XXV, 1120
 in Illinois in 1940, results of, XXV, 1119
 in Illinois in 1942, XXVII, 817
 in Illinois in 1944, XXIX, 690
 in Michigan, XXIV, 988; XXV, 1132
 in New Mexico during 1938 and 1939, XXIV, 1034
 in Rocky Mountain region, XXII, 690
 in West Texas during 1938 and 1939, XXIV, 1034
 in western Pennsylvania in 1941, XXVI, 1122
 in western Pennsylvania in 1942, XXVII, 845
 in western Pennsylvania in 1943, XXVIII, 733
 in western Pennsylvania in 1944, XXIX, 676
 of Bloomington dome in St. George district, Utah, XXIII, 140
 Deep troughs, RMS, 325
 in East Indies, RMS, 349
 Deep water, currents in, RMS, 112, 119, 132
 currents in, velocity of, RMS, 54
 nature of, in basins, RMS, 96, 97
 oxygen content of, RMS, 92
 relative stability of, RMS, 91
 salinity of, in fiords, RMS, 359
 source of, in ocean, RMS, 90
 Deep water facies of limestone, MEX, 22, 23
 Deep water fauna, MEX, 82
 Deep water wells, two, near Rapid City, South Dakota, XXVII, 646
 Deep well at Niceville, Okaloosa County, Florida, micropaleontology and stratigraphy of, XXV, 263
 at Rodessa, Caddo Parish, Louisiana, cores from, XXII, 764
 in Harrison County, West Virginia, stratigraphy of, XXVII, 1539
 in Richburg field, New York, STR II, 289
 in Russell County, Virginia, XXVII, 1543
 in Winkler County, Texas, crystalline rock in, XXIX, 222
 near Marlow, Stephens County, Oklahoma, XXII, 1106
 Deep well record of fossil mammal remains in California, XIX, 1064
 Deep well records, STRAT, 809
 Deep well temperatures in Oklahoma, XII, 765
 Deep wells drilled in Florida, XXII, 814
 drilled with rotary tools on Baker-Glendive (Cedar Creek) anticline, XXIII, 461
 in St. Lawrence lowlands, GAS, 102
 in Texas and Louisiana salt domes, GC, 118; XX, 735
 in West Texas, igneous rocks from, XXIX, 1028
 value of cores from, for geologic study, XXIII, 1608
 Deep wildcat tests in Michigan in 1944, XXIX, 700
 Deep wildcats drilled in Missouri in 1939, XXIV, 1005
 Deep zone in Big Lake field, Texas, gas production, STR II, 537
 oil production, STR II, 537
 Deep zone in North Belridge field, (Deep)
 XXVII, 872
 Deep-zone developments, XXVI, 1151
 in California, XXI, 979
 Deep zones, potential, in proved fields, XXIV, 1943
 Deepening or recompleting wells in old fields, discoveries of oil resulting from, XXIII, 913
 Deeper drilling in Rocky Mountain fields, results and prospects of, VII, 400
 Deeper-pool test, XXIX, 633
 definition, XXVIII, 706
 Deeper possibilities at Hoffman field, XXIV, 2142
 Deeper producing zones in old fields in Wyoming, XXVII, 856
 Deeper production in Porter field, prospects for, XXVIII, 194
 Deeper productive horizons at Darrow dome, possibility of, XXII, 1418
 Deeper source of oil in Trinidad, XXIV, 2124
 Deeper zones, Tupungato field, XXVIII, 1479
 Deepest formations penetrated in wildcat wells drilled in southern Arkansas and northern Louisiana during 1939, analysis of, XXIV, 1094
 tested by wildcat wells drilled in south Arkansas and north Louisiana in 1940, XXV, 1027
 Deepest oil well ever drilled, Big Lake field, Texas, STR II, 535
 Deepest producing field in Arkansas, XIV, 738
 Deepest rocks at Jackson, Mississippi, discussion, XXII, 927
 Deepest well ever drilled in Kansas, Watchorn Oil Company's Watkins No. 1 in Arbuckle limestone in Clark County, XXIII, 796
 in Mid-Continent region, Washita County, Oklahoma, XXIV, 735
 in world, II, 131; III, 21; IV, 29; XXIX, 652
 Deepkill formation, XXI, 27
 Deer Creek limestone in Virgil pool, Kansas, STR II, 144
 Deer Creek-Topeka series, V, 581
 Deer Island field, XXVII, 736
 Deerfield area, Monroe County, Michigan, XXIV, 983
 Deerfield pool, XXVI, 1103
 Dees sands and oolitic limestone, XXI, 1069
 Dees sandy zone, XXII, 971
 Deese beds, upper, STRAT, 797
 Deese formation, GAS, 589, 593; VI, 7; XXV, 1666
 Hewitt field, Oklahoma, STR II, 293
 Deese sand, XXV, 1100
 Deese series of Ardmore basin, boundaries for, XXIX, 165
 Deevy, E. S., Jr., XXV, 840
 Defant, A., RMS, 132, 133
 Defenders and Traders Oil Company, XXIV, 1782
 Defenders Petroleum Company, XXIII, 1056
 Defiance uplift, of Arizona, X, 827
 Deficiencies or excesses of mass not great below any part of earth's surface, CD, 179
 Definition, proposed new, of linear units, XXII, 1616
 Definitions, bar, RMS, 63
 beach, RMS, 207
 chlorinity, RMS, 61
 (Definitions)
 continental shelf, RMS, 219, 220
 histogram, RMS, 561
 isopycnal, RMS, 123
 of geology, XXIX, 470
 of terms used in connection with exploratory drilling, XXVIII, 703
 Reynolds number, RMS, 75
 roughness parameter, RMS, 80
 salinity, RMS, 61
 specific volume, RMS, 62
 Deflecting diamond-drill holes, example of, XIV, 1059
 Deflection of drill holes from vertical, XIII, 111
 Defective force, RMS, 107, 108, 111, 117, 119
 in tides, RMS, 131
 of earth's rotation, RMS, 107, 110, 122
 of earth's rotation, effect of, on currents, RMS, 105
 Deflocculation in mechanical analyses, RMS, 530
 DeFord, Ronald K., PTNM, 539;
 PROB, 725; STRAT, 752; XIII, 658, 1015, 1031; XXI, 1246;
 XXIII, 1550, 1551, 1678, 1810;
 XXIV, 10, 11, 29, 49, 61, 281, 328,
 337, 355, 1033; XXV, 75, 1046,
 1680, 1684, 1897; XXVI, 85, 217,
 245, 247, 539, 1013, 1646; XXVII,
 523, 752
 abstract, XXII, 1706
 areal geology of Cimarron County, Oklahoma, XI, 753
 discussion of nomenclature in connection with Goldsmith field, Texas, XXIII, 1550
 discussion of unconformities in Permian redbeds in Kansas, XXIII, 1815
 microscopic examination of Permian crude oils, XXIV, 2181
 naming subsurface formations, discussion, XXII, 1280
 paleogeography, discussion, XXIII, 344
 Permian conference, XXIV, 604
 Permian correlation meeting, Centennial, Wyoming, September, 1940, XXV, 429
 Permian volume, XXIII, 1593
 reviews, XXII, 567; XXVIII, 128, 877
 surface structure, Florence oil field, Fremont County, Colorado, STR II, 75
 DeFord, Ronald K., and Coffin, R. Clare, PROB, 837; XXII, 1038
 waters of oil- and gas-bearing formations of Rocky Mountains, PROB, 927
 DeFord, Ronald K., and Lloyd, E. Russell, XXIV, 15; XXVI, 85, 219
 foreword, West Texas-New Mexico symposium: Part II, PTNM, XXVI, 533
 West Texas-New Mexico symposium: Part I, Editorial introduction, XXIV, 1
 DeFord, Ronald K., and Riggs, George D., Tansill formation, West Texas and southeastern New Mexico, XXV, 1713
 DeFord, Ronald K., and Wahlstrom, Edwin A., GAS, 430; PROB, 350, 413, 415; STRAT, 752; XVII, 564; XXVII, 501

- (DeFord)
Hobbs field, Lea County, New Mexico, XVI, 51
- DeFord, Ronald K., Riggs, G. D., and Willis, N. H., PTNM, 595, 596, 597; XXVI, 595, 596, 597
- Deformation, age of, in Stephens field, Arkansas, STR II, 10
close to surface, a cause of loss of gas on salt domes, GAS, 736
following reef-building period in Pecos Valley, XXI, 892
importance of time relations of, GAS, 1079
intra-Mississippian, of Eastern Interior basin, XXIV, 850
of Appalachian foreland, date of, XXV, 421
of earth's crust, review, XVIII, 1093
of eastern North America and western Europe slight since on-coming of glaciers, CD, 85
of rocks, PROB, 466
of sediments at time of deposition, RMS, 526
of Southern fields ridge, date of, MEX, 107, 205, 206
of strata, PROB, 484
of strata, reservoirs closed by local, PROB, 443
periods of, PROB, 563
periods of, in Michigan region, PROB, 546
pre-Mississippian, of Eastern Interior basin, XXIV, 850, 851
- Deformational highs, XIII, 1041
- Degenhardt, XVIII, 732
- DeGolyer, E., GAS, 997, 999, 1001, 1002, 1007; MEX, ix, 2, 23, 32, 42, 99, 118, 120, 139, 143, 148, 149, 151-153, 155, 156, 176, 181, 184, 226, 228; PROB, 395, 630, 634, 635, 639, 666; SD, 1, 6, 24, 26, 27, 211, 218, 225, 263, 272, 781; I, 6; III, 314; V, 71, 230, 464; VII, 606, 616, 623; IX, 137, 670; X, 3, 55, 220, 423, 633; XI, 687, 1068, 1184, 1185, 1189, 1191; XII, 528, 766; XIII, 153; XV, 522; XVI, 536, 726; XIX, 109, 814, 1230; XX, 170, 521; XXI, 1272; XXII, 571; XXIV, 1353, 1463, 2047; XXV, 324, 1257; XXVII, 927, 931, 1515, 1520; XXIX, 578
chronological note on activities of, XXIX, 400
debt of geology to petroleum industry, V, 394
discovery of potash salts and fossil algae in Texas salt dome, SD, 781
discussion of cap-rock petrography, XV, 522
editor, elements of the petroleum industry, review, XXV, 904
future of petroleum exploration in United States, XXI, 706
future position of petroleum geology in the oil industry, XXIV, 1389
geology of Cuban petroleum deposits, II, 133
honorary member, XXIX, 397
memorial of Edwin Butcher Hopkins, XXIV, 1851
memorial of Philip Charteris Anstruther Stewart, V II, 321
notes on present status of problem of exploration, XXVI, 1214
oil associated with igneous rocks in Mexico, XVI, 799
origin of North American salt domes, (DeGolyer)
SD, 1 IX, 831
potash salts and fossil algae in Texas salt dome, IX, 348
preliminary report of technical oil mission to Middle East, XXVIII, 919
report of business committee for 1930, XV, 583
report of president for 1925, X, 540
simple method of taking cores in wells drilled by rotary system, V, 515
theory of origin of salt domes, IX, 854
Wallace Everett Pratt, first Sidney Powers memorial medalist, an appreciation, XXIX, 478
Zacamixtle pool, Mexico, V, 85
- DeGolyer intrusive theory of origin of salt masses, XIV, 1041
- Degonia formation, XXV, 874
- Degonia sandstone, XIV, 211, 839
in Kentucky, XXII, 283
- Degree of asymmetry of cumulative curve, RMS, 569
of reduction, RMS, 418, 432
of roundness, RMS, 589
of sorting, RMS, 560
of spread, RMS, 588
- Degthareff, W. T., SBP, 46
- Dehydration, PROB, 25, 281
by gas, PROB, 471
of coal, relation to carbon-ratio theory, PROB, 76
of Paleozoic beds in Appalachian area, XXVII, 1221
of reservoirs, PROB, 479
of sand, STRAT, 826
of sediments, PROB, 307
- Dehydration curve of glauconite, RMS, 505, 506
- Dehydration properties of clays, RMS, 472, 474
- Deiss, Charles, XXIII, 481, 1446, 1449; XXV, 127, 218; XXIX, 1023, 1024, 1267, 1276, 1280, 1281, 1291
- DeJong, L. E. Den., PROB, 41
- DeKay, J. E., XXIII, 1228
- DeKoven coal, XXIII, 1385
- Del Bonita structure, southern Alberta, XXVIII, 871
- Del Monte, MSC, 131, 132, 235, 236, 253, 254, 263, 294
- Del Monte, foraminifera from the diatomite quarry east of, MSC, Fig. 14 (in pocket)
- Del Monte-Monterey, MSC, 2
- Del Monte-Monterey area, MSC, 157
- del Rey Canyon, MSC, 38, 131, 132
- Del Rio formation, III, 301, 306; V, 19, 380
- Del Rio formation in Luling field, Texas, STR I, 274
- Del Rio shale, PROB, 404
- Del Valle and Newhall-Potrero oil fields, correlation of, XXVI, 196
- Del Valle and Newhall-Potrero oil fields, electric logs in, XXVI, 195
- Del Valle anticline, XXVI, 191
section along axis of, XXVI, opp. 191
- Del Valle area, structure, XXVI, 190
- Del Valle extension, XXVI, 1150
- Del Valle fault, XXVI, 191
- Del Valle oil field, Los Angeles County, California, XXV, 1159, 1162; XXVII, 872
geology of, XXVI, 188, opp. 190
section in eastern area of production at, XXVI, 192
section in western area of production (Del Valle)
at, XXVI, 194
stratigraphy, XXVI, 189
zones of production in, XXVI, 193
- Delaney gravel, XXIX, 1705
- Delarbre, Antoine, XVI, 1105
- Delavel and Kayser, XIII, 1468
- Delaware, RMS, 209
Cretaceous in, XXII, 804
Eocene in, XXIX, 900
map, XXIX, 898
Pleistocene in, XXIX, 900
- Delaware basin, GAS, 420, 422, PTNM, 617, 663; XIX, 235, XXI, 835, 1016, 1084; XXIII, 1682, 1683; XXIV, 54; XXV, 77, 102, 1048; XXVI, 84, 255, 617, 663; XXVII, 754, XXVIII, 807; XXIX, 744
anhydrite in, XXV, 156
correlation of Guadalupe series of, PTNM, XXVI, 699
during formation of Capitan limestone, diagram, XXI, 881
Guadalupe series in, XXV, 92
in South Permian basin, FOP, 102; XXV, 1534
map showing wells, XXVIII, 1597
of Texas and New Mexico, upper Permian formation of, XIX, 262, 561
of West Texas and southeastern New Mexico, Permian sediments in, XXIII, 1673
or fore-reef province of Permian of Pecos Valley, XXI, 846
Rustler formation in, XXIII, 1692
San Andres group in, XXV, 83
section across, XXI, 847
sections of Ochoa rocks in, XXVIII, 1600, 1602, 1603
solution during Tertiary, XXVIII, 1623
stratigraphy of brine areas within, XXV, 155
thicknesses of sediments in, PTNM, 618; XXVI, 618
tilting of, XXI, 895
West Texas and southeastern New Mexico, Upper Permian Ochoa series of, XXVIII, 1596
- Delaware basin and vicinity, Permian system of, suitable as a standard of reference for North America, XXIV, 339
- Delaware basin area, Wolfcamp series in, PTNM, XXVI, 563
- Delaware basin facies of Leonard series, PTNM, XXVI, 653
- Delaware Bay, RMS, 210, 231
- Delaware County, Ohio, Paleozoic and pre-Cambrian rocks of Vance well, XXIV, 672
- Delaware Extension pool, Oklahoma, STR II, 362
- Delaware field, XXI, 1006
- Delaware formation in Ohio, source material in, XX, 799
- Delaware limestone, XIII, 930; XXV, 810
- Delaware Mountain, XXI, 844, 853
- Delaware Mountain basin, XIII, 1034
- Delaware Mountain formation, XXI, 840, 846, 873; XXIII, 1684
in trans-Pecos Texas, XXI, 873
- Delaware Mountain group, XXIV, 8, 54, 59; XXV, 1715
at Wheat pool, XX, 785
in Texas, ammonoids from upper Cherry Canyon, XXVIII, 1644

- (Delaware)
 lower divisions of, equivalent to San Andres group, XXV, 81
 of Delaware basin, PTNM, 576, XXVI, 576
 San Andres group equivalent to, XXV, 83
 three formations of, PTNM, 577
 Delaware Mountain region, secondary gypsum in, discussion, XIII, 1395
 Delaware Mountain sands, XXV, 1049; XXVI, 1019; XXVII, 754, PTNM, 748; XXVI, 748
 origin of, PTNM, 750; XXVI, 750
 Delaware Mountain sandstones, XIII, 931, 973; XXIII, 1676; XXIV, 272, 341; XXIX, 744
 of Permian of New Mexico, temperature tests on, XXI, 1194
 Delaware Mountains, XIII, 931, 962; XXV, 77
 Delaware Mountains and Glass Mountains, correlation of Pennsylvanian-Permian of, XIII, 903
 Delaware-Onondaga beds, GAS, 64
 Delaware River estuary, former, XXIX, 897
 Delaware sands, FOP, 102; XXV, 1063, 1534
 Delaware sandstone, XV, 1090
 Delaware subsurface stratigraphy, XXIX, 899
 Delesse, X, 1057
 Delevanian stage, XXIX, 993, 994, 1006
 Delhi field, Louisiana, XXIX, 807
 Delight sand, XXIX, 1447
 Deliverabilities, gas in storage, and well head pressure from East End Tioga storage pool, relationship between, XXVIII, 1591
 Deliverability determinations in connection with storage projects, XXVIII, 1589
 Dell, E. F., XXIII, 1353
 Delmontian, MSC, opp. iii, 78, 130, 134, 135, 201, Figs. 4, 5, 6, 14 (in pocket)
 foraminifera from, MSC, Pl. XXII
 lower, MSC, 135, 172, 185, 211, 221, 223, 224, 229, 234-237, 247-257, 260-264, 267, 268, 270, 275-282, 285, 292, 294-299, 308, 313, 317, 319, 320, 327, 329, 332-334, 338, 341-346, 350, Table I (in pocket)
 lower, uppermost Luisian, and lower Mohnian of Reliz Canyon, Foraminifera from, MSC, Pl. XVI
 thickness, MSC, 133
 upper, MSC, 135, 195, 196, 201, 219, 221, 223, 229, 237-239, 248-250, 253, 264, 281, 282, 299, 307, 316, 318, 321, 322, 328, 332, 334, 336, 345, 346, 350
 Delmontian age, MSC, 166
 Delmontian beds, MSC, 168; XXVI, 1150
 Delmontian foraminifera, MSC, 134
 Delmontian-Lower Pliocene sequence of California, MSC, 174
 Delmontian-Mohnian contact, MSC, 131, 168
 Delmontian sandstone, MSC, 133
 Delmontian Stage, MSC, 68, 69, 127, 131, 132, 135, 156, 157, 165, 167, 174, 181
 Delmontian time, MSC, 180
 Delmontian zone of Klempell (Tma, Tmb, Tmc, Tum) (Miocene), SBP, 91, 92, 94-194, 416
- Delo, David M., XX, 1335
 Delta, RMS, 153-177, 279, 344
 growth of, RMS, 159, 164, 165
 Mississippi, XVIII, 1252
 Mississippi, building of, XIV, 867
 Mississippi, map of, RMS, 158
 Mississippi, marine transgressions of, RMS, 173
 Mississippi, sediments of, RMS, 153-177
 Mississippi, tidal lagoon sediments on, RMS, 178-194
 of Rio Grande, XXIX, 1311
 of sand, in Barataria Bay, RMS, 188
 organic content of, RMS, 450
 subsidence because of, RMS, 160
 Delta deposits, MBX, 100, 103, 140
 along border of Valle Grande, XIII, 236
 along Gulf Coast, XXIV, 699
 Delta Duck Club field, XXIX, 797
 Delta Farms field, XXIX, 797, 798
 Delta-flank depressions, RMS, 160, 161
 Delta sediments, RMS, 154
 initial dip of, RMS, 173
 Delta structure, XXIX, 1309
 contrasting types of, diagrammatic sections, XXIX, 1310
 Deltaic accumulations, XIII, 715; XVIII, 1252
 Deltaic coastal plain, GC, 210; XVII, 915
 Deltaic deposits in Gulf Coast region, XXIX, 1308
 Deltaic facies of Permian, a series of local unconformities, XXI, 1560
 DeMalorie-Souder pool, Kansas, STR II, 157
 deMille, George, XXIV, 1639
 Deming, C. W., XXIX, 924
 Demolon, A., and Barbier, G., XVII, 1225, 1226
 Demorest, D. J., VIII, 720
 Demorest, Max, XXII, 1307
 Den Helder, Holland, RMS, 334
 Dendraster conglomerate, CAL, 232
 Dendritic branching on deltas, RMS, 156
 Dendritic pattern or terraces, XXIII, 1222
 Denegri, M. A., V, 585
 Denison, A. Rodger, XVII, 656; XIX, 1407; XXIII, 147; XXIV, 198; XXVI, 217
 a challenge to geology, XXVIII, 897
 description of the profession of geology, XXVIII, 292
 discussion on early Pennsylvanian sediments of Nemaha Granite Ridge, Kansas, X, 636
 financial statement for 1929, XIV, 340
 geologic data from the war effort, XXVIII, 1050
 joint annual meeting of A.A.P.G., S.E.G., and S.E.P.M., Dallas, March, 1944, XXVIII, 166, 287
 medal award committee, establishment of, XXVII, 878
 minutes of business committee, Denver, Colorado, April, 1942, XXVI, 950
 national roster of scientific and specialized personnel, XXVIII, 292
 possible deferment of students of geology, XXVIII, 290
 presentation of first Sidney Powers memorial medal award, XXIX, 477
 proposed Geological Institute of
- (Denison)
 America, XXIX, 240
 report of business committee for 1929, XIV, 669
 report of business committee for 1941, XXVI, 936
 report of medal award committee, XXVIII, 668 1230; XXIX, 603
 report of president for 1943, XXVIII, 645
 report of resolutions committee for 1940, XXV, 980
 report on finances for 1929, XIV, 662
 report on membership for 1929, XIV, 659
 review, XXIX, 1520
 Robberson field, Garvin County, Oklahoma, VII, 625
 Sidney Powers Memorial Medal Fund, XXVII, 1277
 William Edwin Wallace—recipient of president's award, XXIX, 469
 Denison, A. Rodger, Oldham, A. E., and Kisling, J. W., Jr., PROB, 332
 structure and stratigraphy of Kelsey anticline, Upshur County, Texas, XVII, 656, 1015
 Denison Dam, log of Kiamichi-Duck Creek section exposed at, XXVII, 1063
 Denison formation, II, 62, 80; V, 307; VI, 181
 Denham, R. L., and Dougherty, W. E., sand belt area of Ward and Winkler counties, Texas, and Lea County, New Mexico, STRAT, 750
 Denitrifying bacteria, RMS, 291
 Denmark, RMS, 322, 336, 347
 dust falls in, RMS, 498
 Denmark limestone, middle Trenton, large ripples in, XXIX, 432
 Denning, W. H., XVI, 53
 Dennis or Hogshooter formation, XXVII, 639
 Denny, E. H., and Harrington, D., GAS, 1061
 Densities and porosities, determination of, XVI, 915
 Density, RMS, 61, 62, 74, 110, 112, 125, 582
 effect of, on currents, RMS, 118
 effect of temperature upon, RMS, 61
 factors influencing, RMS, 62, 117
 gradient, RMS, 76, 124
 in fiords, RMS, 359
 increase of, with depth, 59, 60
 maximum, temperature of, RMS, 70
 method of determining, RMS, 62
 of oils, rule of, XVI, 1038
 of sediments, PROB, 620
 of water, RMS, 68
 porosity, and compaction of sedimentary rocks, XIV, 1
 range of, PROB, 620
 rate of change, with depth, RMS, 59
 relation to compaction and depth, PROB, 280
 vertical distribution of, in basins, RMS, 94
 vertical distribution of, in sea, RMS, 93
 Density contrast and differential hydrostatic pressure at bottom of salt column, GC, 83; XVIII, 1179
 Density contrast between salt and surrounding sediments in salt domes, GC, 81; XVIII, 1177
 Density curves of waters with different salinity under varying temperature, RMS, 364

- Density-depth curve, PROB, 619
 Density differences, RMS, 121
 as cause of currents, RMS, 105
 Density distribution, RMS, 74, 128
 Density relations of a Gulf Coast salt dome, XIV, 214
 Density stratification, RMS, 106, 135, 236
 in basins, RMS, 96, 97, 100
 Dent, Elliott J., RMS, 25
Dentalium-Fusus bed, MSC, 53, 196, 204, 213, 216, 221, 222, 240-242, 258, 260, 316, 332, 346, 355
 Dentella, Giacomo, X, 1236
 Denton, F. R., and Trowbridge, R. M., developments in East Texas during 1940, XXV, 1081
 developments in East Texas during 1941, XXVI, 1050
 Denton County, Texas, developments during 1940, XXV, 1076
 fossils from limestones of Buda age in, XXVIII, 1538
 Denton limestone, XXII, 1431
 Denton marl in northern Texas, XIII, 1297
 Denton shale, XXIX, 173
 Denudation, area of, RMS, 592
 of Sierra Madre during Lower Eocene time, MEX, 140
 Denver Basin, FOP, 60; XXV, 1492; XXVI, 1567; XXVII, 427
 Colorado, Dawson and Laramie formations in southeastern part of, XX, 1308
 Colorado, geologic map of southeastern part of, XX, 1315
 Colorado, structure section, FOP, 63; XXV, 1495
 Denver Oil and Refining *et al.*, XXII, 676
 Denver Oil Co., SD, 623
 Denver-Wasson pool, Gaines and Yoakum counties, West Texas, XXIV, 1037
 Department of Agriculture, SBP, 7
 Department of Interior, SBP, 6
 Department of Loretto, Peru, oil on Agua Caliente anticline, XXIII, 688
 Depass formation, XXIII, 481, 1447; XXV, 127
 Dependent variable in presentation of results of mechanical analyses, RMS, 560
 Depew anticline in Depew area, Oklahoma, STR II, 368
 Depew area, Oklahoma, STR II, 365
 surface formation of, STR II, 366
 Depew fold terminated on east by reversed fault, STR II, 372
 Depew pool, Oklahoma, an example of pools having similar subsurface domal relationships in more than one sand, STR II, 681
 Depletion, computation of, GAS, 1032
 of a reservoir, XXII, 1242
 of oxygen, RMS, 418
 Depletion allowances, application of, to oil property taxation, V, 484
 Deposition, RMS, 6, 525, 526, 582; XXVI, 1763. (*See Sedimentation*)
 by streams, laws of, RMS, 12
 compaction, and cementation, period of, XXII, 836
 conditions of, in Baltic, RMS, 299-300, 312
 conditions of, and source of sediments in Oklahoma coal field, XXI, 1404
 contemporaneous with folding, GAS,
- (Deposition)
 1079
 core taken from sea bottom in Gulf of California showing annual interval of, XXVI, bet. 154 and 155
 maximum, during pre-Pennsylvanian and Pennsylvanian time, map of Texas showing areas of, XXIX, 1342
 maximum, in West Texas, pre-Permian axes of, XXIX, 1336
 of black muds, land-locked waters and, RMS, 356
 of chalk, RMS, 148
 of free oil by sediments settling in sea water, XXV, 2170
 of Lissie and Beaumont formations of Gulf Coast of Texas, XXIV, 693
 of metals by organisms, RMS, 4, 435, 436
 of oil, sedimentary, XXII, 1045
 of organic matter in recent sediments, PROB, 27
 of petroleum source materials, XXVIII, 925
 of sediments, Barrell's theory, XIII, 716
 of continental shelf, RMS, 239
 on deep ocean floor, RMS, 280
 on deltas, RMS, 165
 past and present, on continental shelf, RMS, 242
 petroleum in sediments at time of, XIV, 1451
 physical conditions of, RMS, 592
 relation of radioactivity to rate of, XXIX, 1487
 shifts of, in Gulf Coast region, XXIX, 1322
 thickness of, MEX, 50, 52, 64
 Depositional and diastrophic history of Colombia, XXIX, 1105
 Depositional cycles in coastal Texas and Louisiana, GC, 455; XIX, 674
 Depositional features, Appalachian, XXV, 788, 792
 Depositional highs, XIII, 1041
 Depositional pattern, cyclic, in Midway-Wilcox complex of Sabine uplift, XXIX, 54
 Depositional pinch-out reservoirs, XXIX, 1563
 Deposits associated with strand line, RMS, 153
 coastal and inland, value as future source beds of petroleum, XII, 1057
 Depreciation of gas property, GAS, 1031
 Depressions. (*See Basins*)
 in Baltic Sea, RMS, 299, 307, 309
 nature of sediments in, in limestone-forming areas, RMS, 293
 North Germany, RMS, 331, 334
 on sea floor, RMS, 246
 Depth, PROB, 141, 150; RMS, 377
 as related to pressure, RMS, 63
 change of base of crude oil with, XXI, 922
 chart of North Sea, RMS, 324
 decreasing specific gravity with increasing, shown by Miocene, Oligocene, Jackson Eocene, and lower Eocene crude oils, XXI, 923
 effect on character of crude oil, PROB, 141
 effect on character of Gulf Coast crude oil, PROB, 111
 in passes of Mississippi River, RMS, 159
- (Depth)
 of burial, PROB, 449
 of burial, relation of, to nature of sediments, RMS, 389-394
 of cherty shale marker above Stevens sand, southeastern San Joaquin Valley, XXV, 1356
 of current action, in Baltic Sea, RMS, 312
 of current action on continental shelf, RMS, 237
 of frictional influence, RMS, 119
 of Rio Bravo sand, southeastern San Joaquin Valley, XXV, 1358
 of sediment, variation of organic matter with, RMS, 321
 of sediments in eastern United States, FOP, 142; XXV, 1574
 of water, changes of velocity with respect to, RMS, 120
 of water, effect on carbon content of East Indies sediments, RMS, 352
 of water, effect on organic content, RMS, 305, 381
 of water, effect on sediments in North Sea, RMS, 336
 of water, effect on texture, RMS, 251
 of water, effect on texture in Atlantic Ocean, RMS, 388
 of water, effect on tides, RMS, 131, 135
 of water, influence on pelagic sediments, XXIII, 1671
 of water to which stiff-handled bottom samplers can be used, RMS, 641, 645
 of wave and current action, RMS, 235
 of Wilcox sediments, increase of, to bottom of coastal geosyncline, XXIV, 1898
 range in, of samples studied, SBP, 403-411
 rate of change of density with, RMS, 59
 relation of, to growth of organisms and concentration of nitrates, phosphates and silicates, RMS, 146
 seismic velocity a function of, XXV, 1350
 to basement in Houston-Jennings area indicated by geophysical prospecting, GC, 195; XVII, 1449
 to petroleum accumulation, problem of, and microscopic geochemical prospecting, XXIV, 1415
 to which plants grow in sea water, RMS, 145
 Depth and age, variation of content of carbon and sulphur in crude oil with, XXI, 927
 Depth and temperature distribution of foraminifera, MSC, 81
 Depth calculation in refraction work, XVI, 1212
 Depth conditions, average, in present-day impounded water bodies, XXVI, 1750
 Depth corrections at marker above Stevens sand, southeastern San Joaquin Valley, XXV, 1357
 at Rio Bravo sand, southeastern San Joaquin Valley, XXV, 1359
 Depth determinations for top of Viola limestone made by use of variations in drilling time per foot, XXIII, 1820
 to various formations on radioactivity logs, accuracy of, XXV, 1774
 Depth record for drilling in Rocky

(Depth)

- Mountain region, in Laramie County, Wyoming, XXI, 995
- Depth-resistivity factor curves, XVIII, 54, 56
- Depth-temperature curve, Lonetree, Ward County, North Dakota, PROB, 1004
- of Getty-Dooley well No. 7, XXI, 1195
- showing possible effect of ground water, PROB, 999
- Depth-temperature curves, XIV, 539
- Depth variation of the specific gravity of crude oils of Gulf Coast, XXI, 924
- Depths of normal boiling point of water, and rock temperatures, in the United States, XX, 270
- to principal producing horizons in Illinois oil fields, XXIII, 813
- Depths and stratigraphic position, relative, of porosity and fluids in Wason field, chart, XXVII, 505
- DeQueen limestone, XXIX, 1419
- DeQueen limestones in Arkansas and Oklahoma, XII, 1076
- Derby, XXIX, 545
- Derby and Hartt, XXI, 299
- Derby, O. A., XIX, 1728; XX, 1208, 1218, 1219, 1229, 1230
- Derby dolomite, XXV, 1632
- Derby dome, XXV, 148
- Embar and Tensleep waters in, XXIV, 1290, 1295
- Derden, Jesse Homer, XIV, 1517; XVI, 961
- memorial of, XXVIII, 1668
- Derrick, Frank G., XVII, 456
- Des Moines, upper, and lower Missouri series from Jackson County, Missouri, to Appanoose County, Iowa, cross section, XXV, 26
- upper, and lower Missouri series from Jackson County, Missouri, to Appanoose County, Iowa, traverse of, XXV, 23
- Des Moines beds, New Mexico, equivalents of, XXIV, 177
- Des Moines group, Adair County, Oklahoma, XXIV, 432
- Jesse pool, XXII, 1568
- Des Moines fauna, XXV, 132; XXVI, 1387
- Des Moines-Missouri boundary, XXV, 66
- of Mid-Continent, XXIX, 165
- stratigraphic position of, XXV, 46
- Des Moines-Missouri series, XXIX, 141
- Des Moines series, XXI, 505, 507; XXV, 42, 45, 49, 53, 54, 64, 69, 1661, 1677; XXIX, 146, 148
- Adair County, Missouri, section, XXV, 51
- Appanoose County, Iowa, XXV, 69
- Appanoose County, Iowa, section, XXV, 62
- Bush City field, STRAT, 45
- central Oklahoma, XXV, 1670
- Cherokee group in, Missouri to Iowa, XXV, 35, 42, 49, 53, 59
- Davies and Grundy counties, Missouri, section, XXV, 45
- East Tuskegee pool, STRAT, 443
- fauna of, XXV, 43
- Henrietta group in, XXV, 29, 36, 42, 45, 49, 50, 55, 59, 64, 66, 69
- Jackson County, Missouri, section, XXV, 28
- Kansas, XXV, 1674

(Des Moines)

- Lafayette and Johnson counties, Missouri, section, XXV, 33
- Livingston and northern Carroll counties, Missouri, section, XXV, 40
- Missouri, XXV, 1675
- northeast of Hardin, Ray County, Missouri, section, XXV, 38
- Olympic pool, STRAT, 460
- Ouachita Mountains, XXV, 1672
- Putnam County, Missouri, section, XXV, 57, 61
- Sullivan County, Missouri, section, XXV, 46
- Des Moines type section and correlations, XXIX, 164
- Deschambault anticline, GAS, 99
- Deschutes formation, XXIX, 1386
- Description of cuttings from Duffer well, Ranger field, III, 39
- discussion, III, 40
- Desda field, West Virginia, XXIX, 683
- Desdemona field, IV, 160; XXV, 1677
- Desert Basin, Western Australia, fossils of, X, 1128
- geologic structure, X, 1132
- Jurassic, X, 1129
- oil prospects of, X, 1118
- stratigraphy, X, 1127
- Desert varnish, XXVI, 40
- Deserts, RMS, 496
- Desha basin, XXIII, 1401
- Designation of basic data on samples analyzed in study of source beds of petroleum, SBP, 412
- Desjardins, Louis, measurement of dip angles on aerial photographs, XXVII, 1534
- review, XXVII, 95, 1160
- Desmoinesian and Missourian in Oklahoma and Kansas, references on, XXVII, 640
- Desmoinesian age, rocks of, XXVII, 632
- Desmostylus* fauna, MSC, 155
- Desor, XXVII, 270
- Destruction of oil-bearing horizons caused by recent faulting in central Texas, XX, 1369
- of organic matter in sea and sediments, RMS, 439-441, 444, 529
- Destructive distillation, PROB, 39, 269
- of organic matter, XV, 455
- Detailed studies of properties in Dominguez oil field, SBP, 153-165
- Detailed study of oil fields, use of electrical logging in, XXIII, 1303
- Detergent chemical added to water on percentage of oil produced through sand, graph showing effect of, XXIV, 2176
- Determination of mean sea level, RMS, 128
- of position and extent of simple bodies by use of gradient and differential curvature values, review, XIII, 85
- of relative gravity by torsion balance, accuracy of, XVI, 1235
- Determining time of accumulation under special circumstances, criteria for, XXII, 834
- Detmer, W., PROB, 43
- Detrick sand, V, 291
- Detrital *versus* Simpson at Oklahoma City, XIV, 228
- Detrital form of minerals, RMS, 603
- Detrital minerals, XXIV, 640

- Detritus carried by streams in California, RMS, 272
- content of, RMS, 28
- distance carried seaward during floods, RMS, 276
- effect of, on erosion, RMS, 11
- quantity of, supplied to the sea in Southern California, RMS, 268-274
- transportation of, by moving water, RMS, 5
- Detroit River (upper Monroe) and Dundee formations of central Michigan, insoluble residues of, XXI, 317
- Detroit River dolomite, XXIV, 1955
- Detroit River-Dundee break, PROB, 550
- Detroit River formation, XXII, 398, 408; XXV, 1134; XXVI, 1106; XXVII, 828, 829; XXVIII, 763; XXIX, 698, 700
- sour-oil pay of, XXVII, 831
- Detroit River group at Buckeye field, XXIV, 1961
- Detroit River producing formation, XXVI, 1097
- Deussen, Alexander, GAS, 673, 683; GC, 216, 418, 437, 473, 502, 551; PROB, 134, 666; SD, 22, 30, 211, 214, 216, 241, 242, 247, 255, 352, 421, 426, 570, 577, 588, 719, 770, 771, 782; STRAT, 588; STR I, 309; III, 127, 312, 313; VI, 43, 331; VII, 623; VIII, 542; IX, 349, 537; 661, 744, 851, 860, 862, 866, 1285; 1290; X, 3, 33, 34, 39; XI, 829; XIII, 157, 167, 1339, 1348, 1358, 1387; XIV, 1301, 1309; XV, 470, 758, 868, 879; XVI, 386, 692; XVII, 18, 456, 458, 460, 462, 466, 470, 480, 482, 489, 490, 497, 506, 532, 630, 912, 919, 922, 928, 942, 1296, 1297, 1325; XVIII, 1078; XIX, 333, 334, 335, 342, 656, 658, 670, 880, 1361; XX, 495; XXIV, 1409, 1411; 1806, 1813; XXV, 1968, 2002, 2003; XXVIII, 1009; XXIX, 1714, 1796
- announcement of twenty-sixth annual meeting, Houston, April, 1941, XXV, 342, 535
- discussion of Coastal Plain deposits of Texas, XVII, 483
- factors governing estimation of recoverable oil reserves in sand fields, discussion, XVIII, 1078, 1080, 1082
- Humble (Texas) field, I, 60; discussion, I, 79
- memorial of Anthony F. Lucas, V, 688
- memorial of Laura Lee Weinzierl, XIII, 94
- memorial of Lee Hager, XXVIII, 1666
- oil-producing horizons of Gulf Coast in Texas and Louisiana, GC, 1; XVIII, 500
- report of resolutions committee for 1937, XXII, 616
- review of developments in Gulf Coast country in 1917, II, 16
- review of Tertiary stratigraphy of Louisiana, discussion, XVII, 869
- theory of origin of salt domes, IX, 851, 860
- two decades of progress in the art of oil finding, XVIII, 942

- Deussen, Alexander, and Andrau, E. W. K., XX, 1367; XXIII, 602
Orange, Texas, oil field, GC, 880; XX, 531
- Deussen, Alexander, and Guyod, Hubert, use of temperature measurement for cementation control and control and correlations in drill holes, XXI, 789
- Deussen, Alexander, and Lane, Laura Lee, Hockley salt dome, Harris County, Texas, SD, 570; IX, 1031
- Deussen, Alexander, and Owen, Kenneth Dale, XXV, 109; XXVI, 1006
correlation of surface and subsurface formations in two typical sections of Gulf Coast of Texas, XXIII, 1603
- Deussen, Alexander, and Trowbridge, A. C., GC, 552; XVII, 490
- Deustua, R. A., oil in Peru, review, X, 98
- Deuterium oxide, RMS, 67
- Deutsche Bucht, RMS, 335-337
- Deutschen Alpen und ihre Entstehung*, XII, 1112
- Deutsches Erdöl*, review, XVIII, 1092
- Development, GAS, 119, 230, 238, 766, 873, 877. (See Drilling)
- early, of drilling practices in Kanawha County, West Virginia, XXII, 1088
- future, of Artesia field, New Mexico, STR I, 123
- future, of Copley pool, West Virginia, STR I, 461
- in Alberta in 1944, XXIX, 654
- in Cochran County, West Texas, in 1938, XXIII, 842
- in Colorado in 1943, XXVIII, 789
- in East Texas during 1937, résumé of, XXII, 728, 1111
- in Eastern Interior basin in 1940, XXV, 1114
- in Edna gas field, XXV, 118
- in Illinois, recent, with discussion of producing formations below McCloskey sand, XXIII, 807
- in Kanawha County, West Virginia, XXII, 1160
- in Maryland in 1941, XXVI, 1134
- in Michigan, XXII, 662
- in Moose Mountain area, XXVII, 49
- in natural gas in Michigan during 1941, XXVI, 1102
- in Nebraska in 1940, XXV, 1111
- in Nebraska in 1941, XXVI, 1084
- in Ness County, Kansas, XXIX, 564
- in new central Texas oil fields, review of, during 1918, III, 163
- in Nowata and Rogers counties, Oklahoma, XXI, 1006
- in Ramsey area, XXIV, 2004
- in Refugio field, XXII, 1189
- in Rocky Mountain region, areas of principal, XXI, 991
- in southern Arkansas and northern Louisiana in 1938, XXIII, 896
- in Tloga County, Pennsylvania, XV, 932
- in White Point area, XXV, 173
- increased in north and west-central Texas in 1943, XXVIII, 835
- major, of Hugoton field in seven countries of Kansas, XXIV, 1782
- new, for oil and gas in Oklahoma during the past year, and its geological significance, II, 53
- of Amelia field and its problems, XXIII, 1637
- (Development)
- of Basin fields in Illinois, XXIII, 1495
- of Carterville-Sarepta and Shongaloo fields, XXII, 1487
- of Cunningham field, Kansas, XXI, 517
- of Emba salt-dome area, XXIII, 496
- of Eola field, history of, XXV, 1365
- of Greenwich pool, XXIII, 643
- of ground water in Houston district, XXVII, 1082
- of Hoffman field, XXIV, 2139
- of Illinois oil fields, XXII, 74
- of Jesse pool, XXII, 1560
- of Kansas reserves in 1939, XXIV, 999
- of Keokuk pool, XXIII, 239
- of micropaleontology, early scientific background for, XXV, 1209
- of oil and gas resources, unrestricted competitive, reducing the economic and natural waste attendant upon, XXII, 1086
- of Powder Wash field, XXII, 1022
- of production in Jurassic (?) Morrison formation on Wilson Creek dome, Rio Blanco County, Colorado, XXII, 677
- of Santa Maria Valley field, XXII, 46
- of Saxet field, XXIV, 1832
- of Schuler field, history of, XXVI, 1471
- of Sewell-Eddleman area, XXVI, 206
- of shallow-sand gas territory of western Pennsylvania during 1941, XXVI, 1114
- of South Cotton Lake field, XXV, 1913
- of Sulphur Bluff field, XXI, 111
- of Tinsley field, XXV, 1019, 1020, 1022
- of Wasson field, XXVII, 481
- of Wilmington oil field, XXII, 1052
- oil and gas, in Rocky Mountain region, history of, XXVII, 419
- recent petroleum, in Illinois, XXII, 649
- slow, of Sparta-Wilcox trend in Gulf Coast, XXIV, 711
- Development and birth of the geological sciences, XXIII, 1099
- Development and geologic relationships of Appalachian fields, history of, XXII, 416
- Development and geology of Keokuk pool, Seminole and Pottawatomie counties, Oklahoma, XXIII, 220
- of petroleum fields of Peru, South America, outline of, V, 585
- Development and history of process of well logging by radioactivity, XXV, 1769
- Development and production in Amelia field, XXIII, 1657
- in Coastal Louisiana, XXVII, 737
- Development and production data, XXV, 622
- Development and production history of Lisbon field, XXIII, 320
- Development and production practice at Cunningham field, Kansas, XXI, 517
- Development and production statistics on Coastal Texas, XXVII, 734
- Development and use of engineering geology, XXVI, 1797
- foreword, XXVI, 1795
- Development chart of Conroe field, GC, 821; XX, 768
- Development drilling, definition, XXVIII, 704
- Development map of Eola field, XXV, 1368
- southeastern United States, XXVI, 996
- Development methods, Graham field, Oklahoma, VIII, 616
- Development practices, Sewell-Eddleman area, XXVI, 216
- Development problems and their solution in Luling field, Texas, STR I, 279; IX, 650
- Development problems and their solution in Southern California oil fields, VIII, 135
- Development trends in southeastern United States, XXVI, 994
- Development work, VIII, 653
- Developments, Gulf Coastal, in 1936, XXI, 1050
- Gulf Coastal, in 1937, XXII, 736
- in American petroleum industry, 1914-1919, XXVI, 136
- in Appalachian area in 1940, XXV, 1135
- in Appalachian area in 1941, XXVI, 1110
- in Appalachian area in 1942, XXVII, 835
- in Appalachian area in 1943, XXVIII, 722
- in Appalachian area in 1944, XXIX, 665
- in Arkansas-Louisiana-Texas area, 1936-1937, XXI, 1068
- in California in 1937, XXII, 702
- in California in 1938, XXIII, 932
- in California in 1943, XXVIII, 743
- in California in 1944, XXIX, 646
- in Canada in 1944, XXIX, 654
- in Canada in 1944, bibliography, XXIX, 663
- in Colorado in 1937, XXII, 680, 687
- in East Texas in 1938, XXIII, 889
- in East Texas in 1939, XXIV, 1062
- in East Texas in 1940, XXV, 1081
- in East Texas in 1941, XXVI, 1050
- in East Texas in 1942, XXVII, 782
- in East Texas in 1943, XXVIII, 841
- in East Texas in 1944, XXIX, 766
- in Eastern Interior basin, 1939 and first quarter of 1940, XXIV, 959
- in Eastern Interior Basin in 1941, XXVI, 1086
- in Eastern Interior basin in 1942, XXVII, 814
- in Eastern Interior basin in 1943, XXVIII, 751
- in Eastern Interior basin in 1944, XXIX, 685
- in eastern Kentucky in 1941, XXVI, 1129
- in Gulf Coast of upper Texas and Louisiana in 1943, XXVIII, 853
- in Gulf Coast country in 1917, review of, II, 16
- in Kansas in 1937, XXII, 666
- in Kansas in 1938, XXIII, 797
- in Louisiana Gulf Coast in 1944, XXIX, 792, 799
- in Louisiana Gulf Coast in 1944, contributions to geological knowledge, XXIX, 799
- in Michigan in 1939, XXIV, 974
- in Michigan in 1942, XXVII, 822
- in Michigan in 1943, XXVIII, 760
- in Michigan in 1944, XXIX, 693, 694
- in Mississippi in 1940, XXV, 1016, 1020

(Developments)

- in Mississippi in 1941, XXVI, 992
- in Mississippi in 1942, XXVII, 992
- in Mississippi in 1943, XXVIII, 803
- in Montana, in 1937, XXII, 687
- in 1938, Gulf Coast of southeast Texas and Louisiana, review of XXIII, 871
- in 1939, Gulf Coast of upper Texas and Louisiana, review of, XXIV, 1079
- in 1940, Gulf Coast of upper Texas and Louisiana, review of, XXV, 1004
- in 1941, Gulf Coast of upper Texas and Louisiana, review of, XXVI, 983
- in 1942, Gulf Coast of upper Texas and Louisiana, review of, XXVII, 730
- in north and west-central Texas, 1939, XXIV, 1044
- in north and west-central Texas in 1942, XXVII, 771
- in north and west-central Texas in 1943, XXVIII, 834
- in north and west-central Texas in 1944, XXIX, 757
- in north and west-central Texas in 1944, map, XXIX, 761
- in north Louisiana and south Arkansas in 1941, XXVI, 1250
- in north Louisiana and south Arkansas in 1942, XXVIII, 257
- in north Mid-Continent in 1939, XXIV, 994
- in north Mid-Continent in 1940, XXV, 1103
- in north Mid-Continent in 1941, XXVI, 1073
- in north Mid-Continent in 1942, XXVII, 806
- in north Mid-Continent in 1943, XXVIII, 767
- in north Mid-Continent in 1944, XXIX, 701
- in north-central and west-central Texas, 1938, XXIII, 844
- in north-central Texas in 1937, map, XXIII, 846-847
- in north-central Texas in 1939, XXIV, 1046
- in north-central Texas in 1940, XXV, 1074
- in north-central Texas in 1941, XXVI, 1041
- in north-central Texas in 1942, XXVII, 773
- in north-central Texas and Panhandle, 1936-1937, XXI, 1015
- in northeast Texas district in 1936, XXI, 1063
- in Ohio in 1940, XXV, 1144
- in Oklahoma in 1936, XXI, 1006
- in Oklahoma in 1938, XXIII, 823
- in Oklahoma in 1939, XXIV, 1011
- in Oklahoma in 1940, XXV, 1090
- in Oklahoma in 1941, XXVI, 1058
- in Oklahoma in 1942, XXVII, 790
- in Oklahoma in 1943, XXVIII, 774
- in Oklahoma in 1943, bibliography on, XXVIII, 788
- in Oklahoma in 1944, XXIX, 708
- in Permian of West Texas, 1940, XXV, 1947
- in pre-Permian of West Texas, XXVI, 1028
- in pre-Permian of West Texas in Crane, Crockett, Pecos, and Ward counties, in 1940, XXV, 1054

(Developments)

- in pre-Permian of West Texas in 1942, XXVII, 762
- in Rocky Mountain region in 1936, XXI, 986
- in Rocky Mountain region in 1937, XXII, 677
- in Rocky Mountain region in 1938, XXIII, 903
- in Rocky Mountain region in 1939, XIV, 1100, 1347
- in Rocky Mountain region in 1940, XXV, 1149
- in Rocky Mountain region in 1942, XXVII, 854
- in Rocky Mountain region in 1943, XXVIII, 789
- in Rocky Mountain region in 1944, XXIX, 1593
- in south Arkansas and north Louisiana in 1937, XXII, 719
- in south Arkansas and north Louisiana in 1939, XXIV, 1092
- in south Arkansas and north Louisiana in 1940, XXV, 1024
- in south Arkansas and north Louisiana, in 1944, XXIX, 803
- in south Texas in 1936-1937, XXI, 1042
- in south Texas, 1938-1939, XXIII, 860
- in south Texas, in 1940, XXV, 1037
- in south Texas, in 1941, XXVI, 1000
- in south Texas in 1942, XXVII, 739
- in south Texas in 1943, XXVIII, 858
- in south Texas in 1944, XXIX, 777
- in southeastern New Mexico in 1940, XXV, 1062
- in southeastern New Mexico in 1941, XXVI, 1035
- in southeastern New Mexico in 1942, XXVII, 767
- in southeastern United States in 1941, XXVI, 991
- in southeastern United States in 1942, XXVII, 990
- in southeastern United States in 1943, XXVIII, 801
- in southeastern United States in 1944, XXIX, 815
- in southwestern Indiana in 1941, XXVI, 1092
- in Texas Panhandle in 1944, XXIX, 721
- in upper Gulf Coast of Texas in 1944, XXIX, 785
- in West Texas and southeastern New Mexico in 1936, XXI, 1034
- in West Texas and southeastern New Mexico in 1937, XXII, 694
- in West Texas and southeastern New Mexico in 1938, XXIII, 836
- in West Texas and southeastern New Mexico in 1939, XXIV, 1033
- in West Texas and southeastern New Mexico in 1940, XXV, 1044
- in West Texas and southeastern New Mexico in 1942, XXVII, 747
- in West Texas and southeastern New Mexico in 1943, XXVIII, 806
- in West Texas and southeastern New Mexico in 1944, XXIX, 725
- in West Virginia in 1940, XXV, 1146
- in West Virginia in 1941, XXVI, 1126
- in western Kentucky in 1940, XXV, 1123
- in western Kentucky in 1941, XXVI, 1095
- in western Kentucky in 1943, XXVIII, 759

(Developments)

- in Wyoming in 1937, XXII, 680, 688
- new, in north and west-central Texas, 1940, XXV, 1064
- new, in north and west-central Texas, 1941, XXVI, 1040
- of geologic significance, Wichita and Archer counties, Texas, XXIV, 1049
- oil and gas, in Michigan in 1940, XXV, 1125
- oil and gas, in Michigan in 1941, XXVI, 1097
- past years', in Kentucky, résumé of, from a geologic standpoint, II, 38
- petroleum, in Canada in 1943, XXVIII, 864
- recent, in geochemical prospecting, critical survey of, XXIV, 1464
- recent, in Kansas and Nebraska in 1936, XXI, 1000
- recent, in Michigan basin, XXII, 659
- recent, in south Mid-Continent, XXIV, 1025
- significant, in California, 1939, XXIV, 1112
- Developments and status of oil reserves in south Texas, 1939, XXIV, 1069
- Devernn, L., RMS, 593
- Deviation, use of data on, in connection with gas measurement in California fields, GAS, 1041
- Deviation corrector, XXI, 610, 612
- Devilwater-Gould member, XXVI, 1616
- Devil's Basin anticline, XXVII, 1304
- Devils Basin dome, Montana, PROB, 704, 715; XXVII, 434
- Devils Basin field, XXVI, 434, 465
- Devils Den, CAL, 20, 176, 178, 284, 309; SC, 20, 29, 56, MSC, 119; XX, 1566, 1575, 1602
- Devils Den fault, XI, 614
- Devils Den oil field, MSC, 109
- Devil's Hole in North Sea, RMS, 325
- Devine, John M., and Wilhelm, C. J., GAS, 443, 451, 452, 456, 457, 1069, 1070, 1074
- Devolatilization, PROB, 76
- of coals, PROB, 483
- Devon gas field, Montana, XXIX, 1290
- Devonian, CAL, 15, 62, 63, 65, 199, 301; RMS, 203
- Alberta, FOP, 23, VII, 148; XXV, 1455
- Amazon trough, XXIX, 543
- Appalachian area, XXVIII, 740
- Appalachian region, PROB, 58, 105, 455, 457, 494; XXV, 422
- Argentina, X, 854; XXIX, 515
- Australia, XXI, 1124
- Big Sinking field, STRAT, 180
- Bolivia, X, 854
- Bradford field, Pennsylvania and New York, STR II, 414, 417
- Brazil, XXIX, 544
- Brazil and other areas of South America, correlation of, XX, 1234
- Cabin Creek field, West Virginia, STR I, 469
- Canada, V, 86, 524; XV, 609; XXIX, 656
- Central basin of Appalachian geosyncline, XXV, 794, 805
- central New York, XV, 674
- Chanute pool, STRAT, 62, 63
- China, XXVIII, 1422
- Cincinnati arch, XXIII, 1847
- Colombia, XXV, 1789
- Colorado, XXVI, 1377

(Devonian)

correlations of Illinois and Missouri sections, XXV, 691
 Dakota basin, XXVII, 1592
 Davenport field, STRAT, 389
 eastern coal field, Kentucky, STR I, 74, 88
 Eastern Interior Coal basin, GAS, 821
 eastern Ohio, STR I, 141, 144
 eastern Tennessee, XXVII, 1051
 Finger Lakes region, New York, XVI, 676
 Franklin Mountains, Texas, XXIV, 164
 growth of Cincinnati Arch during, GAS, 940
 Hebron field, XX, 1020
 Illinois, IV, 45, XXIII, 812, 1357; XXV, 672, 1116; XXVII, 818; XXVIII, 751
 Indiana, IX, 321
 Iowa, XXIV, 1496; XXV, 1645
 Kansas, STRAT, 63; II, 105, 109; V, 146, 509
 Kentucky, GAS, 825, 835, 857, 916, 917, 932, 943-945; STRAT, 180; II, 40; III, 357; IV, 304; V, 522; VI, 24; XXV, 1147; XXVIII, 531
 Kentucky, relation to petroleum possibilities, XXV, 710
 Kentucky, stratigraphy, XXV, 669
 Kentucky and Tennessee, PROB, 517
 Kentucky eastern coal field, XI, 479
 Kevin-Sunburst field, Montana, STR II, 260
 Lower, XXVII, 890
 Lower, Central basin of Appalachian geosyncline, XXV, 810
 Lower, east-central United States, XXII, 1530
 Lower (Helderbergian), in Michigan, XXI, 319
 Lower, New York and Pennsylvania, XXII, 242
 Lower, western Tennessee, section, XXV, 673
 Lower, western Tennessee, south-western Illinois, and southeastern Missouri, sections, XXV, 677
 Marathon basin, XV, 1076
 Marathon Mountains, XXIX, 1343
 Michigan, GAS, 791; XXII, 397; XXIV, 1953, 1955, 1966, 2151; XXV, 1134; XXVII, 595, XXVIII, 185
 Michigan basin province, XIII, 421
 Mid-Continent fields, PROB, 293, 822
 Middle, PROB, 546
 Middle, Central basin of Appalachian geosyncline, XXV, 809
 Middle, correlations, XXV, 692
 Middle, Illinois, XXV, 679
 Middle, limestones in east-central United States, XXII, 1529
 Middle, Michigan, unconformity in, XXI, 319
 Middle, Missouri, XXV, 682
 Middle, orogeny in Maritime provinces, FOP, 119; XXV, 1551
 Middle, outcrops of Illinois Basin area, correlation of, XXVIII, 1520
 Middle, sections in Illinois, well logs, XXVIII, 1525
 Middle, subsurface formations in Illinois, XXVIII, 1519
 Middle, Tennessee, XXV, 678
 Minnesota, X, 195
 Missouri, XXV, 674, 1645

(Devonian)

Montana, FOP, 42; PROB, 61, 349; XXV, 1474
 Moose Mountain area, XXVII, 44
 Muskegon field, Michigan, XVI, 159
 Nebraska, XVIII, 1628; XXV, 1110
 New Mexico, IV, 104; XXV, 2109; XXVII, 858
 New York, XXIII, 1181
 New York and Pennsylvania, GAS, 962
 New York oil fields, STR II, 274, 277
 North Dakota, XXVI, 347, 1421
 North Sea, RMS, 332
 Ohio GAS, 905; STRAT, 384, V, 609; XI, 1026, XX, 798
 Oil of, III, 292
 oil production from, in Illinois, XXIII, 814
 Oklahoma, STRAT, 389; IV, 174, V, 34, 152, VI, 6, 161; XXIII, 326; XXIV, 2009; XXVIII, 781, XXIX, 714
 Ontario, GAS, 61
 Ontario Peninsula, FOP, 115; XXV, 1547
 Ordovician, Silurian, and early Carboniferous sedimentary rocks of Interior Highlands in Arkansas, GAS, 540
 Parana basin, XXIX, 553
 Pennsylvania, XXIX, 671; STRAT, 511; XXV, 1141; XXVI, 1115
 Plains of Canada, XXIX, 657
 post-, rocks in Kansas west of Nemaha Granite ridge, GAS, 462
 promising tests in Crawford County, Illinois, XXIII, 818
 Rocky Mountains, XXIII, 1138, XXVII, 422, 465
 Russia, XXIII, 956
 Saginaw field, XI, 960
 Sand Hills area, Texas, XXIV, 126
 Scenery Hill gas field, Pennsylvania, STR II, 444, 445
 Seminole district, Oklahoma, STR II, 324
 Shinnston pool, STRAT, 834-838
 southern Indiana and Kentucky, XXV, 686
 southwestern Pennsylvania, age of, discussion, XXIX, 1546
 subsurface, of Sandoval pool, Marion County, Illinois, correlation of, with Devonian outcrop of south-western Illinois, XXVIII, 1528
 subsurface stratigraphy, XXV, 692
 Szechuan province, China, XXVIII, 1433
 Tennessee, FOP, 154; V, 168, 653; XXV, 669, 1586
 Texas, XV, 826; XXI, 1019
 thinning of, in Appalachian region shown by isopachous lines, XXII, 425
 Thomas field, Oklahoma, X, 648
 Tioga County, gas field, XV, 930
 Upper, PROB, 490; XXV, 691
 Upper, Canada, FOP, 19; XXV, 1451
 Upper, Pennsylvania, STRAT, 495; XXVII, 838; XXVIII, 726
 Upper, sands, correlation of, XXV, 805
 upper, and lower Mississippian of southwestern Pennsylvania, stratigraphic units of, XXV, 163
 Urals, XXI, 1442, 1444
 Utah, VI, 207
 Vance well, Delaware County, Ohio, XXIV, 676

(Devonian)

Venango district, STRAT, 511
 West Texas, diagrammatic cross section, of pre-Pennsylvanian rocks at close of, XXIX, 1344
 West Texas Permian basin, dolomite porosity in, XXVIII, 1043
 West Virginia, STRAT, 834; IV, 28, XI, 589; XXV, 784, 1146
 western Kentucky, XVI, 238
 western Kentucky, paleostratigraphic map, XXV, 693
 Wind River Mountains, Wyoming, XXV, 129
 Wyoming, XXV, 1733, 2027
 Devonian and Carboniferous source beds in Cameron Brook and Sage Creek region, XVI, 794
 Devonian and Mississippian in Montana, XXI, 991
 in Pennsylvania, GAS, 950, 952
 Devonian and Mississippian formations in central Michigan, section of, XXII, 134
 Devonian and Mississippian inliers of southwestern Pennsylvania, XXV, 161
 references on, XXV, 163
 Devonian and Mississippian systems in central United States, basal stratigraphic relations of, XXIV, 775
 Devonian and Ordovician in Illinois, XXVI, 1088
 Devonian and Silurian, Dakota basin, XXVI, 1565
 in subsurface in Oklahoma and Kansas, XXV, 1645
 Kentucky, descriptions of samples from wells used in study of, XXV, 701
 Kentucky, list of wells used in study of, XXV, 700
 Mid-Continent, XXV, 1641
 Ozark area, Arkansas and Oklahoma, XXV, 1644
 sections across western Kentucky showing pre-Chattanooga structure and thinning, south and east, XXV, 694
 Seminole district, Oklahoma, STR II, 316, 329
 subdivisions, nomenclature, and correlations of, XXV, 1643
 Devonian and Silurian rocks in Mid-Continent, distribution of, XXV, 1642
 Devonian and Silurian strata, possible, in Van Horn region, Texas, XVI, 95
 Devonian and Silurian stratigraphy, central Kentucky, XXVIII, 533
 Devonian and subjacent Silurian formations in western Kentucky, composite correlation diagram showing relation of, XXV, 695
 correlation of, XXV, 709
 Devonian area of Paraná, correlation of, with areas of Amazon, Matto Grosso, Goyaz, Uruguay, and Paraguay, XX, 1228
 Devonian areas of Paraná Basin in Brazil, Uruguay, and Paraguay, geology of, XX, 1208
 of South America, distribution of, XX, 1209
 Devonian asphalt in Russia, XI, 495
 Devonian bituminous shale, X, 872
 Devonian black shales, XV, 165
 Devonian correlation in east-central United States, XXII, 1522

- Devonian dolomite in Nebraska, XXIV, 1007
- Devonian fields in Crane, Ector, and Andrews counties, Texas, XXIX, 748
- Devonian fish fauna in Wind River Mountains, XXV, 130
- Devonian fossils, Argentina, X, 856
- Bolivia, X, 856
- in black shale, eastern Kentucky, GAS, 937, 938
- West Virginia, XXIV, 1985-1988, 1990-1993
- Wind River Mountains, XXV, 130
- Devonian intrusions, GAS, 99
- Devonian limestone, PROB, 366, 532; XXVI, 1092, XXVII, 819
- Indiana, GAS, 825
- Martinsville field, Illinois, STR II, 132
- productive in Sandoval field, Marion County, Illinois, XXIII, 807
- productive on closed structures in Illinois, XXI, 787
- subsurface contour maps of Salem field on Bethel formation and on, XXIV, 967
- Devonian limestone production, development of, in Eastern Interior basin during 1940, XXV, 1116
- Devonian oil in Appalachian region, XXII, 418
- Devonian oil pools, new, in Illinois, map, XXIV, 964
- in western part of Illinois basin, XXIV, 966
- Devonian Old Red Sandstone, RMS, 334
- Devonian outcrops surrounding Illinois basin, XXVIII, 1519
- Devonian possibilities in Illinois basin, XXIII, 817
- Devonian production in Illinois, XXIII, 822
- in Illinois basin, XXIV, 965
- Devonian rocks, bacteria in, PROB, 43, 57
- in Buckeye field, Michigan, XXIV, 1961
- of Kentucky, review, XV, 89
- Devonian samples, black shale zones (Dua, Dub, Duc, Duu), SBP, 351-354, 357-379, 414
- black shale zones, organic content of, as means of correlation, SBP, 360
- carbon content of, SBP, 27-31
- carbon-nitrogen ratio of, SBP, 34, 35
- Chattanooga shale (Dc), SBP, 255-285
- Hunton group (Sh), SBP, 255-285
- Misener sand (Dm), SBP, 255-285
- Onondaga limestone (Do), SBP, 349-379
- Oriskany sand (Dor), SBP, 349-379
- Tully limestone (Dt), SBP, 349-375
- Devonian shale, Berea and Big Injun sands, and Big Lime, major producing formations in West Virginia, XXIX, 681
- Devonian shales, oil of, VI, 335
- probable source of oil and gas in New York oil fields, STR II, 283
- Devonian strata, thinning of, westward in Appalachian region, XXII, 421
- Devonian structure map for Illinois, XXV, 1118
- Devonian subsurface strata in Kentucky, bibliography on, XXV, 710
- in western Kentucky, XXV, 668
- Devonian system, XXIV, 289
- of West Virginia, résumé of, XXIV, 1983
- Devonian tests in Illinois basin, XXIX, 690
- Devonian zones in Kentucky, XXV, 698
- Devono-Carboniferous, Bradford field, Pennsylvania and New York, STR II, 411
- DeWalt dome, PROB, 896
- Deweese, E. J., STRAT, 625
- Dewey, Robert S., XXVII, 752; XXVIII, 832
- Dewey anticline, Fall River and Lakota waters in, XXIV, 1269
- Dewey field, XXVII, 465
- Dewey Lake beds, XXIII, 1676; XXIV, 342
- Dewey Lake formation, XXIV, 50, XXV, 600; XXVI, 1635; XXVII, 488; XXVIII, 1601, 1615
- Midland basin, XXIV, 62
- Sand Belt, STRAT, 752
- Dewey Lake redbeds, XXIV, 36
- Dewey Lake time, PTNM, 763; XXVI, 763
- Dewey limestone, II, 121; V, 546, 566
- Dewitt formation, III, 313, 316; V, 384
- DeWolf, Frank Walbridge, GAS, 813; IV, 318; VI, 43; X, 703
- Illinois security law, IV, 169
- memorial of Frederick Bevan Tough, XI, 109
- professional ethics, VI, 392
- review, XVII, 1394; XIX, 1240
- DeWolf, Frank Walbridge, and Mylius, Louis Aubrey, a new Trenton field in Illinois, IV, 43
- DeWolf, Frank Walbridge, and Seashore, Paul T., GAS, 676
- diamond drilling near Kerens, Navarro County, Texas, X, 703
- DeWolf, Frank Walbridge and West W. W., XXIII, 1247
- reply to discussion of stratigraphic studies of Baker-Glendive anticline, XXIII, 1247
- stratigraphic studies of Baker-Glendive anticline, eastern Montana, XXIII, 461
- DeWolfe, C. E., XIV, 612
- Dexter division of Woodbine formation, GAS, 667
- Dexter field, helium and nitrogen in, GAS, 1056
- d'Halley, J. J. d'Omalus XXVII, 264
- Dhéré, C., SBP, 2
- Diabase-schist-tuff formation » Upper Cretaceous of Dutch Leeward Islands, XXIV, 1569
- Diabase, MEX, 145; XXIX, 918
- Diabase sills in Point Sal formation, XXVII, 1344
- Diablan orogeny, XXVIII, 457
- Diablo and San Rafael uplifts, similar histories of, XXI, 550
- Diablo anticline, XIII, 219
- Diablo Mountains, SC, 11; XX, 1557
- Diablo Plateau, XIX, 223
- pipe lines crossing, FOP 105; XXV, 1537
- stratigraphic traps in, FOP, 104; XXV, 1536
- unconformity at base of Permian in, FOP, 104; XXV, 1536
- Diablo platform, uplift, beneath, PTNM, 718; XXVI, 718
- Diablo Range, CAL, 11, 106, 193, 309
- Cretaceous in, CAL, 99, 101, 106, 112, 115, 283
- (Diablo)
- Franciscan rocks of, CAL, 88, 101
- great thickness of Franciscan in, XXVII, 184
- land during Pliocene (part), CAL, 251
- piercement folds in, CAL, 47, 88
- Pliocene in, CAL, 234, 251
- structural history revealed on east flank of, CAL, 283
- Diablo uplift, SC, 14, 15, 53, 65, 85; XX, 1560, 1561, 1599, 1611, 1631
- Diagenesis, PROB, 29; RMS, 4, 390, 393, 394, 487, 503-512, 525, XXVI, 1764
- in clays, RMS, 489
- Diagenetic changes in volcanic glasses, XI, 1286, 1294
- Diamond Canyon, MSC, 65, 212, 227, 300, 343
- Diamond Creek sandstone, XXIV, 625, 626
- Diamond Crystal Salt Company, GAS, 807
- Diamond drill, drilling oil wells with, V, 386
- in oil exploration, VI, 98
- Diamond-drill core from Bourbon High, Crawford County, Missouri, XXVIII, 1386
- Diamond drill equipment, X, 662, 665
- Diamond-drill holes, examples of deflecting, XIV, 1059
- Diamond drilling, V, 386, 674; VI, 64, 91, 98, 139, 369, 399
- against high gas pressure in Turner Valley, Calgary, Alberta, XII, 91
- for production, VI, 91
- review, VI, 264, 265, 390
- Diamond drills and diamond-drill equipment for oil structure investigation, X, 656
- Diamond Peak quartzite, CAL, 62
- Diamond Valley, cinder cones in, XXIII, 123
- Diapir folds, SD, 153; IX, 1239
- according to Mrazec, VII, 583
- in Germany, IX, 428
- of sub-Carpathian type, SD, 184
- Diapir type folds of Coalinga district, SC, 57; XX, 1603
- Diapiric anticline, XXIII, 950
- Diapiric structure, XVI, 1062; XVIII, 773
- Diaspore, RMS, 627
- Diastem, definition, XXIV, 2022
- Diastem type of unconformity, GC, 722; XVII, 1375
- Diastems, XIII, 727; XXVI, 37
- in Baltic sediments, RMS, 312
- Diastrophic and depositional history of Colombia, XXIX, 1105
- Diastrophic cycle, MSC, 159
- Diastrophic environment of crinoidal sediment, XXVI, 1753
- Diastrophic epochs in California, PROB, 736
- Diastrophic history, SC, 5; XX, 1551
- of Miocene, SC, 43; XX, 1589
- of Rocky Mountain region, XXVII, 421
- Diastrophic-metamorphic theory for predominance of gas, GAS, vi
- Diastrophic method of classification, XXVI, 219
- Diastrophic record, value in selection of systemic boundaries, XXIV, 349
- Diastrophism, PROB, 913; RMS, 95, 160
- Cenozoic, in central coast region of California, CAL, 59

- (Diastrophism)
 date of major, and other problems of Marathon basin, Trans-Pecos Texas, discussion, XII, 1111
 in central Illinois basin, XXII, 656
 in mid-Atlantic, RMS, 391
 in North Sea, RMS, 332-335
 late middle Miocene, in Oregon and Washington, XXIX, 1409
 of Hercynian age in Tupungato area, XXVIII, 1476
 periodicity of, XIX, 1254
 rôle of, in topography of Corpus Christi area, South Texas, XVII, 907, 1281; GC, 205
 ultimate cause of development of sedimentary deposits, XXVI, 1752
- Diastrophism and Upper Cretaceous sedimentation in Montana, IX, 886
- Diastrophism and vulcanism in Temblor time, XXV, 199
- Diatom, RMS, 57, 144, 147, 148, 197, 201, 289, 291, 379, 391, 402, 442, 444, 445
 chemical composition of, RMS, 442
 conditions of growth of, RMS, 402
 in Baltic, RMS, 300, 303, 304, 305, 309, 314
 in East Indies, RMS, 351
- Diatom-bearing shales at Malaga Cover, Los Angeles County, California, age of, discussion, XII, 1109
- Diatom flora of Monterey formation, XXVII, 1346
- Moreno shale, CAL, 110
- Diatom impressions, MSC, Fig. 4 (in pocket)
- Diatom marl, RMS, 449
- Diatom ooze, RMS, 394-399, 402, 404, 407, 412; XXIII, 1669, 1671
 boundary relations of, to other sediments, RMS, 402
- Diatomaceous earth, XXV, 2171
- Diatomaceous member, upper, of Monterey shale, MSC, 132
- Diatomaceous shales, California, PROB, 25, 62, 98, 182; SBP, 95; STR II, 21, 44, 49; X, 899
 from Puente Hills, age of, XIV, 1447
- Diatomaceous siltstone and sandstone, MSC, Fig. 14 (in pocket)
- Diatomite in Santa Cruz basin, MSC, Fig. 14 (in pocket)
- Diatomite and ash of 1870 Hill, MSC, Fig. 14 (in pocket)
- Diatomite quarry east of Del Monte, Foraminifera from, MSC, Fig. 14 (in pocket)
- Diatoms, CAL, 110, 154, 179, 209, 245, 287
 bacterial action, PROB, 450
 from Moreno formation, XXVII, 255
 in Great Salt Lake, XXII, 1333
 in Monterey shale in California, MSC, 10; XII, 980
 Miocene, in California, CAL, 196; IX, 234
 Oligocene, in Kreyenhagen shale, CAL, 154
 source of bituminous substances, theory, XII, 555
 were they the chief source of California oil? X, 709
- Dibblee, T. W., Jr., XXVII, 2, 6, 13
- Dbollensis* fossil zone at Esperson dome, GC, 863; XVIII, 1638
- Dicha pool, MEX, 193
- Dicken, S. N., XXI, 438
- Dickerson and Kew, MEX, 134, 135
- Dickerson, Roy Ernest, CAL, 13, 14, 89, (Dickerson)
 136, 137, 144, 145; MEX, 114, 115, 124, 134, 135, 139; XVII, 82; XIX, 770; XXIV, 1733; 1743, XXVI, 163, XXVII, 1411, 1515, 1520, 1521
 memorial of, XXVIII, 888
- Dickerson, Roy E., and Butt, W. H., XXVII, 1517
- Cuban Jurassic, XIX, 116
- Dickey, Parke A., STRAT, 538; XXVI, 794; XXVII, 846; XXVIII, 734; XXIX, 1074, 1081, 1084
- pre-Cretaceous sediments in Cordillera Oriental, Colombia, XXV, 1789
- review, XXV, 1413
- Sherrill, R. E., and Matteson, L. S., types of stratigraphic oil pools in Venango sands of northwestern Pennsylvania, STRAT, 507
- Dickey, Robert I., PTNM, 705; XXII, 1426, XXIII, 1551; XXIV, 5, 7, 10, 14, 24, 32, 34; XXV, 94, 100; XXVI, 84, 85, 217, 241, 705, 1026; XXVII, 490; XXIX, 1775
 abstract, XXII, 1702
 geologic section from Fisher County through Andrews County, Texas, to Eddy County, New Mexico, XXIV, 37
- Dickey, Robert I., and Ray, Bernard A., XXVIII, 832
 developments in West Texas and southeastern New Mexico in 1942, XXVII, 747
- Dickey, Robert I., Cole, Taylor, and Kraus, Edgar, developments in West Texas and southeastern New Mexico in 1940, XXV, 1044
- Dickinson and Shrewsbury, XXII, 1092
- Dickinson, John, XXII, 1089
- Dickinson dome, XXIII, 882
- Dickinson section of Tertiary of Dakota basin, XXVII, 1577
- Dickite, RMS, 467, 470, 484, 485
- Dickson County, Tennessee, GAS, 869, 871
- Dictionary of geological terms, XXIV, 1499
- Diddell, Mrs., XXV, 168
- Didymograptus artus-bifidus* zone, XXV, 653
- Didymograptus nanus* zone, XXII, 221
- Diediker, Paul, and McDonald, James A., MSC, 13
- Dieffenbach, E., X, 1241
- Diehl, GAS, 1046
- Diehl, H. S., Larsen, W. P., and Hartzell, T. B., XX, 262
- Diehl, R. C., XI, 223
- Dielectric constant of water, RMS, 67
- Dielectric methods, RMS, 601
- Dielectric mineral separation, new method for treatment of ores, review, VIII, 682
- Diener, Carl, MSC, 11, 82, 87, 90, 96; XXIV, 273
 objection to continental drift theory on basis of resulting cleft between Siberia and Alaska, CD, 111
 objections to Wegener's hypothesis, CD, 139
- Dienst, W., XXIV, 1890
- Diepenbrock, Alex, MSC, 72, 153, 204, 208, 290, 310, 314, 320, 324, 334, Fig. 14 (in pocket)
- Dierks limestone, upper Aptian in age, XXIX, 1448
- Dierks limestone lentil in Arkansas, XII, 1079
- Dietrich, G., RMS, 94, 115
- Dietz, C., XVIII, 1244
- Dietz, Robert S., RMS, 281
- Dietz, Robert S., and Emery, K. O., abstract, XXII, 1717
- Dievendoff, H. H., XVIII, 1561
- Difference between ocean and enclosed basins, RMS, 51
 in CaCO₃ content on two sides of Indian Ocean, RMS, 404
 in pressure in sea, RMS, 110
 in vertical distribution of density in sea, RMS, 115
- Differential compacting the cause of certain Claiborne dips, VII, 370
- Differential compaction, a cause of folding, PROB, 429, 819; discussion, XIII, 179
 studies in, XIII, 1; discussion, XIII, 1074; reply, discussion, XIII, 1396
- Differential pressure, PROB, 809
 a cause of plastic flowage of sedimentary salt series, GC, 22, XVII, 1028
- Differential settling, application of principle of, to tracing of lenticular sand bodies, XXII, 823
 in Smith-Ellis field, Texas, STR II, 560
 of sediments, PROB, 618
 of sediments over ancient land masses, STR II, 680
 structures developed by, XXII, 825
- Differential stresses from dissipation of tidal energy favorable to continental drift, CD, 88
- Differential subsidence, STRAT, 731
- Differential uplift, XXIX, 1643
 probable effect on sediments, XX, 1432
- Differentiation and structure of Glenn formation, VI, 5
- Diffusion, RMS, 71, 75
 in subsurface layers, RMS, 393
 kinematic equation of, RMS, 74
 of oxygen in sea, RMS, 92
 of salt, XXVIII, 1639
- Diffusion and convection, processes of, explanation of distribution of salt in Woodbine waters, XXVIII, 1641
- Diffusion and convection currents, explanation of distribution of salt in Woodbine sand, XXVIII, 1635, 1639, 1641
- Difunta formation, XXVIII, 1160
- Dihydrol form of water, RMS, 66
- Dike rocks in Wichita Mountains, XXV, 289
- Dikes, PROB, 80. (See Dykes)
 igneous, GAS, 100
 of North Sea, RMS, 335
 sills, and plugs in fluorspar district of Illinois and Kentucky, XXI, 781
 truncated, XXVI, 57
- Dill pool, XXV, 1100
- Dillard, W. Reese, STRAT, 71, 238, 443, 461, 478, 481, 488; XXI, 43
- Olympic pool, Hughes and Okfuskee counties, Oklahoma, STRAT, 456
- Dillard, W. Reese, Kennedy, Luther E., Bass, N. Wood, and Leatherrock Constance, origin and distribution of Bartlesville and Burbank shoe-string oil sands in parts of Oklahoma and Kansas, XXI, 30
- Dillard, W. Reese, Oak, Donald P., and Bass, N. Wood, Chanute pool,

(Dillard)

- Neosho County, Kansas—a water-flooding operation, STRAT, 57
- Dillé, Glenn S., XV, 187; XXIV, 312
- anticlines of the state of Iowa, review, XII, 773
- Minnelusa of Black Hills of South Dakota, XIV, 619
- reviews, XVIII, 267; XXIII, 105; XXIV, 1685; XXV, 1950
- Diller, J. S., CAL, 14, 15, 26, 42, 62, 63, 65, 66, 67, 69, 83, 95, 98, 100, 108, 109, 112, 117, 233, 255, 293; XIV, 412; XVIII, 1349; XXVI, 1816, 1817; XXVII, 116, 119, 160, 193, 254
- Diller, J. S., and Stanton, T. W., XVIII, 1350
- Dillon folding at Pine Island field, Louisiana, STR II, 177
- Dillon gas horizon in Pine Island field, Louisiana, STR II, 178
- Dillon sand in Pine Island field, Louisiana, STR II, 175, 176
- Dilution of calcareous deposits with clastic débris in ocean, RMS, 374, 377
- Dilworth sand, GC, 488; XVII, 1311
- section of, GC, 490; XVII, 1313
- Dimple formation, V, 377, 545, 556
- Dina field, FOP, 20; XXV, 1452
- Dina member of Mannville formation, XXIX, 1613
- Dinant basin, XVIII, 1167
- Dinklage, RMS, 497
- Dinosaur bone in Dawson formation, XX, 1321
- Dinosaur Graveyard, XXVIII, 1204
- Dinosaur remains, XXVIII, 1171
- at Como Bluff, exploration of, XXVIII, 1215
- Dinosaurs, a short history of a great group of extinct reptiles, review, XIX, 562
- D'Inverniers, E. V., XXII, 1109
- Dinwoody and Phosphoria tongues in lower Chugwater of central and southeastern Wyoming, XVIII, 1655
- Dinwoody Creek, Wyoming, outcrop section d, SBP, 243-255
- Dinwoody formation, XXIII, 482, 1449; XXV, 134
- Dinwoody gypsum, XXIII, 486
- Diodorus, XIX, 472
- Diopside, RMS, 610
- Diorite, MEX, 9, 143, 145, 148, 149
- Diorite and dacite dikes at site of Shasta Dam, XXVI, 1818
- Diorite dikes at site of Friant Dam, XXVI, 1823
- Dip, corrections for, XXI, 341
- discordance in, above and below a contact, XXVI, 56
- discordance in, between surface and deep-seated structures, causes and examples, STR II, 696
- graphic method for determining projection of, XXI, 341
- homoclinal, GAS, 252
- in producing area in Laredo district, Texas, STR I, 396
- increase with depth, XIII, 12
- initial, PROB, 625
- of anticlinal belt in southeastern Illinois, XXIII, 1506
- of formations at or above top of salt and cap-rock core, PROB, 647
- of formations in eastern Kentucky, GAS, 917

(Dip)

- of strata, curve for estimating, IX, 463
- regional, PROB, 255, 257
- regional, fault-block nature of Kansas structures suggested by elimination of, XIX, 1540
- regional, graphical method for eliminating, XIX, 1538
- true, graphic method for determining, from two components, discussion, XX, 1496
- Dip and strike, symbols for, XI, 868
- Dip and strike change along a traverse across axis of plunging anticline or syncline, diagram showing, XXII, 484
- Dip angles, measurement of, on aerial photographs, XXVII, 1534
- Dip chart, XXI, 341
- Dip construction, the John L. Rich, simplification of, XIX, 903, XXI, 351
- Dip Creek formation, Adelaida Quadrangle, California, XXVIII, 512
- mineral analyses from type section of, XXVIII, 515
- fauna of, XXVIII, 516
- lithologic character and thickness, XXVIII, 513
- relation to older and younger formations, XXVIII, 516
- type section of, XXVIII, 513
- Dip problems, graph of network to solve, XXI, 342
- methods of solving, XXI, 348
- minimum scale-error graph for use in solving, XXI, 346
- some, XXI, 340
- Dip shooting, applications and limitations of, XVIII, 119
- Dip-shooting and reflection seismograph, Darrow salt dome located by, XXII, 1413
- Dip-slip fault, XXV, 2182
- Dip-slope area of Bighorn Basin, structures typical of, XXIII, 1465
- of southern rim of Bighorn Basin, XXIII, 1463
- Diphenylamine indicator, SBP, 48
- Diphenylamine titration, SBP, 46-52
- Diploschiza cretacea* zone, XVIII, 1514; XXII, 1654
- Dipole ends, RMS, 478
- Dips, initial, XVIII, 1249
- vertical, in valley of Wigwam Creek, New York, XXI, 1588
- Direct synthesis of higher from lower hydrocarbons, VIII, 830
- Direction of drift not necessarily exclusively westerly, CD, 90
- Direction of velocity, RMS, 108
- Directional and deflection angles, plane projection for drill-bit course, to illustrate, XXVII, 89
- Directional drilling, example of, as applied to geology in Ellis County, Kansas, XXVII, 87
- Disaggregation of constituents of sediments relative to petrologic and mechanical analysis, 530, 593
- Discharge channels on deltas, RMS, 172
- Discocyclina advena* zone in Gulf Coast, useful for stratigraphic correlation, XXII, 1008
- Discocyclina (Astero-cyclina)* zone in Gulf Coast, XXII, 999, 1000
- Discocyclina blanfordi-discocyclina cookei* zone in Gulf Coast, XXII, 1010

- Discoloration of sediments by bacteria, XIV, 626
- Disconformable contact of Pennsylvanian and Mississippian strata in Salem field, XXIII, 1367
- Disconformities, GAS, 11, 233, 692, 801, 866, 907, 911, 959, 1112, PROB, 510, 782
- at base of Pennsylvanian and base of Devonian in Appalachian basin area, FOP, 131, XXV, 1563
- in Eureka section of Little Hatchet Mountains, XXII, 538
- in Little Hatchet Mountains, XXII, 527
- Disconformities and variable thicknesses, Miocene sections in Santa Maria Valley oil field to show, XXIII, 73
- Disconformity, MEX, 11; XXVI, 37
- above Chugwater in Wind River Canyon area, XXIII, 1450
- above Stone Corral member, XXIII, 1781
- at contact of Blaine and underlying beds of Nippewalla group in western Kansas and eastern Colorado, XXIII, 1793
- between Cane River and Wilcox formations at Urania field, Louisiana, STR I, 99
- between Ninneseah and Stone Corral dolomite, XXIII, 1772
- between Runnymede sandstone and Stone Corral dolomite, XXIII, 1774
- between Wolfcamp and Leonard on west flank of Bend arch, XXIII, 1705
- definition, XXIV, 2022
- in Kevin-Sunburst field, Montana, STR II, 259
- in Smith-Ellis field, Texas, STR II, 559
- pronounced, separating Permian from overlying Triassic, recognized as upper boundary of Permian system, XXIV, 340
- Discorbinae, MSC, 15, 307
- Discorbis, Heterostegina, and Marginulina* zones, GC, 410; XVII, 640
- Discorbis* sand, XXV, 2007
- gas produced from, at East White Point field, XXV, 1975
- Discorbis* shale, XXV, 2007
- Discorbis veguensis* zone, Hardin field, STRAT, 567
- Discorbis* zone, GC, 11, 654; XVII, 642; XVIII, 510; XIX, 389, 550; XX, 570; XXIII, 179, 181; XXIV, 2098; XXV, 306; XXVII, 1104, 1113, 1136, 1147; XXVIII, 201, 1357, 1364, 1367; XXIX, 795, 798
- Amelia field, XXIII, 1643
- Barbers Hill, XIV, 723
- Buckeye field, GC, 745
- Edna gas field, XXV, 107
- Esperson dome, GC, 863; XVIII, 1638
- Gulf Coastal region, GC, 669; XVII, 524
- High Island dome, GC, 919, 940, 955; XX, 570, 591, 606
- Hitchcock field, STRAT, 644
- Jennings field, GC, 966, 977, 981; XIX, 1313, 1324, 1328
- Louisiana, GC, 404; XVII, 635
- (Oligocene) (Td), SBP, 336, 338-349, 415
- Orange field, GC, 890; XX, 541

(Disorbis)

- Saratoga oil field, SD, 512
 Spindletop, XXI, 480
 Sugarland field, GC, 715, 724; XVII, 1367, 1377
 West Columbia field, Texas, STR II, 459, 461
Disorbis zone species, XXIV, 436
 Discordance in dip above and below a contact, XXVI, 56
 between surface and deep-seated structures, causes and examples, STR II, 696
 Discoveries, gas, in California in 1944, XXIX, 652
 in California in 1936, XXI, 977
 in California in 1940, XXV, 1162
 in California in 1941, XXVI, 1137
 in Gulf Coast district, in 1941, XXVI, 984
 in Michigan in 1939, XXIV, 985
 in Mississippi in 1940, XXV, 1019
 in New Mexico in 1940, XXV, 1062
 in north and west-central Texas in 1940, XXV, 1079
 in Oklahoma in 1938, XXIII, 826, 827
 in Oklahoma in 1940, map showing classification and location of, XXV, 1096
 in Oklahoma, in 1940, stratigraphic distribution of, XXV, 1098
 in Oklahoma in 1941, XXVI, 1062
 in South Texas in 1939, XXIV, 1071
 in South Texas in 1940, XXV, 1039
 in southeastern New Mexico in 1944, XXIX, 752
 in United States, 1937-1942, decline, XXVII, 964
 in West Texas, 1943, XXVIII, 814, 816
 in Wyoming in 1939, XXIV, 1101
 of oil in California by years, XXIII, 944
 of oil, in California in 1944, XXIX, 648, 649
 of oil resulting from deepening or re-completing wells in old fields, XXIII, 913
 recent, Mid-Continent, Rocky Mountain, and Gulf Coast region, XXVII, 966
 relationships between price, search, and, XXVII, 964
 Discoveries and additions to oil reserves in California during 1937, XXII, 701
 Discoveries and developments in north-eastern Texas in 1928, XIII, 611
 Discoveries and explorations in Oklahoma during 1940, XXV, 1092
 Discoveries and extensions in East Texas in 1944, XXIX, 768
 in north and west-central Texas during 1939, XXIV, 1056-1059
 Discoveries and marked extensions in north- and west-central Texas during 1938, XXIII, 850
 Discoveries and production, Mid-Continent, Rocky Mountain, and Gulf Coast region, XXVII, 962
 Discovery, art of, XXVII, 928
 of 50 per cent of major oil fields in United States, geological studies responsible for, XXI, 701
 of gas in Rockingham County, Virginia, XXVI, 275
 of Hardin field, STRAT, 566
 of new oil in Illinois basin in 1937, XXI, 784

(Discovery)

- of oil in Big Medicine Bow anticline, Carbon County, Wyoming, XIX, 1238
 of oil in Bodcaw sand, Cotton Valley field, Webster Parish, Louisiana, XXII, 1603
 of oil in Ellenburger formation, K. M. A. oil field, Wichita County, Texas, XXIV, 1494
 of potash salts and fossil algae in Texas salt dome, SD, 781
 rate of, XXVI, 1215
 Discovery and wildcatting of reserves, 1937-1941, XXVI, 980
 Discovery expedition, RMS, 51
 Discovery geology, emphasis on, XXVIII, 905
 Discovery methods in California fields, XXIII, 935, 937, 939
 in developments in north and west-central Texas, XXVIII, 840
 in south Texas, XXIII, 864
 used in north and west-central Texas in 1944, XXIX, 764
 Discovery process, modern, XXVII, 915
 Discovery rate, XXVII, 723
 wildcat drilling in 1941 with comments on, XXVI, 969
 Discovery rate and overproduction in California, XXIII, 946
 Discovery rates, decline in, XXVIII, 1503
 effect of geophysical exploration on, XXI, 704
 in oil finding, XXI, 697
 in oil finding, discussion, XXII, 109
 Discovery thinking, XXVII, 887
 need for, FOP, 7; XXV, 1439
 Discovery well, definition, XXVIII, 708
 Discovery well data for different sands in Saxet field, XXIV, 1812
 Discovery wells drilled in southern Arkansas and northern Louisiana in 1939, XXIV, 1098
 in Michigan, 1940, XXV, 1133
 in Michigan, 1941, XXVI, 1107
 in Michigan, 1942, XXVII, 832
 in Michigan, 1943, XXVIII, 762
 Discrepancies in adjustment of continents, CD, 110
 Discussion, general, of water problems of Bend series, III, 151
 of geochemical exploration (soil analysis), XXIV, 1434
 of Iowa series in Illinois, XXIV, 236
 Disgrace of useful science, discussion, XV, 474
 Dispersed fraction in mechanical analysis, RMS, 530
 Dispersing agent, effect of, on size distribution, RMS, 537
 Dispersion, RMS, 182, 533, 541
 effect of, on size of clay particles, RMS, 487
 in X-ray studies, RMS, 621
 of clay minerals, RMS, 470
 of light in minerals, RMS, 604
 Dispersion equilibrium, RMS, 537
 Displacement, horizontal, along thrust planes, estimation of, XXIX, 439
 of continental sial by tangential forces, CD, 189
 of isolines in sea, RMS, 126
 Displacement hypothesis, petroleum exploration an opportunity for geological tests of, CD, 157
 some physical tests of, CD, 145

- Disseminated oil, areal distribution of, XVI, 401
 Dissociation, electrolytic, of water, RMS, 67
 of acid, RMS, 538
 of salts, RMS, 538
 Dissociation constants of carbonic acid in sea water in Baltic, RMS, 316
 Dissolved materials in rivers, RMS, 26
 Dissolved organic matter, utilization of, by organisms in sea, RMS, 440
 Dissolved oxygen in sea, RMS, 71, 91
 Dissolved solids, composition of, in sea, RMS, 61, 62, 64, 70
 Dissolving power of water, RMS, 67
 Distance from shore, effect of, on carbonate content of sediments, RMS, 353
 maximum audience, relation to lantern-slide copy, XXVI, 1667
 of transport, effect of, on rounding, RMS, 40, 45
 of transport, of detritus by currents in ocean, RMS, 497
 Distance basis for studying relation of nitrogen reduction ratio to oil zones, SBP, 83-87, 385-390, 395
 for studying relation of nitrogen reduction ratio to oil zones, Appalachian samples, SBP, 377-379
 for studying relation of nitrogen reduction ratio to oil zones, California outcrop samples, SBP, 193, 194, 386
 for studying relation of nitrogen reduction ratio to oil zones, California samples, SBP, 151-154
 for studying relation of nitrogen reduction ratio to oil zones, East Texas, SBP, 330-331
 for studying relation of nitrogen reduction ratio to oil zones, Gulf Coast, SBP, 346-349
 for studying relation of nitrogen reduction ratio to oil zones, Mid-Continent, SBP, 281-283
 for studying relation of nitrogen reduction ratio to oil zones, Rocky Mountains, SBP, 240-243
 for studying relation of nitrogen reduction ratio to oil zones, Rocky Mountains outcrop samples, SBP, 255
 Distance classes, size-distribution of nitrogen-reduction ratio of, with respect to oil zones, SBP, 388
 Distillate, RMS, 450
 from sediments, RMS, 433
 or condensate production in south Texas, XXIV, 1072
 Distillate and cracked distillate from Trinidad asphalt, XXIV, 1874
 Distillation of oil from organic sediments by heat and other processes of igneous intrusions, XII, 995
 of petroleum, geologic, is it possible? XIII, 75
 résumé of oil shale industry, with outline of methods of, IV, 59
 Distillation and other studies of organic nature of some modern sediments, results of, XI, 1221
 Distillation experiments, PROB, 287
 Distillation tests of organic matter in various types of rock, XVIII, 1108-1125
 Distinction between Girón and Cocuy series, XXV, 1791
 Distinguished lecture committee,

- (Distinguished)
progress report of, XXVI, 1864; XXVII, 247, 1035
- Distinguished lecture tours, XXVIII, 170, 297, 448, 573, 697, 893, 1560, 1672, 1789; XXIX, 124, 249, 474, 1687, 1801
- Distinguishing marine and non-marine sediments, possible criterion for, XXIII, 1716
- Distortion of stereographic model in photographs, causes of, XXIX, 1759
- Distributaries on delta, RMS, 157, 162, 166, 170, 174
- Distributary and crevasse channels, XXIII, 1214
- Distributary ridges of ancient Nueces River, GC, 218; XVII, 922
- Distributing system, gasoline, of United States, XXI, 185
- Distribution, geological, of reserves in south Texas, XXIV, 1077
- of Baltic sediments, RMS, 319
- of calcium carbonate in Atlantic sediments, RMS, 378
- of carbon among ancient sediments, SBP, 25-32
- of carbon-nitrogen ratio among ancient sediments, SBP, 33-35
- of clay minerals in Atlantic sediments, RMS, 381-383
- of deep-sea sediments, RMS, 50
- of diatom ooze in Indian Ocean, RMS, 403
- of living calcareous organisms in sea water, RMS, 377
- of near-shore North Sea sediments, RMS, 334
- of nitrogen-reduction ratio among ancient sediments, SBP, 40-41, 55
- of oil, influence of fluctuating shore line of Twin Creek and Logan seas on, XXI, 769
- of petroleum, XXI, 182
- of petroleum in earth's crust, XXVIII, 1506
- of pressure in sea, RMS, 62, 112
- of samples by states in study of source beds, SBP, 16
- of sediments in North Sea, RMS, 327-330
- of sediments in vertical profile of stream, RMS, 20, 22, 23, 24
- of sediments on sea floor, RMS, 3
- of silt with respect to erosion and deposition, RMS, 23
- of underground salt water and its relation to accumulation of oil and gas, II, 170
- vertical, of density, in ocean, RMS, 59
- world, of oil, XXVIII, 1495
- Distribution and correlation of Mississippian of Oklahoma, XI, 1307
- Distribution and mode of life of Cretaceous ammonoids in Texas area, paleontological factors controlling, XXIV, 1164
- Distribution and origin of Bartlesville and Burbank shoestring oil sands in parts of Oklahoma and Kansas, XXI, 30
- Distribution chart, percentage, Canoas stonstone, Kreyenhagen formation, XXVII, 1382
- percentage, of foraminiferal families in Tejon formation, XXVII, 1377
- Distribution curves, RMS, 606
- Distribution division of natural gas industry, GAS, 1112
- Districts in which wildcats were drilled in 1937, XXII, 1232
- Disturbances within Pliocene-Lower Pleistocene time, SC, 48; XX, 1594
- Disturbed belt in Montana, FOP, 39; XXV, 1471; XXIX, 1266
- in Montana, map, FOP, 40; XXV, 1472
- in Montana, structure section across, FOP, 41; XXV, 1473
- Dittler, E., RMS, 485
- Dittmar W., PROB, 958; RMS, 52, 143; X, 1284; XXV, 2172; XXVI, 841
- Diurnal cycles, RMS, 58
- Diurnal tides, RMS, 128
- Divalent cations, RMS, 536, 538
- Diven, Quay, XIII, 109
- Divers, observations by, RMS, 205
- Divesian stage, redbeds and salt of, XXVII, 1419, 1504, 1524
- Divesian substage, XXVII, 1416
- Divide Creek anticline, XXII, 690; XXIII, 928; XXIV, 1110
- Divide West pool, XXIX, 687
- Divide member, XXVIII, 22
- Division of Chemistry of National Bureau of Standards, SBP, 7
- of Geology and Geography, National Research Council, XXVII, 1554
- of Geophysics, Journal of Society of Petroleum Geophysicists, review, XX, 107
- of Pennsylvanian into two systems, Bendian and Pennsylvanian, XXIV, 75
- Divisions, major, of Permian in Oklahoma and southern Kansas, XXI, 1515
- of Permian system, XXIII, 1674
- of Tertiary of New Zealand, XXV, 763
- of Upper Cretaceous and Tertiary in New Zealand, XXV, 1813
- Dix, Emily, XXIV, 293; XXIX, 132, 143, 146
- Dix field, Illinois, XXII, 653
- Dix pool, XXIX, 690
- Dixie-Amerada Petroleum Corporation, Johnson 1 (well 245), Voshell 1 (well 250), SBP, 255-285, 407
- Dixie Oil Company, XXII, 795, 1431
- Dixie oil horizon in Pine Island field, Louisiana, STR II, 179
- Dixie oil pool, Caddo Parish, Louisiana, XIV, 743
- Dixon, XII, 993
- Dixon, A. F., XIV, 567
- Dixon, E. E. L., XVIII, 993, 1003
- Dixon, E. E. L., and Hudson, R. G. S., XVIII, 1005
- Dixon-Bainbridge facies in southern Illinois, XXVI, 12
- Dixon device for orientation of cores, XIV, 567
- Dixon fossils, XXVI, 12
- Dixon horizons in Bainbridge formation, XXVI, 12
- Dizygocarinus rotundus* zone, XXI, 1162
- Djabyk granitic massive of Urals, XXI, 1456
- Djaksy-Karagal basin, XXI, 1443
- Djambi, XXII, 28
- Djambi district of South Sumatra, XXIII, 960
- Djeddhah, Arabia, XXI, 138
- D'Lo dome, XXIX, 831
- Dmitriev, G. A., XXII, 773
- Doane, George H., CAL, 229, 230; X, 482, XVIII, 788, XXIII, 518, 540; XXV, 1234
- Dobbin, Carroll Edward, PROB, 76, 158, 727; SBP, 196; VII, 8; XIII, 1414; XVII, 352, 375, 397; XVIII, 1475; XXI, 1256, 1258; XXIII, 462; XXIV, 1215; XXV, 884; XXVI, 1318; XXVII, 1306; XXVIII, 1196
- carbon ratios and oil gravities in Rocky Mountain region of United States, XIII, 1247
- developments in Rocky Mountain region in 1939, XXIV, 1100, 1347
- developments in Rocky Mountain region in 1940, XXV, 1149
- geologic structure of St. George district, Washington County, Utah, XXIII, 121
- geology of natural gases rich in helium, nitrogen, carbon dioxide, and hydrogen sulphide, GAS, 1053
- memorial of George Otis Smith, XXVIII, 683
- oil-field models of Shreveport Geological Society, XXV, 1587
- report of committee on applications of geology for 1939-1940, XXIV, 933
- structural conditions of oil and gas accumulation in Rocky Mountain region, United States, XXVII, 417
- Dobbin, Carroll Edward, and Erdmann, C. E., GAS, 248, 250, 258, 272; STRAT, 273, 283, 303; XXVI, 1356
- geologic occurrence of oil and gas in Montana, PROB, 695
- structure contour map of Montana plains, review, XVI, 1045
- Dobbin, Carroll Edward, Hoots, H. W., and Dane, C. H., GAS, 305
- Dobbin, Carroll Edward, and Miller, J. C., Osage oil field, Weston County, Wyoming, STRAT, 847
- Dobbin, Carroll Edward, and Morrell, Foster, GAS, 436
- Dobbin, Carroll Edward, and Reeside, John B., Jr., PROB, 697; XVII, 426
- problems of Chugwater-Sundance contact, discussion, XI, 1235
- Dobbin, Carroll Edward, and Thom, W. T., Jr., PROB, 697; XXVII, 1569
- oil and gas prospects in Garfield County, Montana, VI, 144
- Dobbin, Carroll Edward, Baker, A. A., McKnight, E. T., and Reeside, J. B., Jr., notes on stratigraphy of Moab region, Utah, XI, 785
- Dobbins, Roy A., IX, 632; XI, 825
- Dobrin, M. B., XXVII, 52, 54
- Dobrotow beds, Europe, VI, 526
- Dockum, type, Dickens County, Texas, geographic location of, XXVII, 624
- Dockum clay-ball conglomerate, XXVII, 622
- Dockum conglomerates, fossils in, XXVII, 626
- siliceous, origin of, XXVII, 622
- Dockum group, STRAT, 752; XXIV, 50; XXV, 1690
- in West Texas, XXIV, 63
- of Upper Triassic age, XXIV, 55
- sand belt, STRAT, 752
- Triassic redbeds of, XXVI, 383
- Dockum pebbles, properties of, XXVII, 624

- Dockum series, XXVII, 622
 in Permian basin, XIII, 1046
 Dockum siliceous conglomerate, XXVII, 622
 Doctor Bond sandstone, XXIII, 1159
 Dodd, Harold V., GAS, 181; PROB, 407; VII, 224; XVII, 719, 725; XVIII, 1466; XIX, 895
 Doddridge County, West Virginia (well 424), SBP, 349-379, 410
 Dodds Bridge pool, XXVII, 819
 Dodge, John Franklin, GAS, 118
 Dodge, John Franklin, Pyle, Howard C., and Trostel, Everett G., estimation by volumetric methods of recoverable oil and gas from sands, XXV, 1302
 Dodge, W. E., notes to inventor geologists, VI, 50
 Dodge City basin, GAS, 459, 461; XIV, 1550; XVII, 796
 Dodge horizon at Fairport field, Kansas, STR I, 37
 Dodson, C. R., and Gosline, J. E., XXV, 1314
 Dodson, Floyd, XXII, 696
 Doe Run dolomite, XXV, 1632
 Doeglas, D. J., XXIV, 2069
 Doering, John, XX, 315; XXIII, 187, 188, 1558, 1559; XXVIII, 1354; XXIX, 1312, 1737
 post-Fleming surface formations of coastal southeast Texas and south Louisiana, GC, 432; XIX, 651
 Dog Canyon formation, XXVI, 85
 Dog Canyon limestone, XXI, 844, 853, 858
 in Trimble Canyon, XXI, 862
 in Guadalupe Escarpment, XXI, 864
 Dog Canyon section, XXV, 2151
 Dog Creek and Blaine faunas, XXVIII, 1026
 Dog Creek and Blaine formations, XXI, 1524
 Kansas, Oklahoma, and Texas, map, XXVIII, 1014
 near El Reno, XXI, 1538
 Dog Creek dolomite, XXI, 425
 Dog Creek formation, II, 74, 114
 Dog Creek shale, XXIV, 43, 98
 at type locality in Barber County, Kansas, XXIII, 1800
 in Kansas, XXIII, 1799
 in Oklahoma, XX, 1469
 in subsurface, XXIII, 1801
 in Weatherford area, Oklahoma, XII, 707
 Medicine Lodge gypsum, Nescatunga gypsum, and Shiner gypsum in Comanche County, Kansas, view showing, XXIII, 1801
 Dog Creek shales, XXI, 423, 1558; XXIV, 58
 Dog Creek-Whitehorse contact, XXI, 1560; XXIII, 1802
 Dog Lake, PROB, 115
 Dogger Bank, RMS, 325, 333
 Doheny and Canfield, MEX, 2, 3
 Doheny, E. L., GAS, 210; VII, 610; VIII, 71
 Doheny-Beil field, XXVII, 1349
 Doherty, H. L., VII, 616; XVIII, 1455, 1458
 Dohm, C. F., RMS, 174
 Dole, R. B., RMS, 285
 Dole, R. B., and Stabler, H., XXII, 1350
 Dolerite, MEX, 147-149
 Dolet Hills bed, XXIX, 57
 Doli, H. G., and Maillet, R., XIX, 38
 Dollart area, Germany, RMS, 195, 201
 Dollfus, G. F., XVI, 1133; XIX, 527
 Dolman, S. G., GAS, 119, 166, 168
 Dolocasta, XXVI, 1401
 Dolomite, GAS, 11, 412, 435, 440, 449, 909, RMS, 488, 602, 620, 623, 626; SBP, 199, 285, 413; XXVIII, 74
 C-zone, in central Hutchinson County, Texas, type section of, XXIII, 1023
 carried by wind, RMS, 499
 effect of, on calcium carbonate determinations, SBP, 79
 identification of, by X-ray, RMS, 624
 in Permian limestones of West Texas, XIX, 1678
 in rock salt, XXI, 1285
 in zeolite-opal rock, XXV, 292
 inclusions in, RMS, 385
 lignite in, XIV, 517
 oolitic, Big Lake field, Texas, X, 375
 or reef limestone, origin of porosity in, discussion, XIII, 1219
 spotted porous, XXIX, 1160
 Dolomite and calcite as cementing minerals, XXV, 1858, 1863
 Dolomite and magnesite in Salado formation, XXVIII, 1609
 Dolomite beds, I, 102
 Dolomite fields of West Texas, XXVII, 479
 Dolomite limestone, V, 330, 376
 Dolomite porosity in Devonian of West Texas Permian basin, XXVIII, 1043
 Dolomite section in Artesia field, New Mexico, STR I, 114
 in Goldsmith field, XXIII, 1529
 Dolomite zone in Oklahoma City pool, XXIII, 824
 productive of gas in Muskegon, Ottawa, and Kent counties, Michigan, XXV, 719
 Dolomites of Stillwater, Wellington, Garber, Hennessy, and Duncan formations, review, XV, 479
 Dolomitic arkose, XXIII, 1004
 Dolomitic break in Second Wilcox sand at Keokuk pool, XXIII, 232
 Dolomitic limestone, Argentina, X, 855
 Seven Rivers, XXVI, 94
 Yates field, Texas, STR II, 482
 Dolomitic limestone phase of Delaware Mountain formation in Texas and New Mexico, XIII, 974
 Dolomitic zones in Salem limestone, XXIII, 815
 Dolomitization, MEX, 43
 of Madison beds, XXVI, 327
 Dolomitization and porosity, XXIX, 1163
 Dolores formation, VI, 215
 Domal fields, typical, STR II, 676
 Domal folds in Seminole district, Oklahoma, STR II, 338
 Domal origin, theories of, STR II, 680
 Domal structure at Yates field, Texas, STR II, 482, 493, 494
 of formations near head of Cañada de Santa Anita, XXVII, 14, 16
 Dome, Aagard pool, Kansas, STR II, 157
 Artesia field, New Mexico, STR I, 117
 Bellevue field, Louisiana, STR II, 231, 242
 Big Lake pool, Texas, STR II, 677
 Bradford field, Pennsylvania and New York, STR II, 420
 Coffeyville field, Kansas, STR II, 677
 (Dome)
 Cushing field, Oklahoma, STR II, 399
 DeMalorie-Souder pool, Kansas, STR II, 157
 Elk Hills field, California, STR II, 45
 elongate, in Elk Hills field, California, STR II, 51
 Francisco pool, Indiana, STR II, 140
 Garber field, Oklahoma, STR II, 180
 Homer field, Louisiana, STR II, 202, 215
 Knapp Creek, at Bradford field, Pennsylvania and New York, STR II, 431
 Lance Creek field, Wyoming, STR II, 605
 Martinsville field, Illinois, STR II, 135
 Permian beds, Big Lake field, Texas, STR II, 526
 Petrolia field, Texas, STR II, 554
 Pine Island field, Louisiana, STR II, 172
 Polhamus-Marshall pool, Kansas, *STR II, 157
 Rattlesnake field, New Mexico, on a, STR II, 677
 Scenery Hill gas field, Pennsylvania, STR II, 447
 South Blackwell field, Oklahoma, STR I, 171
 Teeter pool, Kansas, STR II, 156
 Texon zone in Big Lake field, Texas, STR II, 520
 Tinsleys Bottom field, Tennessee, STR I, 247; STR II, 677
 typical, Covert-Sellers field, Kansas, STR II, 677
 typical, Elbing field, Kansas, STR II, 677
 typical, Florence field, Kansas, STR II, 677
 typical, Garber field, Oklahoma, STR II, 677
 typical, Hewitt field, Oklahoma, STR II, 677
 typical, Morrison field, Oklahoma, STR II, 677
 typical, Peabody field, Kansas, STR II, 677
 typical, Petrolia field, Texas, STR II, 677
 typical, Turkey Mountain limestone fields, Oklahoma, STR II, 677
 typical, Virgil pool, Kansas, STR II, 677
 Upper salt beds in Big Lake field, Texas, STR II, 520
 Ventura Avenue field, California, STR II, 30
 West Columbia, Texas, salt core of, STR II, 455
 Wilbarger County, Texas, STR I, 299
 Dome-with-graben structures, deep, caused by salt uplift and regional faulting, XXVIII, 1308
 Dome-with-graben type of structure in Louisiana fields, XXVIII, 1253
 Dome formation, geophysical evidence of, XXVII, 58
 Dome-penetration phenomena at West Columbia field, Texas, STR II, 463
 Domenaya breccia, XXIV, 247, 258; XXV, 1400
 Domengine and Meganos formations, CAL, 139
 Domengine Creek, California, MSC, 70, 71
 outcrop section J, SBP, 167-194, 410

- Domengine formation, CAL, 136-139; SC, 17; XX, 1563
correlation chart, CAL, 303
in Tejon Quadrangle, XXI, 214
north of Coalinga, CAL, 123
restricted, XXIV, 1733
(Tdo), SBP, 97, 168-194, 415
- Domengine-Kreyenhagen contact
XXIV, 1734
- Domengine Ranch, CAL, 138, 172, 309
- Domengine sand, XXVII, 873
- Domengine sandstone, SC, 66; XX, 1612; XXIV, 1747
molluscan fauna of, XXIV, 1750
- Domes, closed, in Elk Hills field, California, STR II, 51
deep-seated, fault patterns of, XXVIII, 1252
deep-seated, in south Louisiana, bibliography on, XXVIII, 1312
formed by igneous intrusions, STR II, 681
formed by igneous intrusions in Homer and Bellevue fields, Louisiana, STR II, 707
formed by igneous intrusions in Tow Creek anticline, Colorado, STR II, 707
formed by intrusion of salt masses, STR II, 681
formed by lateral pressure, STR II, 680
formed by vertical movement, STR II, 681
in Centralia district, Illinois, STR II, 120
in Eldorado field, Kansas, STR II, 163
in Henry Mountains, origin of, XXVI, 201
in Osage County field, Oklahoma, STR II, 385
in Stephens County, Texas, STR II, 472
mountain, origin of, XXVI, 198
on anticline at Vermilion Creek basin, GAS, 354
on syncline at Scenery Hill gas field, Pennsylvania, STR II, 450
produced by intrusion of stocks possibly suitable structural traps for oil and gas, XXVI, 203
relation of origin of, to productivity, STR II, 680
south Louisiana deep-seated, structure of, XXVIII, 1249, 1549
structure elements of, XX, 51
- Domes and closed anticlines, oil accumulation on, PROB, 404
- Domical uplifts in southeastern Utah, XIX, 1480
- Domijean sands, description of, XXIV, 1729
- Doming in Illinois, GAS, 831
- Doming mechanics, XVIII, 1279
- Dominguez, Long Beach, and Seal Beach oil fields, structure, GAS, 182
- Dominguez anticline, CAL, 46, 47; XXIV, 1123
- Dominguez Harbor fault at Wilmington oil field, XXII, 1063
- Dominguez Hills, XII, 632
structure indicated by pattern of consequent streams, XII, 519
- Dominguez oil field, California, GAS, 180; MSC, 98; PROB, 217, 229, 742, 750; SBP, 26; XXI, 979; XXIV, 1123
bitumen content of sediments in, (Dominguez)
SBP, 68
effect of thrust and normal faults on accumulation at, XXIV, 1123
general geology of, XXVI, 390
gravity of oil at, XXIV, 1123
Los Angeles basin earthquake of October 21, 1941, and its effect on certain producing wells in, XXVI, 388
map, XXVI, 392
properties of sediments of, SBP, 153-165
(wells 45, 64-70), SBP, 87-130, 144-165, 404
- Dominguez structure, age of, XXVI, 398
- Dominguez surface, unconformity above, XI, 419
- Domino fault, Las Monas, Aguas Claras, Colombia, XXIX, 1123
- Dona Ana beds, fossils of, typical Osage forms, XXV, 2138
- Dona Ana member of Lake Valley formation, XXV, 2116, 2136; XXV, 2112
fauna of, XXV, 2137
in Deadman Canyon, type section of, XXV, 2121
- Donald, A. W., X, 1258
- Donath, P., and Lissner, A., PROB, 43
- Donath, P., and Tausz, J., PROB, 264, 265, 920; XXVII, 1180
- Donnell, J. C., VII, 613; XXII, 1022
- Donnelly, Alden S., XXVII, 523
high-pressure Yates sand gas problem, east Wasson field, Yoakum County, West Texas, XXV, 1880, 2070
- Donnelly, Alden S., and Winter, Niles B., XXIX, 725
developments in West Texas and southeastern New Mexico in 1943, XXVIII, 806
- Donnelly pool, PROB, 411, 767
- Donner, H. F., XXVI, 1389
- Donoghue, David, GAS, 609; SD, 345, 352, 358; VIII, 717, 776; IX, 538, 632, 758
absence of metamorphosed sedimentary rocks in Texas Panhandle, VIII, 241
- Bayou Bouillon salt dome, St. Martin Parish, Louisiana, SD, 345; IX, 1283
elasticity of reservoir rocks and fluids with special reference to East Texas oil field, XXVIII, 1032
fundamental data on subsurface reservoirs, XXVIII, 1754
note on Ranger sand, Eastland County, Texas, XI, 635
notes on appraisals, XXVI, 1283
relation of initial production to ultimate production of wells completed in Smithwick (Gray) limestone, Breckenridge field, Stephens County, Texas, XXV, 1589
report of second vice-president for 1928, XIII, 547, 549
report of secretary for 1927, XII, 584
report of treasurer for 1927, XII, 286, 586
- Section 28 salt dome, St. Martin Parish, Louisiana, SD, 352; IX, 1290
- Donovan, Percy Williams, discussion on diamond drilling, VI, 139
- Doolittle, R. N., XXIII, 122
- Dora oil pool, Seminole County, Oklahoma, STRAT, 408; XXIII, 692
- (Dora)
accumulation of oil, STRAT, 422
anticlinal, XXIII, 696
cost of drilling, STRAT, 433
reserves, STRAT, 435
structure of, on top of Senora limestone, XXIII, 693
wells in, XXIII, 692
- Dora sand, Dora pool, STRAT, 419
- d'Orbigny, Alcide D., MSC, 10, 90, 168, VIII, 488; X, 174; XX, 222; XXIV, 1686, 2040; XXV, 1215, 1218; XXVII, 263, 266, 268
- d'Orbigny's Stages, MSC, 98
- Dorcheat field, Arkansas, XXIV, 1027; XXV, 1036; XXVIII, 260
Smackover limestone production at, XXVIII, 260
- Dorcheat member of Schuler formation, XXVIII, 597, 602
- Dorcheat field, Columbia County, Arkansas, thin section of varicolored, sideritic shale of, XXVIII, 605
type sections, XXVIII, 606, 607
- Dorcheat oil field, XXVIII, 611
- Dorcheat pool, Columbia County, deepest in Arkansas, XXIV, 738
- Dore, W. H., RMS, 457, 486
- Dorf, Erling, CAL, 245; XXVII, 1061
- Dormon, J. L., X, 245
- Dorn, C. L., MSC, 50, 51, 218, 224, 230, 234, 235, 237, 243, 248, 251, 275, 284, 344, Fig. 14 (in pocket)
- Dornick Hills formation, GAS, 589, 593; XVIII, 1023; XXV, 1663, 1665, 1666
- Dorr, James B., MEX, viii, x, 71, 72, 74, 78, 85, 86, 88-90, 101, 110, 113, 117, 119, 121, 123, 124, 126; MSC, 110, 177-180; XIX, 529; XX, 441; XXV, 1234; XXVI, 1651; XXVII, 1122
- Dorr, J. J., *et al.*, XXVI, 1632
- Dorr field, XXVII, 834
- Dorrance, James R., CAL, 13, 44, 57; MSC, 7; XVIII, 435
California exploration and development in 1941, XXVI, 1135
- Dorsey, George Edwin, GAS, 587, 597; PROB, 74, 322, 834; XI, 637, 978, 979, 985; XII, 796; XIII, 1095; XVI, 1030; XVII, 154; XIX, 1536; XXIX, 1193
origin of color of redbeds, abstract, XIII, 697
present status of carbon-ratio theory, XI, 455
preservation of oil during erosion of reservoir rocks, XVII, 827; discussion, XVII, 1272, 1275
- Dos Bocas-Alamo field, PROB, 377, 380
- Dos Bocas field, MEX, 3, 36, 140, 204, 208, 209; V, 85, 453, 505
- Dos Palos shale, XXIX, 982
- Dos Pueblos Creek, MSC, 31, 117, 129
- Dosados sand, XXIX, 983
- Doss pool, XXIX, 748
- Dossor field, XXIII, 496
- Dossor gusher, XXIII, 496
- Dossor oil field, section, XXIII, 505
- Dothan and Galice slates in Oregon, XXVII, 186
- Dothan formation, III, 145; XXVII, 117; XXIX, 1396
- Dothan limestone, XXVI, 1046
- Noodle Creek pool, STRAT, 702
- Dott, Robert H., PROB, 309; STRAT, 441; XIV, 782, 1537; XV, 994, 1018, 1044; XVII, 245, 254;

(Dott)

- XVIII, 248, 1008, 1075; XIX, 503, 560; XX, 305, 625, 1463; XXI, 1515, 1535; XXII, 100, 1573; XXIII, 1673; XXIV, 328, 337, 411, 717, 719, 721, 724, 2146, 2148; XXV, 3, 6, 8, 10, 11, 21, 287, 651, 1683; XXVII, 1060; XXIX, 125, 126, 135, 143
- abstract, XIII, 697
- discussion of *en echelon* faults in Oklahoma, XVIII, 248
- editor, discussions at Permian Conference, Norman, Oklahoma, May 8, 1937, XXI, 1559
- editor's note on papers discussing stratigraphy of Permian in Oklahoma and Kansas, XXI, 1513
- geology of Garvin County, Oklahoma, and Robberson field, discussion, XI, 889
- lower Permian correlations in Cleveland, McClain, and Garvin counties, Oklahoma, XVI, 119
- Memorial shale of Pennsylvanian age in Oklahoma, XXV, 1591
- overthrusting in Arbuckle Mountains, Oklahoma, XVIII, 567
- overturned beds in Arbuckle Mountains, Oklahoma, XVII, 865
- regional stratigraphy of Mid-Continent, XXV, 1619
- reviews, XII, 869, 955; XV, 976; XVI, 495, 945, 1045; XVIII, 1377, 1378
- sixteenth International Geological Congress, XVII, 1139
- Dott, Robert H., and Ginter, Roy L., PROB, 277, 917; XVII, 801, 838
- iso-con map for Ordovician waters, XIV, 1215
- Dott, R. H., and Ham, W. E., new evidence concerning age of Spavinaw granite, Oklahoma, XXVII, 1626
- Dott, Robert H., and Ware, John M., XXIV, 721
- Double Mountain, probable age of top of dolomite in Artesia field, New Mexico, STR I, 116
- Double Mountain dolomite, PROB, 351, 352
- Double Mountain formation, I, 95, 97, 102, 103; III, 95, 117, 169, 170; IV, 270; V, 379; XI, 724
- in Big Lake field, STR II, 512
- Double Mountain group, XXIII, 1677
- in West Texas, XIII, 949
- Double trap and triple trap reservoirs, XXIX, 1570
- Double trap reservoirs, XXIX, 1573
- Dougherty, J. S., XXV, 195, 229
- Dougherty, W. E., and Denham, R. L., "Sand Belt" area of Ward and Winkler counties, Texas, and Lea County, New Mexico, STRAT, 750
- Douglas, A. E., XX, 1366
- Douglas, J. A., XXIX, 512
- Douglas, J. G., VIII, 739, 769; XXII, 1103
- Douglas Creek field, Colorado, XXVIII, 791
- Douglas field, Wyoming, PROB, 693; V, 203, 422, 423
- Douglas formation, II, 104
- Eldorado field, Kansas, STR II, 166
- Douglas group (Cd) (Pennsylvanian), SBP, 258, 261-280, 413
- Douglass, XXIX, 1607
- Douglass, C. C., XXV, 725, 727; XXVII, 572, 593
- Douro area, XXV, 1050
- Doutkevitch, XXIV, 280
- Douville, Henri, MEX, 72, 132, 133; SD, 122; XI, 993, 995, 1210; XV, 151; XXVII, 262
- Dover anticline, GAS, 560
- Dover field, GAS, 71, 74, 76, 82
- Dover Straits, RMS, 322, 343
- Dover West field, FOP, 118; XXV, 1550
- Dow, D. B., GAS, 1074; XXV, 1874
- Dowling, Donaldson Bogart, STRAT, 271, 273; VII, 148; XI, 239, 255; XV, 493, 1127, 1135, 1137, 1182, 1187, 1198, 1209, 1212, 1219, 1229, 1238; XVI, 788; XVIII, 1418; XXIV, 1623; XXVI, 343, 345
- biography of, ALTA, vii
- Downip Wilcox (Eocene) of coastal Texas and Louisiana, XXIV, 1891
- Downey Plain, CAL, 9; SC, 115; XX, 1661
- Downfaulted block, main structural feature in Ontario, FOP, 109; XXV, 1541
- Downs, G. R., XXVI, 307
- Downton sandstone, XXIV, 287
- Downward withdrawals, reduction of capillary action by, around periphery of well, XXIV, 2174
- Downwarped provinces, structurally, likely to produce oil and gas, XXVIII, 324
- Downwarping into coastal geosyncline during Wilcox and Claiborne time, XXIV, 1909
- of a geosyncline caused by crustal shortening, XXIII, 1330
- Doyle, Milroy, Hanbury, Nellie, Wheeler, and Cruce pools, redbeds in, GAS, 586
- Doyle area, Oklahoma, Pennsylvanian sands productive of oil in, XXIV, 1029
- Doyle limestone, VI, 427
- Doyle shale, XXI, 505
- Doxier Mounds dolomite, XXI, 439, 450
- cross-bedding in, XXI, 455
- Drach, G. K., review, VII, 586
- Drag bucket sampler, RMS, 635-638
- Drag fold, Turner Valley field, GAS, 42
- Drainage, GAS, 1028
- Artesia field, New Mexico, STR I, 113
- Irma field, Arkansas, STR I, 1
- Luling field, Texas, STR I, 261
- of Freezeout Mountain-Bald Mountain area, XXV, 884
- oil well, XXVI, 1777
- Tri-County field, Indiana, STR I, 24
- Urania field, Louisiana, STR I, 92
- Ventura Avenue field, California, STR II, 30
- Drainage area, relation of, to production, STR II, 705
- Drainage areas, relief of, XXV, 829
- vegetable protection over, XXV, 830
- Drainage basin of Medicine Bow River, Freezeout Mountain-Bald Mountain area in, XXV, 887
- Drainage systems, post-deposition, of Ridge Basin, California, XXIII, 555
- Drake, XII, 659; XIII, 884; XV, 597; XXII, 428, 1092, 1095
- Drake, Cecil, MEX, ix
- Drake, E. L., XII, 474; XIX, 488
- Drake, Edward, PROB, 2, 3
- Drake, Noah Fields, I, 23, 27, 31, 96; III, 134, 137, 142; VIII, 62; X, (Drake)
- 1085; XIII, 572; XVI, 191; XVIII, 982; XXIV, 81, 89, 94, 95, 96; XXVII, 622; XXIX, 163
- memorial of, XXIX, 1794
- Drake Passage, RMS, 117
- Drake well, PROB, 2, 10, 70; XV, 597; XIX, 487, XXII, 429
- organized prospecting for petroleum initiated at, XXI, 708; XXIV, 1401
- Drake's discovery well in Pennsylvania, XXIX, 1739
- Drake's salt dome, Louisiana, SD, 222, 274, 275, 323-328; X, 271
- Drammensfjord, RMS, 362
- Dredge, Leger, RMS, 661
- rock, RMS, 638
- sheet iron, RMS, 637
- Dredging, RMS, 231, 252, 267
- in Baltic, RMS, 300, 319
- Dreher, Otto, files of the oil geologist, IX, 331
- symbols for dip and strike, XI, 868
- Dresbach sandstone, XXVIII, 115
- Drescher, R. B., XXII, 267
- Drescher, W. J., XXIX, 1169
- Drescher, W. S., XXIX, 1177
- Drevermann, Fr., XII, 951
- Drew, G. H., RMS, 283, 291, 417; XIV, 709; XX, 260
- Dreyer, F. E., and Wissler, S. G., XXVII, 1346
- Dreyer, R. M., Jakosky, J. J., and Wilson, Clyde H., geophysical investigations in Tri-State zinc and lead mining district, XXVII, 86
- Drift, reversal of, CD, 69
- Drift currents, RMS, 50, 108, 123, 124, 125
- balance of forces in, RMS, 118
- computation of, RMS, 120
- Drift theories, CD, 33
- Drill as geologic tool, XXIX, 864
- Drill, diamond, in oil exploration, VI, 98
- Drill-bit course, plane projection for, to illustrate directional and deflection angles, XXVII, 89
- Drill cuttings, Lemberg solution staining of, XXI, 949
- logging rotary wells from, XII, 59
- staining of, XXI, 949
- Drill holes, courses of, XIII, 109
- courses of, discussion, XIII, 387
- for oil and gas, Oregon and Washington, XXIX, 1381
- use of temperature measurements for cementation control and correlations in, XXI, 789
- Drill-stem tests, XXIV, 1374
- Drilling, classification, XXVIII, 704
- classification of exploratory, and statistics for 1943, XXVIII, 701
- core costs, X, 526
- deep, in Wyoming and Montana, XV, 553
- deeper, in Rocky Mountain fields, VII, 400
- diamond, for production, VI, 91
- diamond, near Kerens, Navarro County, Texas, X, 703
- economic aspects of, XXII, 633
- for geophysical data in Yellowstone National Park, XV, 469
- in Arkansas Valley, GAS, 572
- in Hoffman field, XXIV, 2139
- in Kansas, 1937, summary of, XXII, 666
- in Missouri in 1939, XXIV, 1003

(Drilling)

- in New York state in 1943, XXVIII, 725
 in Queensland, review, VII, 196
 in Rocky Mountain fields, VII, 407
 in St. George district, Utah, history of, XXIII, 140
 in Western Canada, VII, 82
 in with oil at North Cowden field, XXV, 627
 mechanical versus geological variations in, XXIII, 1821
 method of, in Hugoton field, XXIII, 1054
 near seepages, earliest prospecting technique, XXVI, 1219
 of salt wells, XXII, 1090
 of wells in excess of equilibrium requirements, effect in declining perwell allowable, XXII, 639
 oil wells with the diamond drill, V, 386
 on oil seepages, XXIV, 1392
 on oil seepages, greatest single source of oil finding, XXIV, 1397
 results of, XXVIII, 707
 rotary, VIII, 641
 town-lot, VII, 118
 types of equipment, X, 520
 wildcat, in 1937, XXII, 645
 wildcat, in 1938, XXIII, 789
 with electricity, review of publication on, VI, 389
 Drilling activities, comparative, for years 1943 and 1944 in south Arkansas and north Louisiana, XXIX, 803
 in north Louisiana oil fields during 1942, XXVIII, 270
 Drilling activity in Colorado, Montana, Utah, and Wyoming, 1942-1944, XXIX, 1593
 in Kansas, XXIII, 797
 in Kansas in 1938 and 1939, XXIV, 995
 in Kansas in 1940, XXV, 1103
 in Kansas in 1943, increase of, XXVIII, 767
 in Kansas in 1944, XXIX, 701
 in Nebraska in 1940, XXV, 1109
 in New Mexico in 1939, XXIV, 1030
 in southeastern United States, decrease of, in 1941, XXVI, 995
 in Sugar Creek field, XXII, 1517
 Drilling and completion practice at Schuler field, XXVI, 1514
 Drilling and production, XXIV, 1055
 statutory regulation of, based upon concept of ownership in place, must be limited in application, XXII, 573
 Tupungato field, XXVIII, 1481
 Drilling and production methods, SD, 477, 555, 639, 690
 Big Lake field, Texas, STR II, 532
 Elk Hills field, California, STR II, 57
 La Rosa field, XXV, 317
 Drilling and production practices, Goldsmith field, XXIII, 1543
 Drilling and production statistics, West Texas and southeastern New Mexico, XXIII, 838
 Drilling campaigns, competitive, XXII, 1083
 Drilling costs, review of publication on, VI, 390
 Seminole district, Oklahoma, STR II, 350
 Drilling depth record, new, in Wyoming, XXV, 1158

- Drilling fluid, loss of, PROB, 281
 Drilling history of 1921 at Orange field, GC, 885; XX, 536
 Drilling locations, favorable, in Tennessee, STR I, 254
 Drilling methods, Amarillo district, GAS, 411. (See Production Methods)
 Archer County field, Texas, X, 475
 Barbers Hill, Texas, IX, 971
 Bellevue field, Louisiana, STR II, 251
 Bend Arch district, GAS, 646
 Big Lake field, GAS, 448
 Billy Creek field, GAS, 303
 Boggy Creek salt dome, XVI, 596
 Bradford field, Pennsylvania and New York, STR II, 436
 Bryan Heights dome, IX, 625
 Buckeye field, GC, 754; XIX, 392; XXIV, 1981
 Conroe field, GC, 823; XX, 770
 Damon Mound field, Texas, IX, 531
 Darst Creek field, XVII, 36
 East Lea County high, GAS, 428
 eastern Kentucky fields, GAS, 947
 Ederly field, IX, 504
 Elk Basin field, Wyoming and Montana, STR II, 587
 Germany, XVI, 1148
 Goose Creek field, IX, 295
 Government Wells field, GC, 642; XIX, 1142
 Hendrick field, XIV, 941
 Hobbs field, XVI, 90
 Homer field, Louisiana, STR II, 223
 Michigan fields, GAS, 810
 Monroe field, GAS, 767
 New York and Pennsylvania fields, GAS, 986
 New York oil fields, STR II, 287
 North Cowden field, XXV, 595
 Oklahoma City field, XVI, 1001
 Olympic pool, XXII, 1585
 Ontario fields, GAS, 86
 Page field, XXV, 631
 required for overhanging salt, GC, 149; XVII, 1500
 Sakhalin Island, X, 1166
 Salt Creek field, Wyoming, STR II, 603
 Sayre field, GAS, 415
 Smith-Ellis field, Texas, STR II, 569
 Stephens field, Arkansas, STR II, 12
 Sugarland field, GC, 728; XVII, 1381
 Turner Valley field, GAS, 52
 Ventura Avenue field, California, VIII, 828; XII, 733
 Viking field, GAS, 57
 Voshell field, XVII, 186
 Wasson field, XXVII, 519
 Welsh field, Louisiana, IX, 476
 West Ranch field, XXVIII, 216
 Wheat pool, XX, 788
 Yates dome, XIII, 1553
 Drilling methods and practices, Lisbon field, XXIII, 319
 North Cowden field, XXV, 625
 Ramsey pool, XXIV, 2004
 Drilling mud, information from tests of, XXIV, 1370
 its manufacture and testing, XXI, 812
 Drilling operations, Darrow dome, XXII, 1421
 in Oklahoma in 1938, XXIII, 824
 in Oklahoma in 1939, XXIV, 1012
 in Oklahoma in 1940, XXV, 1091
 in southeastern United States in 1943, upturn of, XXVIII, 801

(Drilling)

- liability of subsurface trespass in, XXII, 1085
 use of chemicals in, XXIV, 1365
 West Texas and southeastern New Mexico in 1937, XXII, 695
 Drilling practice, Cunningham field, Kansas, XXI, 518
 Gulf Coast district, XIV, 599
 Trenton fields, XXII, 99
 Drilling practices, early development of, in Kanawha County, West Virginia, XXII, 1088
 Drilling procedures used to prevent collapse of casing, XXV, 1892
 Drilling rate responsive to price of crude oil, volume of required production, level of general business, and availability of newly discovered oil fields, XXII, 634
 Drilling systems, Tonkawa field, Oklahoma, VIII, 294
 Drilling time important in Illinois operations, XXIII, 1821
 important in Kansas operations, XXIII, 1821
 important in West Texas operations, XXIII, 1820
 method of recording manually, XXIII, 1830
 method of recording mechanically, XXIII, 1831
 Drilling-time data, determination of, XXIII, 1829
 in rotary practice, XXIII, 1820
 interpretation of, XXIII, 1820
 Drilling-time logs as recorded on geograph chart, for parts of three wells, in West Frederick field and in Oklahoma City, XXIII, 1828
 conventional, of parts of three wells, XXIII, 1826
 Drilling-time logs and their uses, XXVI, 1279
 Drilling-time method, illustrations of possibilities of, XXIII, 1825
 Drilling-time variations to fit different types of rock, XXIII, 1822
 Drilling wells, important, in southeastern New Mexico at close of 1944, XXIX, 754
 important, West Texas, December 31, 1944, XXIX, 741
 Drills, VII, 251; XXVI, 1799
 diamond, and diamond-drill equipment for oil structure investigation, X, 656
 rotary, VII, 121
 Drinkard-Yeso pool, XXIX, 751
 Driscoll, Robert, XVII, 822, 823
 Driscoll field, XV, 765
 Driscoll pool, Duval County, Texas, GC, 620; XVII, 816
 Fayette sand at, GC, 628, 630; XVII, 824, 826
 Oakville gas sand at, GC, 628; XVII, 824
 subsurface geology of, GC, 623, 628; XVII, 819, 824
 Driscoll Ranch, Duval County, Texas, map of subsurface geology of, GC, 625; XVII, 821
 Driscoll-Sevier sand, XXIII, 1634
 Driver, Herschel L., CAL, 229; GAS, 119; MSC, 77, 79; SBP, 186; SC, 108, 122; XXVIII, 788; XX, 1654, 1668; XXI, 584, XXVIII, 903
 economic paleontology and mineralogy-an appraisal, XXVII, 938
 foraminiferal section along Adams

- (Driver)
Canyon, Ventura County, California, XII, 753
review, XXV, 2212; XXVIII, 1758
Drohobycz district, Poland, XVII, 1092
Drop auger, an experiment with, X 722
Dropright dome, at Cushing field, Oklahoma, PROB, 586; STR II, 399; V, 132, VI, 81
Drouet, Francis, XXII, 1307, 1332
Drowned stream mouths in Corpus Christi area, GC, 214; XVII, 918
Drowned valley of Nueces River in area of White Point and Saxet oil and gas fields, GC, 242, XVII, 950
Drum limestone, V, 548
Drumright dome at Cushing field, Oklahoma, STR II, 399; VI, 81
Drushel, S. G., XXV, 106
Drushel sand, XXV, 117
Drusy cavities in El Abra limestone, MEX, 41, 206
Dry Canyon, MSC, 238, 260, 265, 269, 270, 277, 278, 285, 313, 320, 321, 327, 332, 333, Fig. 14 (in pocket), XXIII, 83
Dry Canyon road MSC, 47
Dry Cimarron River, northeastern New Mexico, section on, showing tentative correlation with southwestern Colorado section, XXV, 1763
Dry Creek and Golden structures, Carbon County, Montana, areal geologic map of, XXII, 107
revision of stratigraphy of, XXII, 106
section exposed in, XXII, 106
Dry Creek dome, XX, 1176
Dry Creek oil and gas field, GAS, 250, 269, 291; PROB, 702, 716, 936; XXVII, 434, 435, 455, 459
Dry gas, GAS, 121, 151, 153, 700
Dry-hole completions, per cent of, to total wells completed in 1942, XXVII, 972
Dry-hole record in California, XXIV, 1716
Dry holes, definition, XXVIII, 707
drilled in United States, 1934-1942, XXVII, 964
important, drilled in Oklahoma in 1939, XXIV, 1021
important, drilled in Oklahoma in 1940, XXV, 1101
important, drilled in Oklahoma in 1941, XXVI, 1069
important, drilled in Oklahoma in 1944, XXIX, 719
important, in Colorado, XXIV, 1110; XXVII, 858
important, in Montana, XXVII, 859
important, in North Dakota, XXVII, 859
important, in Oklahoma, XXVIII, 785
important, in Oklahoma, completed in 1939, XXIV, 1023
important, in Oklahoma, discovered in 1942, XXVII, 803
important, in Rocky Mountain region, XXII, 688
important, in Rocky Mountain region drilled in 1940, XXV, 1153
important, in South Dakota, XXVII, 859
important, in Texas Panhandle, XXIX, 722
important, in Wyoming, XXIV, 1110
in Tinsley field, XXV, 1021
in Wyoming, Nebraska, and Colorado, important, XXI, 995
- (Dry)
increase in proportion of, in 1942, XXVII, 971
oil wells, and gas wells drilled as dry holes in 1942, number of, XXVII, 720
percentage of, in Gulf Coast, II, 37
Dry holes and tests drilled in south Arkansas and north Louisiana during 1940, XXV, 1028
Dry Ice Company plant in Walden field, Colorado, GAS, 1065
Dry Ice Corporation of America, experiments with gas in McCallum fields, GAS, 377
Dry Lake, Logan Quadrangle, Utah, Brazer (Mississippian) and lower Wells (Pennsylvanian) section at, XXIX, 1143
lowest part of Freezeout Pasture syncline, XXV, 894
references on Brazer and lower Wells section at, XXIX, 1155
Dry Lake and Deweyville sections, correlation of, with other sections in Rocky Mountain region, XXIX, 1150
Dry Lake and Deweyville sections and Wellsville Mountain, map, XXIX, 1144
Dry Lake section, XXIX, 1145
Dry Mountain anticline, XXI, 997
Dry Piney, PROB, 693
Dry Piney structure, XXIII, 929
Dry sand fields, PROB, 468
Dry sands, PROB, 17, 469, 845; STRAT, 826
Dry tests, important, in Eastern Interior basin in 1943, XXVIII, 756
Dryden, A. L., RMS, 605, 606
Dryden, Lincoln, XXIX, 895
Drying, effect of, on size distribution of Atlantic clays, RMS, 394
Drying cores, apparatus used in, XXVII, 68
Drying-shrinkage in clays, RMS, 480, 481
D'Spain pool, Wheeler County, Texas, XXIII, 1035
pre-Redbed columnar section, XXIII, 1036
Du Toit, Alex L., XIX, 1734, 1737, 1738, 1741, 1743, 1746, 1748; XX, 1229; XXV, 402, 409, 412; XXIX, 497
observations on evolution of Pacific Ocean, review, XXV, 1811
similarities and dissimilarities of African and South American geology, CD, 120
Dubendorf, H. H., Schwennessen, A. T., and Overbeck, R. M., Long Beach oil field and its problems, VIII, 403
Dubertret, L., XXIV, 751
premières recherches sur les hydrocarbures minéraux dans les tals du Levant sous mandat français, review, XIX, 1706
DuBois, Dr., XXI, 555
Dubose sands and shales, GC, 491, XVII, 1314
Duce, James Terry, GAS, 1065; XXVIII, 1502; XXVI, 829; XXVIII, 1498; XXIX, 1080, 1081
carbon dioxide from wells in Colorado, VIII, 831
review, XIX, 1560
Duce, James Terry, and King, XXIX, 1078
Duck Creek formation, XXIX, 173
of northern Texas, XIII, 1297
rich in ammonites, XXIV, 1183
Duck Creek limestone, XXII, 1430
Duck Creek residues, XXVII, 1064
Duck Creek strata, XXVII, 1061
Duckert, P., XII, 855
Dudley, Paul, XXIV, 664
Dudley, R. B., III, 174
Dudley Ridge field, GAS, 153
Dudley shale, V, 293
Duff and Galey, L. P. C. 1 (well 416), SBP, 349-379, 410
Duff, R. C., SD, 611
Duff, R. C., *et al.*, SD, 443
Duffer well, Ranger field, description of cuttings from, III, 39
Duffy, J. M., SD, 620
Dugan, I. E., V, 121
Duggan, Helen, MSC, 6
Duggan pool, XXIV, 1037
Duizend-eilanden, RMS, 349
Dujardin, Felix, XXV, 1215
Duke field, III, 60, 166
Dulce pool, MEX, 164, 191
Dull bits, replacement of, XXIII, 1823
Dumas, J. B., XVIII, 11, 12
Dumas nose, XXIII, 1029
Dumas-Stratford structural trend, section across, XXIII, 1030
Dumble, Edwin Theodore, GC, 471, 475, 487, 502, 552; MEX, vii, viii, 32, 34, 39, 48, 54, 55, 57, 60, 61, 68, 71, 74, 77, 80, 84, 89, 96, 98, 100, 103, 114-116, 118, 120-122, 124, 131-133, 137, 139, 149, 161; PROB, 666, SD, 9, 20, 25, 211, 214, 215, 216, 218, 244, 253, 255, 410, 421, 426, 431, 437, 501, 558, 644, 717, 728, 771, 782; I, 23, 27, 73; III, 311, 312; IV, 117, 128, 129, 130, V, 230, 465; VII, 380, 539, 612, 613, 614; VIII, 74, 539; IX, 127, 128, 137, 349, 546, 655, 839, 850, 854, 855, 862, 863, 864, 866, 1049; X, 3, 10, 36, 47, 156, 163, 175, 177, 238, 616, 899; XI, 1186, 1188, 1191, 1193, 1195, 1197, 1199, 1213; XII, 397, 398, 527, 993; XIII, 166, 1337, 1343, 1348, 1356, 1358, 1360; XIV, 1432; XV, 470, 532, 537, 746, 793, 867; XVI, 259; XVII, 457, 463, 465, 490, 498, 500, 506, 517, 531, 630, 1296, 1298, 1307, 1310, 1325; XXVIII, 1018, 1255, 1256, 1325; XIX, 1358; XX, 433, 440, 442, 495; XXIII, 145; XXIV, 145, 147, 148, 305, 316, 380, 381, 1731, 1733; XXV, 1221, 1222; XXVIII, 982, 1003, 1004, 1007, 1009, 1078, 1102, 1150, 1187, 1360; XXIX, 1722, 1723, 1724, 1726, 1727
a revision of Texas Tertiary section with special reference to oil-well geology of coast region, VIII, 424
memorial of, XI, 439
Dumble, Edwin Theodore, and Applin, E. R., XXVIII, 1132
Dumble, Edwin Theodore, and Trowbridge, A. C., XIX, 656
Dumble, James, IX, 994
Dumont, André, XXVIII, 1163
Dun, W. S., X, 1128, 1137, 1142; XX, 1047
Dunbar, Carl O., MEX, 8; PTNM, 539, 685, 689; XII, 201; XIV, 1280; XVII, 1006, 1659; XXI, 806; XXIII, 85, 499, 1053, 1756; XXIV, 282, 289, 293, 294, 296, 297, 298,

- (Dunbar)
306, 311, 321, 323, 324, 327, 328,
338, 353, 354, 1128, 1129, 1498;
XXV, 100, 401, 641, 669, 670, 671,
672, 676, 678, 691, 1396, 2049;
XXVI, 221, 405, 539, 685, 689,
1377; XXVIII, 305, XXIX, 1153,
1767
Artinskian series, discussion, XXVI,
402
the type Permian: its classification
and correlation, XXIV, 237
Dunbar, Carl O., and Beede, J. W.,
XXIV, 298
Dunbar, Carl O., and Condra, G. E.,
XIII, 890, 898, XVIII, 947; XXV,
1667
Dunbar, Carl O., and Longwell, C. R.,
XXIV, 311
problems of Pennsylvanian-Permian
boundary in southern Nevada, XX,
1198
Dunbar, Carl O., and Schuchert,
Charles, GAS, 654
textbook of geology, Part II, histori-
cal geology, review, XVII, 1148
Dunbar, Carl O., and Skinner, John W.,
PTNM, 560, 564, 565, 573, 598,
603, 643, 649, 651; XXIII, 1700,
1710; XXIV, 171, 294, 308, 315;
XXV, 97; XXVI, 560, 564, 565,
573, 598, 603, 643, 649, 651;
XXIX, 1767, 1772
Dunbar, C. P., XXV, 325
Dunbar, Robert O., Como Bluff anti-
cline, Albany and Carbon counties,
Wyoming, XXVIII, 1196
Dunbar structure, XXVII, 1043
Duncan, H. J., XXIV, 1215; XXVI,
1318; XXVII, 1306
Duncan, J. E., XVIII, 120
Duncan, Milton, XIV, 425
Duncan-Ardmore area, XXV, 1687
Duncan-Chickasha beds, XXV, 1683
Duncan-Chickasha contact in Garvin,
Grady, and McClain counties,
Oklahoma, XXI, 1535
Duncan district, Oklahoma, XIV, 48
Duncan field, IV, 277; V, 32, 627; VI,
424
Duncan formation, XXII, 398, 663;
XXV, 1134; XXVI, 1102, 1103,
1106; XXVII, 828; XXVIII, 178,
763; XXIX, 695, 698
Duncan sandstone, V, 627; X, 797;
XXI, 1534; XXIII, 1790
in Stephens County, Oklahoma, XX,
1466
Duncansby Head, RMS, 334
Dundee and Detroit River (upper Mon-
roe) formations of central Michi-
gan, insoluble residues of, XXI,
317
Dundee and Marshall structures, rela-
tion between, in Michigan, XXII,
143
Dundee Corniferous lime in Saginaw
field, XI, 960
Dundee field, Michigan, XXIV, 983
Dundee formation, Livingston County,
Michigan, GAS, 808
most important oil-producing horizon
in Michigan, XXII, 406
Mount Pleasant field, GAS, 806
Muskegon field, GAS, 796, 802; XVI,
159
pay zone in Porter field at top of,
XXVIII, 179
productive in Wise field, XXIV, 983
Dundee horizon, PROB, 552
Dundee limestone, XXIV, 1962
a possible source of oil in Michigan,
STR I, 111
photomicrograph showing secondary
porosity, XXVIII, 179
productive in Buckeye field, XXIV,
1959
productive in Michigan fields, XXIV,
1955
Dundee producing areas of central and
eastern parts of Michigan, XXIV,
975
Dundee structure, XXIV, 1953
Dundee-Traverse break, PROB, 550
Dune areas of western United States,
collections of sands from, XXIX,
215
Dune sand, comparison of beach sand
with, XXIX, 215
Dunes, RMS, 212, 214, 215, 241
beaches and sandstones, some, size
distribution of sand in, XXIX, 215
covering cliffs, RMS, 331
formation of islands by, in North Sea,
RMS, 335
of North Sea, RMS, 333-335, 347
rounding of grains in, RMS, 37
sands of, RMS, 36, 37, 39, 169, 171,
271, 344
sands of, cause of rounding of, RMS,
41
sands of, on Barataria Bay, RMS,
188
sands of, size distribution of, RMS,
169
submerged, RMS, 242, 346
Dunes field, XXIII, 840
Dunkard beds classed as Permian by
David White, XXIV, 313
Dunkard formation, Gay-Spencer-Rich-
ardson trend, STRAT, 809
Scenery Hill gas field, Pennsylvania,
STR II, 444
Dunkard sand, III, 21
Dunkard series, XXV, 796
Copley pool, West Virginia, STR I,
444
Dunkle, W. E., VI, 295
Dunlap, E. N., XXII, 1248
Dunlap, W. E., MSC, 5
Dunn, David A., where should young
graduates in petroleum geology ac-
quire field experience? Discussion,
XXIV, 2047
Dunn, Paul H., XX, 1110; XXIII, 601;
XXV, 1241; XXVI, 17
Dunn and McAllister pool, XXIII, 857
Dunnigan, California, outcrop section
C, SBP, 167-194, 411
Dunstan, A. E., XXII, 777
Dunstan, A. E., and Sell, George, joint
editors, proceedings World Petro-
leum Congress, review, XVIII, 822
Dunton, Colorado, section showing sub-
divisions of Morrison formation,
XXV, 1764
Dunvegan formation, VI, 116
Duplin marl, XXII, 792
Dupo anticline, XXIV, 770
Dupo oil field, Illinois, XXI, 782;
XXIII, 821
Dupont, E., XXV, 2127
Dupuyer anticline, XXIII, 923
Duquoin anticline, Centralia-Sandoval
area, Illinois, STR II, 116, 117,
122; XXI, 779; XXIV, 770;
XXVIII, 71
DuQuoin-Centralia monocline, XXII,
651
Duquoin flexure, XXIII, 1359
Durango, eastern, Cretaceous section,
Sierra del Rosario, XXVIII, 1167
eastern, mountains west of Laguna
district, XXVIII, 1165
eastern, San Pedro del Gallo area in,
XXVIII, 1167
southeastern, and northern Zacate-
cas, Sierras Ramirez and del Chivo
of, XXVIII, 1157
Durango slide, XXVII, 1251, 1258
Duration of production in Gulf Coast
fields, XIV, 1397
Durham, James H., and Montgomery,
A. J., XXVIII, 873
Durham, J. Wyatt, MSC, 77, XXVII,
2, 1380, XXVIII, 953; XXIX, 958
Oeloe Aer fault zone, Sumatra,
XXIV, 359
Duricrust, GC, 570, XVII, 508; XXVI,
46
in Australia, XXI, 1126
Durst, David, XIII, 229
Durward, Robert H., XXIV, 2126
Fisk, or Shields, pool, Coleman
County, Texas, XIII, 1214
Durward, Robert H., Melvin J. Col-
lins, discoverer of McCamey field,
discussion, XII, 99
Durward, Robert H., and Willson,
Kenneth, memorial of Melvin J.
Collins, XX, 841
Dusenbury, A. N., and Cushman, J. A.,
MSC, 214, 318; XXIV, 1931
Dust falls, RMS, 396, 496-502
Duston, Arthur W., memorial of, XXII,
511
Dutch Creek, XXV, 691
Dutch Creek formation, XXVIII, 1521
Dutch Creek sandstone, XXV, 681
Dutch East Indies, V, 417
Dutch geologists favorably inclined to
Wegener's hypothesis, CD, 57
Dutch Leeward Islands, Upper Cre-
taceous Diabas-schist-tuff forma-
tion of, XXIV, 1569
Dutcher oil, heavy, in Bristow district,
Oklahoma, XV, 211
Dutcher sand, PROB, 323, 775, 863;
V, 290, 404, 486; VI, 395; XIX, 515;
XXV, 1677
Depew area, Oklahoma, STR II, 368,
373, 375, 376
East Tuskegee pool, STRAT, 445
Dutchess County, New York, RMS,
471
Dutkevitch, G. A., XXII, 772; XXIV,
297
Dutton, Clarence Edward, XII, 132,
1163; XVI, 2, 15, 16; XIX, 1500;
XXIII, 139
Dutton Creek field, Wyoming (well
224), SBP, 194-243, 406
Duval and Webb counties, Texas,
Lopez oil field, STRAT, 680
O'Hern field, STRAT, 722
Duval County, Texas, arching through,
XXI, 1087
Driscoll pool, GC, 620
Government Wells oil field, GC, 631
Hoffman field, XXIV, 2126
Muralla field, XXIII, 1237
Sejita structure, XXIV, 482
(well 403), SBP, 335-349, 410;
STRAT, 725
Duval Oil Corporation, GC, 633; XIX,
1133
Dwarf orange-peel bucket, RMS, 661
Dwyer, J. L., XIII, 1116
Dy, XXV, 839
D'Yarmett, E. C., XIX, 1219, 1222

- Dyer, W. S., XI, 248, 249, XXVIII, 533
geology and economic deposits of
Moose River basin, review, XIV, 246
- Dyer, W. S., and Williams, M. Y., GAS, 27, 260
STRAT, 273; XV, 1137, 1182, 1187, 1198, 1201, 1212, 1229, 1238, 1244, 1261
- Dyer Creek area, XXVI, 1144
- Dyer dolomite, XXVI, 1377
- Dyersdale field, XXV, 1009
- Dyes, reducible, for determining reduction of sediments, RMS, 419
- Dykes, MEX, opp. 142, 143, 148-150, 206, 227, Fig. 12 (in pocket)
- Dykstra sand in Centralia-Sandoval area, Illinois, STR II, 121, 128
- Dynamic adjustment, XXV, 2012
- Dynamic declimeter, RMS, 109
- Dynamic equilibrium in ocean, causes of, RMS, 54, 56, 91, 125
- Dynamic geology of Luling field, Texas, STR I, 274
- Dynamic height differences, RMS, 115
- Dynamic isobaths, RMS, 117
- Dynamic metamorphism, PROB, 25, 80
- Dynamic meters, RMS, 109-113
- Dynamic petroleum prospecting, return to, XXIII, 1743
- Dynamic profiles in Pacific Ocean, RMS, 114
- Dynamic thrust, PROB, 73
- Dynamic topography, RMS, 115
off coast of Southern California, RMS, 116
- Dynamics of oil-field structure in southern California, VIII, 576
of running water, RMS, 6
- Dyson, J. F., Survey, Texas (well 314), SBP, 292-335, 408
- Dyson sand, XXIII, 853
- Dzungor basin, XXVIII, 1427
- E
- Eads, Colorado (well 241), SBP, 194-243, 407
- Eads arch, PROB, 684
- Eagle, Shannon, and Emery sandstones of middle sandstone tongue of Upper Cretaceous in Rocky Mountain area, map showing, XXI, 907
- Eagle Basin, XXVI, 1377
- Eagle Ford, MEX, 17, 21, 44, 48, 53
- Eagle Ford age of Agua Nueva beds, PROB, 382
- Eagle Ford-Austin contact at Long Lake dome, GAS, 672
- Eagle Ford clay, SD, 215, 249, 252, 256-258
Bellevue field, Louisiana, STR II, 239
Texas, XI, 5
- Eagle Ford formation, PROB, 30, 302, 391
Arkansas, VI, 350, 363, 477
Buffalo area, GAS, 668
East Texas, XII, 544
Louisiana, II, 62; IV, 122; V, 298; VI, 181
Luling field, Texas, STR I, 267, 273
Texas, III, 97, 302; V, 8, 381, 420; VI, 475; X, 41, 49, 50, 770
- Eagle Ford group, ammonites in, XXIV, 1186
- Lisbon field, XXIII, 293
- Eagle Ford shale, PROB, 296, 330, 332, 404; XXII, 1630;
(Ker) (Cretaceous), SBP, 294, 296-
- (Eagle)
335, 414; XXIX, 185
Lytton Springs field, XI, 851
Mexia fault zone, Texas, STR I, 331
possible source of oil for Woodbine basin, PROB, 295
- Eagle Ford shale and Austin chalk, areal variation in volatility of, in East Texas Basin, SBP, 310
areal variation of nitrogen-reduction ratio of, in East Texas Basin, SBP, 320
- Eagle Ford shale and Woodbine sand, areal variation of organic content of, in East Texas Basin, SBP, 302
- Eagle Ford-Woodbine beds, STRAT, 618
- Eagle Ford-Woodbine group, East Texas, STRAT, 611; XVII, 767
- Eagle gypsum basin, XXVI, 1391
- Eagle Mills formation, XXII, 724; XXVII, 1230, 1411, 1422, 1431
Alabama, section, XXVII, 1433
Arkansas, redbeds facies of, XXVII, 1430, 1439
contact with Smackover formation, XXVII, 1435
probable source of salt in salt domes of Mississippi, XXVIII, 33
red shale of, XXII, 963
salt facies of, widespread in Gulf Coast region, XXVII, 1431
south Arkansas, XXII, 962
- Eagle Mills redbeds and salt, XXVII, 1423
- Eagle Mills-Smackover-Buckner sequence, Alabama, columnar section, XXVII, 1424
Texas, sections, XXVII, 1432
- Eagle Pass coal, V, 27
- Eagle Pass formation, V, 7
- Eagle sand, FOP, 77; XXV, 1509
- Eagle sandstone, GAS, 248, 250, 263, 271, 285; PROB, 171, 172, 698, 716; STRAT, 277; XXI, 1267; XXII, 1634
- Border-Red Coulee field, STRAT, 277, 318
- Cut Bank field, STRAT, 335
- Kevin-Sunburst field, Montana, STR II, 257
- Montana, GAS, 251, 1057; IV, 315, V, 258; VI, 146
- Rocky Mountain area, XXI, 908
- waters from, XXIV, 1309, 1312
- Eagle Valley syncline, XXIV, 965
- Eagle's Nest section of Osage, XXIII, 333
- Eakin, H. M., RMS, 632; VIII, 198; XXII, 1350
- Eardley, Armand J., XXI, 116; XXII, 133; XXV, 719, 733; XXVIII, 196, 1377
- aerial photographs, review, XXVI, 1849
- aerial photographs, their use and interpretation, review, XXVII, 95
- graphic treatment of folds in three dimensions, XXII, 483
- review, XXVII, 1157
- sediments of Great Salt Lake, Utah, XXII, 1305
- sediments of Great Salt Lake, Utah—comments, XXIII, 1089
- Earl, Glenn M., XXIII, 689
- Earland, A., RMS, 521
- Earland, A., and Heron-Allen, E., MSC, 12
- Earle, K. W., XXIV, 1550, 1596, 1601
- Earlsboro field, Oklahoma (well 290), (Earlsboro)
SBP, 255-285, 408; STR II, 316-318, 324
- Earlsboro pool, PROB, 411
- Earlsboro sand, XXIII, 824, 831
- Earlsboro sandstone, productive in Keokuk pool, XXIII, 226
- Early basic breccia unconformable on underlying rocks, XXV, 2041
- Earp pool, PROB, 766
- Earseman, William A., geological investigation of occurrence of natural gas, XXII, 1098
- Earth, a highly viscous fluid, XXIX, 1645
an elastically rigid solid, XXIX, 1645
behavior of as a whole in geologic time similar to that of viscous fluids, XXIX, 1651
behavior of, in response to stresses of long duration, XXIX, 1641
conditions in interior of, XXIII, 1321
down to,—an introduction to geology, review, XX, 1131
inhomogeneities in, XIV, 556
interior constitution of, CD, 14
internal constitution of, XXV, 172
need of large-scale geologic thinking to harmonize hard-rock theory and soup theory, XXIX, 1653
periodic shift of axis of rotation of, XXIX, 1632
radio, and the stars, review, XVIII, 1209
regional geology of, XXII, 929
rigid rather than fluid body, XXIX, 1632
rigidity of, XXIX, 1641
solid throughout, to stresses of short duration, according to Wegener, CD, 178, 179
strength of, XXIX, 1630
strength and structure of, XXV, 902, 1181
viscosity of, XXIX, 1641
zones of, CD, 16
- Earth and its rhythms, review, XII, 217
- Earth cracks in Mississippi, XVI, 214
- Earth development, sequence of, CD, 142
- Earth flexures, review, XIII, 694
- Earth history in the light of pulsation and Polar control theories. Rhythm of the ages, XXV, 1421
review, XVI, 1045
- Earth movements shown by study of seismograms, XXIX, 1631
- Earth oil, review, XVII, 567
- Earth resistivities at depths less than one hundred feet, XVIII, 39
- Earth science history, a chapter in. The Geological Society of America, 1888-1930, review, XVII, 97
- Earth temperature, measurements, reviews of papers by H. Arctowski, XI, 765
- Earth temperatures of north-central Texas, XVI, 413
- Earth temperatures and pressures, PROB, 306
- Earth tides, effect on oil production, MEX, 233
- Earthquake, Los Angeles basin, of October 21, 1941, and its effect on certain producing wells in Dominguez field, Los Angeles County, California, XXVI, 388
of March 10, 1933, Long Beach, California, XVII, 732
- Earthquake-formed lakes, XX, 1366

- Earthquakes, effects of, on Friant Dam, XXVI, 1823
occurrence of, opposed to theory of drifting continents, CD, 183
- Earth's crust, contraction of, and resulting adjustment, XXIII, 1323
temperature loss in, CD, 9
- Earth's rotation, deflective force of, RMS, 107, 110, 122
effect on currents, RMS, 106
effect on tides, RMS, 131
- Eaithworms, their wide distribution regarded by Wegener as evidence of former Atlantic land connections, CD, 137
- East and West Mule Creek field, XXVII, 465
- East Abrams fault, XXVI, 1447
- East Africa, V, 671
Bailey Willis on rift valleys of, discussion, XXI, 113
Pleistocene in, XXI, 114
- East Alice field, XXIII, 867
- East Allen Lake structure, XXII, 686
- East Baton Rouge Parish, Louisiana, stratigraphic reservoirs in University oil field, STRAT, 208
- East Bay, Louisiana, RMS, 163
- East Bernard, XXV, 1008
- East Bernard field, Wharton County, Texas, geochemical log, discovery well, XXIV, 1418
- East Blue Springs field, XXV, 1406
- East Butte, Sweetgrass Arch, Montana, XXIX, 1266
an Ellis (Upper Jurassic) section at, ALTA, 29; XV, 1157
- East Carroll Parish, Louisiana, production in, XII, 765
- East Cat Canyon field, XXVII, 1349
- East Coalinga anticline, XXIV, 1941
- East Coalinga Eocene field, XXIII, 935; XXIV, 1943
- East Coalinga Eocene pool, structure section through, showing north-westward pinch-out of Gatchell sand, XXIV, 1946
- East coast of United States, summary of sedimentary conditions on continental shelf off, RMS, 230
- East Coast Oil Company, GAS, 1004, 1010
- East Coast well, discovery of Pánuco field, MEX, 4
in eastern Tamboyoche, MEX, 180, 181
- East Coyote deeper zone, XXV, 1163
- East Coyote field, California, GAS, 206; PROB, 752, 982
(well 191), SBP, 87-153, 406
- East Coyote Hills (Anaheim Hualde) field, PROB, 224
- East Dicha pool, MEX, 164, 192
- East End Tioga storage pool, XXVIII, 1577
graph showing coning effect on rock pressure of input and output operations, XXVIII, 1591
relationship between gas in storage, well head pressure, and deliverabilities from, XXVIII, 1591
rock pressure versus gas in place, XXVIII, 1579
showing structure on Oriskany sand and limits of production, XXVIII, 1578
- East field, XXVII, 744
- East Foot Creek anticline, XXVIII, 1208
- East Hackberry salt dome, Cameron (East)
Parish, Louisiana, GAS, 717; PROB, 115, 659, 661; XV, 247
- East Haynesville area, Claiborne Parish, XXVIII, 558
- East Indian and Californian subprovinces, comparison of Tertiary history of, XXI, 557
- East Indian Archipelago, age of abyssal deposits of, XXV, 320
gravity anomalies of, XXI, 114
sediments of, RMS, 348
sediments of, references on, RMS, 354
- East Indian species, MEX, 133
- East Indian Tertiary, XXI, 123
letter classification of, XXII, 29
- East Indian zones, continuation of, outside region of archipelago, XXII, 65
- East Indies, CAL, 70, 71; RMS, 101
absence of temperature zones in sediments of, RMS, 351
Bebula transgression in, XXI, 557
Cenozoic in, XXII, 28
circulation of water in, RMS, 349
Cretaceous in, XXII, 19
deep-sea relief in, XXII, 56
folding towards end of Pliocene in, XXII, 50
fossils in, XXII, 19
geological history of, XXII, 1
geological sections in, XXII, 30
geosynclines of, most extensive in late Oligocene and lower Miocene, XXVIII, 1440
Jurassic in, XXII, 13
Mesozoic in, XXII, 8, 22
Miocene intensive folding in, XXII, 35
Miocene transgression in, XXI, 557; XXII, 35
Neogene in, XXII, 35
Paleogene deposits in, XXII, 31
Paleogene movements in, XXII, 34
paleogeographic maps of, XXII, 29, 32, 33, 36, 37, 41, 44, 46-49, 51, 54, 56, 59, 62, 64, 66
Paleozoic in, XXII, 5
Pleistocene unconformable on folded Pliocene in, XXI, 555
Pliocene in, XXII, 45
Pliocene folding in, XXI, 555
Pliocene geosynclines in, XXII, 45
Plio-Pleistocene folding in, XXII, 51
principal sedimentary basins in, XXVIII, 1440
production of crude oil and casing-head gasoline in, XXVIII, 1441
reserves in, XXVIII, 1502
stratigraphic traps in, XXVIII, 1444
Tertiary in, XXII, 28, 29
Tertiary oil-containing geosynclines in, XXII, 39
Tertiary oil fields of, XXI, 555
Tertiary oil possibilities of, XXVIII, 1440
Triassic in, XXII, 8
- East Indies and California, correlation of structural evolution of, XXI, 559
- East Indies and Coast Ranges, parallels between pre-Tertiary stratigraphy of, XXI, 558
- East Indies and Southern California, parallels in structural evolution of, XXI, 553
- East Indies areas differing in Mesozoic history, XXII, 24
- East Lance Creek, XXII, 686
- East Lea County high, New Mexico and Texas, GAS, 424-430
- East Long Lake field, gravity of oil in, XXVI, 1050
- East Lusk pool, XXVII, 768
- East Mahoney field, XXV, 1150
- East Moss Lake field, XXIX, 794
- East Mount Poso area, XXVI, 1147
- East Mountain shale, XXIV, 88
- East Mule Creek dome, XXVII, 436
- East Norwich field, Michigan, XXVII, 833; XXIX, 698
- East Ohio Gas Company, data on storage pools operated by, XXVIII, 1564
storage operations, XXVIII, 1573
- East Otoe pool, production at, XXVIII, 780
- East Pauls Valley pool, XXIX, 716
- East Plymouth field, XXIII, 868
- East pool in Kevin-Sunburst pool, Montana, STR II, 263
- East Premier field, California, XXIX, 650
- East Premont field, Jim Wells County, Texas, XXII, 755; XXVI, 1004
- East Princeton field, GAS, 822
- East Prussia, Samland coast, RMS, 298
- East Rock River area, Cloverly waters in, XXIV, 1261
- East Schuler oil field, XXVI, 1256
- East Side fields in California, PROB, 194, 743
- East Side Oil and Gas Company, GAS, 895
- East Side oil field, SC, 53; XX, 1599
change in facies of Upper Miocene and Pliocene formations at, SC, 63; XX, 1609
- East Strait, CAL, 165
- East Strand field, XXVII, 869; XXVIII, 743
- East Tecumseh pool, XXVI, 1067
gravity of oil in, XXVI, 1067
- East Tennessee Valley area, PROB, 515
- East Texas, Bacon limestone, XXIX, 839
correlation of Pecan Gap, Wolfe City, and Annona formations in, XXVIII, 522
counties containing oil and gas fields, XXV, 1082
developments in 1938, XXIII, 889
developments in 1939, XXIV, 1062
developments in 1940, XXV, 1081
developments in 1941, XXVI, 1050
developments in 1942, XXVII, 782
developments in 1943, XXVIII, 841
developments in 1944, XXIX, 766
discoveries and extensions in 1944, XXIX, 768
exploratory tests in 1944, XXIX, 772
fault-zone waters in, STR I, 373, 374
important exploratory tests in 1941, XXVI, 1055
important exploratory tests in 1942, XXVII, 788
isosalinity contours of Woodbine sand waters, XXVIII, 1636
Jurassic in, XXIX, 775
Jurassic exploration in 1944, XXIX, 769
Louisiana, and Arkansas, Cretaceous in, XXVII, 1231
Louisiana, and Arkansas, Jurassic in, XXVII, 1231
Lower Claiborne of, with special reference to Mount Sylvan dome and salt movements, XIII, 1347
Lower Cretaceous in, XXIX, 774

(East)

map showing major structural features of, STR I, 306
oil and gas fields of, 1939, XXIV, 1063
oil and gas fields of, 1940, XXV, 1082
oil and gas fields of, 1941, XXVI, 1051
oil and gas fields of 1942, XXVII, 783
oil and gas fields of, 1943, XXVIII, 842
oil and gas fields of, 1944, map, XXIX, 767
oil migration in faults in, STR I, 383, 384
parallelism of isosalinity lines and structural contours for Woodbine of, GC, 274, XIX, 320
producing formations in, XXIX, 768
productive counties in, XXIX, 768
résumé of development in, during 1937, XXII, 728, 1111
salt diffusion in Woodbine sand waters, XXVIII, 1635
salt domes in, XII, 527, 677
stratigraphic column in, PROB, 421
Upper Cretaceous in, XXVIII, 522; XXIX, 774
wells drilled in 1941 and 1942, XXVII, 782
East Texas area, positions of oil and gas fields in, XX, 976
East Texas basin, PROB, 302, 333, 579; XXI, 1063; XXVIII, 882
areal variation of nitrogen-reduction ratio of Austin chalk and Eagle Ford shale in, SBP, 320
areal variation of organic content of Eagle Ford shale and Woodbine sand in, SBP, 302
areal variation of organic content of Taylor marl and Austin chalk in, SBP, 300
areal variation of volatility of Austin chalk and Eagle Ford shale in, SBP, 310
Jurassic deposits on west side of, XXVII, 1230
location of samples studied in, SBP, 293
logs and oil zones of wells in, SBP, 296
probability of Permian sediments in, XXVII, 1229
stratigraphic units sampled in, SBP, 294
East Texas district, development and production, XX, 975
developments in 1939, XXIV, 1031
East Texas embayment, XXI, 1433
salt domes in, GC, 109; XX, 726
East Texas field, PROB, 98, 140, 276, 296, 302, 332, 403, 571, 578, 780; XV, 843; XXII, 731; XXIV, 1065; XXV, 1085, 1698; XXVI, 1053; XXIX, 771
a regional pinch-out trap, XXIX, 1566
additions in 1936, XXI, 1067
estimated production, number of wells, and production per well, by years, 1936-1942, XXII, 641
in Gregg, Rusk, Upshur, Smith, and Cherokee counties, XXIII, 893
on Sabine uplift, XXVIII, 303
producing wells in 1941 and 1942, XXVII, 786
production in 1940, XXV, 1085
proration, a valuable contribution to

(East)

welfare of oil-producing industry in, XXIII, 1317
unconformity in, XXI, 1084
(wells 306-358), SBP, 292-335, 408
East Texas fields, gravity of oil at, XXIII, 891-894
East Texas Geological Society, developments in East Texas in 1944, XXIX, 766
East Texas geosyncline, STR I, 305; PROB, 330, 415; GAS, 663; GC, 1047; XIII, 1366; XVII, 764
East Texas oil and gas fields, XXII, 729
East Texas oil and gas fields and important exploratory tests drilled in 1938, index map of, XXIII, 890
East Texas oil field, XVII, 757
accumulation of oil, STRAT, 618
analyses of water, STRAT, 639
Cherokee, Smith, Gregg, and Upshur counties, Texas, STRAT, 600
cost of drilling, STRAT, 629
elasticity of reservoir rocks and fluids with special reference to, XXVIII, 1032
interpretation of bottom-hole pressures in, XVI, 907
East Texas pool, PROB, 578
an example of accumulation from a porosity edge pinching out up-dip, XX, 528
East Texas Refining Company, XXIV, 1027
East Texas region, references on stratigraphy and occurrence of oil and gas in, SBP, 296
East Texas salinity gradients in water-bearing formations, GC, 273; XIX, 321
East Texas samples, assay number, SBP, 310, 315
carbon content, SBP, 27-31, 303-305
carbon-nitrogen ratio, SBP, 34, 35, 324-326
color, SBP, 75, 311-313
key to productivity of, SBP, 327
location of samples, SBP, 292-293
nitrogen content, SBP, 308-311
nitrogen-reduction ratio, SBP, 318-321
oil zones, SBP, 294-297
organic content, SBP, 297-303
oxidation factor, SBP, 321-323
reduction number, SBP, 303, 306, 307
reflectivity, SBP, 75, 311-313
relation of oil zones to properties of sediments, SBP, 326-335
relative volatility, SBP, 316, 317, 321
stratigraphy, SBP, 292-297
summary of properties of, SBP, 326
variation of nitrogen-reduction ratio of, with respect to distance from oil zones, SBP, 330
volatility, SBP, 310-315
(wells 305-398), SBP, 292-335
East Texas syncline, XXI, 1084
East Tintic district, nitrogen at, GAS, 1061
East Tuskegee pool, Creek County, Oklahoma, STRAT, 436
accumulation of oil, STRAT, 451
analyses of oil, STRAT, 452-455
East Tyler dome, Texas, XII, 537; XIII, 611
East Utopia field, gravity of oil at, XXVIII, 792
East Warm Springs dome, Embarras water in, XXIV, 1289
East Watchorn pool, XXVII, 920

(East)

gravity of oil at, XXVII, 798
production at, XXVII, 798
East White Lake, XXV, 1012
East White Point and White Point area, physiography of, XXV, 1973
East White Point and White Point fields, isopach maps of, XXV, 1980, 1982, 1984, 1986, 1988, 1990, 1992
oil and gas productive areas of, XXV, 1970
East White Point field, San Patricio and Nueces counties, Texas, XXII, 755
compaction of shale of, XXV, 1997
cross section showing sand and shale strata, XXV, 1980
cross section using electrical logs indicating variations in intervals between correlative horizons of Oligocene strata, XXV, 1976, 1978
geologic correlation chart of Oligocene strata of, XXV, 2004
geological correlations in, XXV, 2002
isometric perspective block diagrams of, XXV, 1995, 1996, 1998-2003
map, XXV, 1976
map showing area of isometric perspective block diagrams, XXV, 1994
oil production at, XXV, 1973
Oligocene stratigraphic column, XXV, 1975
* Oligocene stratigraphy of, XXV, 1967, 2007
stratigraphic column, XXV, 1974
East Winfield pool, PROB, 775
Eastborough north pool, Sedgwick County, Kansas, XXIII, 799
Eastborough oil field, PROB, 293, 773
East-central Texas, Upper Cretaceous in, XXII, 1631
East-central United States, Devonian correlation in, XXII, 1522
Mississippian in, XXII, 1526
Mississippian correlation in, XXII, 1521
Ordovician in, XXII, 1534, 1547
Ordovician correlation in, XXII, 1524
Pennsylvanian in, XXII, 1525
Pennsylvanian correlation in, XXII, 1520
periods of uplift in, XXII, 1546
Pleistocene in, XXII, 1519
Silurian in, XXII, 1531, 1547
Silurian correlation in, XXII, 1523
stratigraphic correlation in, XXII, 1520
stratigraphy and structural history of, XXII, 1519
Eastern and central United States, stratigraphy of, XXVII, 1016
Eastern Australian Kamilaroi system, correlation of Western Australian sequence with that of, XXV, 397
Eastern Basin area, of Montana, PROB, 700, 704, 717
Eastern Cacalilao anticline, MEX, 176, 184
Eastern Cacalilao pool, MEX, 164, 182-185
Eastern Canada, possible future oil provinces of, FOP, 107; XXV, 1539, 2194
Eastern Coal basin, PROB, 515, 517
Eastern coal field, Kentucky, STR I, 73
beds producing oil or gas in, XI, 478
relation of structure to production in five oil and gas fields of, XI, 477

- Eastern fields, Montana group waters in, XXVI, 1332
- Eastern gas field, GAS, 989
- Eastern Gulf region, Upper Cretaceous in, XXII, 1631
- Eastern Hemisphere, reserves of Persian Gulf Basin and Caspian Basin of U.S.S.R., XXVIII, 1502
- Eastern Highland Rim, PROB, 515
- Eastern homoclinal belt in Canada, FOP, 18; XXV, 1450
- Eastern Interior, geologic age of producing formations in, XXV, 1116
- Eastern Interior basin, XXVIII, 70
- area containing Coals IV and VI, Indiana, one of richest coal-bearing regions in, XXIII, 1387
- bibliography on Mississippian of, XXIV, 855
- coals of, XXIII, 1378
- columnar sections of Coal Measures in, XXIII, 1381, 1383, 1384, 1386
- correlation chart of Mississippian formations exposed on borders of, XXIV, 766
- development of Devonian limestone production in, during 1940, XXV, 1116
- developments in 1939 and first quarter of 1940, XXIV, 959
- developments in 1940, XXV, 1114
- developments in 1941, XXVI, 1086
- developments in 1942, XXVII, 814
- developments in 1943, XXVIII, 751
- developments in 1944, XXIX, 685
- economic importance of Mississippian in oil fields of, XXIV, 770
- geologic map of, XXIV, 774, 776, 777, 780-783, 786, 787, 790, 791
- map showing areas covered in study of Mississippian of, XXIV, 772
- map showing new oil pools discovered in 1943, XXVIII, 752
- map showing new oil pools discovered in 1944, XXIX, 686
- map showing principal tectonic features, oil and gas fields, and subsurface structure on base of New Albany shale, XXIV, 960
- Mississippian border of, XXIV, 765, 1133
- Mississippian system most important source of oil in, XXV, 1116
- pools discovered in 1943, XXVIII, 754
- production in 1941, XXVI, 1086
- production in 1943, XXVIII, 751
- publications on geology of, in 1943, XXVIII, 759
- structural depression occupying greater part of Illinois, southwestern Indiana, and western Kentucky, XXIV, 769
- structure of, XXIV, 965
- Eastern Interior basin and Illinois basin, map, XXVII, 815
- Eastern Interior coal basin, PROB, 559; STR I, 27; XXIII, 1374; XXVI, 1093
- Coal Measures in, XXIII, 1374
- map, XXI, 772
- most important coals of, including Harrisburg No. 5 and Springfield No. 5 of Illinois, Kentucky Coal No. 9, and Petersburg Coal V of Indiana, XXIII, 1390
- natural gas in, GAS, 813
- oil and gas fields of, GAS, 814, 826
- origin of oil and gas reservoirs of, in relation to accumulation of oil and (Eastern)
- gas, PROB, 557
- Eastern Interior Coal basin province, XIII, 420
- Eastern Interior coal field, cross section showing relations of principal coal seams and their associated limestones, XXIII, 1388
- Eastern Kansas, gas wells in, XXIV, 1779
- Eastern Kansas basin, XIII, 422
- Eastern Kansas pools, 1942, XXVII, 810
- Eastern Kentucky, map showing oil and gas regions, XXVI, 1130
- Eastern Kentucky geosyncline, XXIII, 1849
- Eastern Midland basin, Texas, cross section of wells in, XXIV, 56
- stratigraphy, XXIV, 52
- wells in, XXIV, 53
- Eastern Pacific, MSC, 168
- Eastern platform, FOP, 98; XXII, 699; XXV, 77, 1047, 1530; XXVIII, 807
- of Permian basin, XXV, 1053
- Eastern Province area, Turkey, XIV, 696
- Eastern Rift zone of East Africa, XXI, 115
- Eastern Shelf area, formations of, PTNM, 706; XXVI, 706
- in central Texas, PTNM, 679; XXVI, 679
- Eastern Sierra Madre uplift, XX, 1304
- Eastern United States, Ordovician in, FOP, 134; XXV, 1566
- possible future oil provinces in, FOP, 131; XXV, 1563
- references on, FOP, 139; XXV, 1571
- Eastern Venezuelan basin, XXVIII, 25
- Eastland and Stephens counties, Texas, geological structure of, IV, 159
- Eastland County, Texas, XXIV, 89
- Eastland field, III, 138
- Eastland Lake formation, XXIV, 86
- Eastman pool, PROB, 775
- Eastmont Oil Company, XXII, 702
- Easton, H. D., Jr., Stamey, R. A., and Montgomery, J. C., Greta oil field, Refugio County, Texas, GC, 648; XIX, 544
- Easton, N. Wing, XXII, 3
- Eaton, XV, 382
- Eaton and Harrison, XI, 88
- Eaton, Amos, XXII, 542; XXV, 686
- Eaton, Arthur, memorial by Clarence B. Osborne, VII, 461
- Eaton, J. Edmund, CAL, viii, 167, 229, 231, 241, 256; PROB, 748; SC, ix, 77, 80, 126, 129, 130; XI, 424; XII, 559; XIII, 640; XV, 474; XVI, 417; XVII, 732; XVIII, 435, 449; XX, 870, 1535, 1626, 1672, 1675, 1676; XXIII, 41, 251; XXV, 194; XXVI, 397; XXVII, 1261
- a contribution to geology of Los Angeles basin, X, 753
- by-passing and discontinuous deposition of sedimentary materials, XIII, 713
- Civil Service resolution, discussion, XXIX, 1352
- clastic facies and faunas of Monterey formation, California, XVII, 1009
- danger in reporting fossils far beyond their indicated range and environment, XXIII, 250
- decline of Great Basin, southwestern United States, XVI, 1
- divisions and duration of Pleistocene in southern California, XII, 111
- (Eaton)
- ethics, XI, 647
- Long Beach, California, earthquake of March 10, 1933, XVII, 732
- notes on principle and theory of isostasy, XII, 1163
- photography of megafossils, XXIX, 1494
- Pleistocene of southern California, discussion, XII, 559
- publication of original recommendations, XIV, 794
- Ridge Basin, California, XXIII, 517, 1098
- standards in correlation, XV, 367
- stratigraphic nomenclature, discussion, XXV, 2208
- time-equivalent *versus* lithologic extension of formations, discussion, XVI, 1039
- Eaton, J. Edmund, Cushman, J. A., and Laiming, Boris, MSC, Fig. 14 (in pocket)
- Eaton, J. Edmund, Grant, U. S., and Allen, H. B., Miocene of Caliente Range and environs, California, XXV, 193
- Eaton, T., Survey, Texas (well 380), SBP, 292-335, 409
- Ebano, MEX, 1, 63, 66, 78, 80, 201
- Ebano anticline, MEX, 195
- Ebano oil field in Tampico Embayment, GAS, 99, 1005; MEX, 3, 34, 75, 151, 155, 162, 164, 172, 193, 227, 228, Fig. 22 (in pocket); XX, 1303
- in Tampico Embayment, Méndez in, MEX, 75
- in Tampico Embayment, temperatures of oil at, MEX, 227
- Ebano oil pool, V, 505
- Ebb tide, RMS, 129, 195, 344, 347
- Ebmeyer, G. E., IX, 1069
- Eby, J. Brian, GAS, 685; PROB, 73, 89; XI, 291; XII, 806, 810, 815; XIX, 873; XX, 1487; XXVII, 949, 1200, 1216; XXVIII, 1356
- geophysical history of South Houston salt dome and oil field, Harris County, Texas, XXIX, 210
- mid-year meeting, Mexico City, October 16-20, 1935, XIX, 1835
- possibilities of oil and gas in southwest Virginia, as inferred from isocarbs, VII, 421
- recent developments in Texas and Louisiana Gulf Coast, XVII, 558
- San Antonio Section annual meeting, 1935, XIX, 1835
- Eby, J. Brian, and Clark, Robert P., XIX, 1069
- relation of geophysics to salt-dome structures, GC, 170; XIX, 356; discussion, XIX, 1069
- Eby, J. Brian, and Halbouty, Michel T., Spindletop oil field, Jefferson County, Texas, XXI, 475
- Ecce, middle, of South Africa, correlation of lower Coal Measures of New South Wales with, XXV, 406
- Echinodermata, XXI, 808; XXV, 639
- of Vicksburg formation, GC, 404; XVII, 635
- Echinoderms, MEX, 29; RMS, 235, 288, 289; XXVI, 1189
- faecal pellets of, RMS, 519
- Echinoid, foraminiferal, molluscan correlations, MSC, 166
- Echinoid and mollusk zone, MSC, Fig. 14 (in pocket)

- Echinoid area, Bitter Creek, XXV, 245
Echinoid development, greatest, near Bitter Creek, in Monterey time, XXV, 240
Echinoid faunas, MSC, 136
Echinoid zone, MSC, 87
Echinoidea of Temblor and Vaqueros in Caliente Range, XXV, 220
Echinoids, CAL, 287; MSC, 47, 56, 87, 162; VII, 185; XXII, 1635, XXV, 640, 1794; XXVIII, 1100
from Mesón formation, MEX, 132, 134, 135
from Tuxpan formation, MEX, 138, 139
Modelo, MSC, 71
of Cerro beds, XXV, opp. 241
Echinoids and mollusks, MSC, 167
littoral assemblages of, MSC, 134
Eckel, E. B., Yates, R. G., and Granger, A. E., XXVIII, 500
Eckel, E. C., XX, 805, 1071
Eckert, F. E., XXIV, 1474
Eckes, Charles R., XXV, 1222
description of cuttings from Duffer well, Ranger field, III, 39
Eckhardt, E. A., XXIV, 1353; XXVII, 63
geophysics, XXIV, 1377
partnership between geology and geophysics in prospecting for oil, XXIV, 1204
Eckis, Rollin, MSC, 61; XXIV, 666; XXVI, 161
Eckis, Rollin, Lohman, K. E., and Klempell, R. M., MSC, 61
Eclipse plate for petrographic microscope, XXII, 1279
Ecologic adaptations, MSC, 84
Ecologic analysis of marine environment represented by crinoidal phase, Grand Tower limestone, Ozora, Missouri, XXVI, 1745
Ecologic aspects in Temblor, XXV, 230
Ecologic change in fauna of upper Vaqueros, XXV, 223
Ecologic chart of Reliz Canyon Foraminifera, MSC, Fig. 5 (in pocket)
Ecologic differences in fauna of Vaqueros and Temblor of Cuyama valley and Caliente Range, XXV, 222
Ecologic factors indicated for fossil forms by living cephalopods, XXIV, 1176
inherent in surficial environments, XXVI, 1742
Ecologic features of megafaunas of Caliente Range, XXV, 251
Ecologic interpretations with respect to siliceous shale deposition, MSC, 18
Ecologic relations of foraminifera, MSC, 13; RMS, 287
Ecologic valence concept, XXVI, 1746
Ecologic value of microfossils, XXIV, 1760
Ecologists, RMS, 66
Ecology, marine, as related to paleontology, XXVII, 656
of California foraminifera, XXV, 253
of Reliz Canyon foraminifera, MSC, 11
Ecology and geologic rôle of mangroves in Florida, XXVI, 1427
Economic and geologic notes on Venezuelan oil developments, XIII, 1187
Economic and natural waste attendant upon unrestricted competitive de-
(Economic)
velopment of oil and gas resources reducing of, XXII, 1086
Economic and physical factors in spacing of wells, IX, 215
Economic and statistical aspects of petroleum industry, XXIV, 363
Economic application, geomorphology of Gulf Coast salt structures and its, XX, 1413
of paleontology and mineralogy, XXVII, 942
of results, SBP, 392-394
Economic aspects of drilling, XXII, 633
of geology, review, VI, 157
of well spacing, XXVI, 106
Economic collaboration, XXVI, 1208
Economic development and geologic formations of oil and gas fields of California, XXVII, 1393
Economic geology, PROB, 826
bibliography, annotated (for 1928), review, XIII, 1487
introductory, review, XIV, 1357
of mineral deposits, XXI, 529
Economic importance of close spacing, XXVIII, 239
of Mississippian in oil fields of Eastern Interior basin, XXIV, 770
Economic limit of pressure, GAS, 1020
Economic market zones, XIII, 1202
Economic minerals in Cretaceous of California, significance of, XXVII, 257
Economic Paleontologists and Mineralogists, Society of, MSC, 152; XXVII, 940
Society of, and its journals, XXV, 1230
Society of, fourteenth annual meeting, Chicago, April, 1940, XXIV, 400, 902
Society of, officers of, XXIV, 890
Society of, technical program, March, 1938, XXII, 581
Society of, technical program, March, 1939, XXIII, 721
Economic paleontology and mineralogy—an appraisal, XXVII, 938
Economic possibilities of the dome, SD, 435
Economic problems in connection with storage pools, XXVIII, 1592
Economic resources of La Barge region, XXV, 1742
Economic significance of Madison group, XXVI, 307
Economic structure of American petroleum industry, XXI, 149
Economic use and classification of foraminifera, XXIV, 1498
Economic utilization of clays, RMS, 488
Economics, control of exploration and results in California, XXIV, 1720
Ecphora zone of Choctawhatchee formation, XXV, 263, 264
Ector, Crane, and Winkler counties, Texas, Concho Bluffs of, XIII, 1069
Ector County, Texas, Central Basin platform, XXV, 593
Goldsmith field, XXIII, 1525
map showing oil fields, XXIII, 1526
North Cowden field, XXV, 593
San Andres in, XXV, 1051
south-north cross section from Pecos County through, to Roosevelt County, New Mexico, XXIV, 15
Ecuador, MSC, 110, 178, 179, 180, 193, (Ecuador)
194, 196, 203, 215, 226, 229, 243, 275, 293, 294, 336, 337, 338, 353
eastern, XXIX, 521
Eocene in, XIV, 281
Eocene fauna from, XXVI, 1651
Eocene oil production on Santa Elena peninsula, XXIX, 536
exploration for oil in, XXIX, 539
geological explorations east of Andes in, XI, 1253
Miocene in, XIV, 287
notes on Miocene of, XII, 671
Pliocene in, XIV, 287
Quaternary in, XIV, 288
southern, beekite in Tertiary oil-bearing formations of, XVII, 1388
southwest, geologic formations of, XIV, opp. 264, 276
southwest, geology of, XIV, 263; XXI, 959
Tertiary foraminiferal fauna from Manta, MSC, 177
western, prospects for additional oil fields in, XXIX, 537
Ecuador and Peru, northern, oil fields and coastal lowlands of, XXIX, 535
Eddies, RMS, 8, 542
effect of, upon mechanical analysis, RMS, 542
in near shore areas, RMS, 274
near bottom in sea, RMS, 137
turbulent in sea, RMS, 74, 77
Eddleman area, Eddleman sand productive of gas in, XXVI, 211
Eddleman sand, XXVI, 205
Eddy, G. E., XXI, 319, 329, 625; XXII, 132, 133
Eddy coefficient, RMS, 76, 79, 81
Eddy conductivity, RMS, 7, 75
Eddy County, New Mexico, XXVII, 767
chemical analyses of four brines, XXV, 154
geologic section from Fisher County through Andrews County, Texas, to, XXIV, 37
lateral gradation in Seven Rivers formation in Rocky Arroyo, XXVI, 80
Eddy momentum transfer, RMS, 75
Eddy motion, RMS, 7, 75
Eddy viscosity, RMS, 7, 81
coefficient of, RMS, 7, 19, 78, 79, 80, 107, 119, 121
factors influencing, RMS, 79
Eddyding "slope" currents, RMS, 277
Edeleanu, J., SD, 141
Edelman, C. H., RMS, 211, 322, 344, 457, 462, 472, 628; XXIV, 2069
petrological relations of sediments of southern North Sea, RMS, 343
Eden beds, CAL, 303
Eden formation, Big Sinking field, STRAT, 178
in Ohio, analysis of limestone and shale in, XXIV, 681
Eden shales, PROB, 519; XXV, 817
Edens pool, GAS, 678
Edge, A. B., Broughton, and Laby, T. H., principles and practice of geophysical prospecting, review, XV, 1299
Edge, E. R., XXII, 1406
Edge-water contact, Mexia, Texas, STR I, 382, 383
Edge-water encroachment, absence of, in certain oil fields, ascribed to capillarity, XV, 189

- Edgerly crude oil, analysis of, IX, 502
 Edgerly oil field, Louisiana, PROB, 893, 897, 905; SD, 470, IX, 41, 497
 chlorine content of waters, SD, 780
 Edgewise breccias, RMS, 202
 Edison district, MSC, 32
 Edison oil field, California, GAS, 153; MSC, 188, 198, 201, 205, 216, 240, 246, 293, 321, 322, 328, 343, 346, 347, Fig. 14 (in pocket)
 example of double trap reservoirs, XXIX, 1574
 (well 24), SBP, 130-153, 403
 Edison oil field and vicinity, Kern County, California, STRAT, 1
 accumulation of oil, STRAT, 5
 analyses of oil and water, STRAT, 7-8
 cost of drilling, STRAT, 5
 Edison shale, MSC, 328
 Edison zone in Ventura Avenue field, GAS, 164, 165
 Editorial on thirty-year oil fields, XXII, 1698
 where shall our young graduates in petroleum geology acquire field experience? XXII, 1613
 Editorial introduction. West Texas-New Mexico symposium: Part I, XXIV, 1
 Editorial note, XX, 1516
 Edmond field, XXI, 1012
 Edmonton formation, GAS, 27
 Edmonton sandstone, IV, 250
 Edmore field, Montcalm County, Michigan, XXII, 167, 406
 Edmunds, F. H., and Oakley, K. P., XXIV, 293
 Edna, MSC, 166
 Edna gas field, Jackson County, Texas, XXV, 104
 Caddell formation in, XXV, 112
 cost of a completed well in, XXV, 119
Cyclammina zone in, XXV, 111
 development in, XXV, 118
Discorbis zone in, XXV, 107
 fossils in, XXV, 109
 Frio formation in, XXV, 109
 gravity of oil at, XXV, 107
Heterostegina zone in, XXV, 107
 history of, XXV, 106
 Jackson in, XXV, 112
 map, XXV, 105
 McElroy formation in, XXV, 112
 producing sands in, XXV, 115
 stratigraphy of, XXV, 107, 109
 subsurface map of, on Rogers sand, XXV, 110
 subsurface structure in, XXV, 113
Textularia warreni zone in, XXV, 111
Uvigerina gardnerae-Marginalina co-censis zone in, XXV, 112
 Vicksburg in, XXV, 111
 Whitsett formation in, XXV, 112
 Wright sand productive in, XXV, 115
 Edna gas field area, Jackson County, Texas, reflection survey of, XXV, 108
 Edna producing sands, electrical well-log correlations of, XXV, 114
 Edrisi, RMS, 497
 Edson, Dwight, XXIX, 482
 Edson, Fanny Carter, STRAT, 124; STR II, 332; XIV, 138, 1227, 1298, 1537, 1539, 1540, 1544; XV, 736, 737; XVII, 174, 807, 812; XVIII, 1049; XIX, 1408, 1413; XX, 1115; XXI, 507; XXII, 1538; XXIII, 1837; XXIV, 1662
 (Edson)
 discussion of Pennsylvanian climates, XIV, 1298
 discussion of Rich's theory of oil accumulation in Kansas, XVII, 807
 lower Paleozoic unconformities, discussion, XIV, 947
 Ordovician correlations in Oklahoma, XI, 967
 pre-Mississippian sediments in central Kansas, XIII, 441
 résumé of St. Peter stratigraphy, XIX, 1110
 reviews, XIII, 1490, XVII, 270; XXIII, 107
 Simpson formation, Oklahoma, VII, 558
 Edson, Frank Aaron, diamond drilling for production, VI, 91
 drilling wells with the diamond drill, V, 386, 674
 Edwards, E. A., VIII, 66, 72
 Edwards, Everett C., SC, 125; XII, 760; XIV, 969; XX, 864, 1671; XXIV, 649, 665
 Edison oil field and vicinity, Kern County, California, STRAT, 1
 Kern Front oil field, Kern County, California, STRAT, 9
 Pliocene conglomerates of Los Angeles Basin and their paleogeographic significance, XVIII, 786
 stratigraphic position of the Big Lime of West Texas, XI, 721
 Edwards, Everett C., and Orynski, Leonard, W., GAS, 1055
 Westbrook field, Mitchell County, Texas, STR I, 282; XI, 467
 Edwards, Everett C., and Twenhofel, William Henry, metamorphic rocks of Woodson County, Kansas, V, 64
 Edwards, Haden, Survey, Texas (well 334), SBP, 292-335, 409
 Edwards, J., XI, 75
 Edwards, M. G., GAS, 119; SC, 13; XVIII, 788; XX, 491, 1559; XXI, 584; XXVIII, 504; XXIX, 957
 discoveries in California in 1936, XXI, 977
 memorial of George L. Richards, Jr., XXVIII, 889
 some Eocene localities in Salinas valley district, California, XVII, 81
 Edwards, O. M., VI, 238
 Edwards, New York, natural gas, salt, and gypsum in pre-Cambrian rocks at, XVI, 727
 Edwards and Comanche Peak limestones, sections, XXIX, 1455
 Edwards County to Electra, Texas, log section. Stratigraphic base line, upper Canyon, XXIV, 68-70
 Edwards formation, III, 302, 304; V, 17, 381; VI, 496
 Darst Creek field, XVII, 25
 Luling oil field, Texas, STR I, 256, 259, 267, 270, 274; XI, 841
 of Texas, equivalence of El Abra to, MEX, 36, 38, 40
 Salt Flat field, XIV, 1408
 Edwards limestone, PROB, 60, 328, 329, 354, 355, 418-420, 578, 893; XXIX, 1419, 1454
 Balcones fault zone, XIV, 1177
 Big Lake field, Texas, STR II, 517, 518
 correlation, XXIX, 1457
 (Ke) (Cretaceous), SBP, 295-335, 414; XXIV, 1078; XXV, 1698
 of middle Albian age, XXIX, 1426
 (Edwards)
 productive in Chiesman area, XXIII, 865
 Salt Flat field, XIV, 1403
 Edwards limestone Cretaceous production in south Texas, XXI, 1047
 Edwards plateau, Texas, FOP, 98; PROB, 572; STR II, 503; XI, 826; XXII, 751; XXIII, 864; XXV, 630, 1530; XXVII, 487, 743; XXVIII, 807
 bibliography on pre-Cretaceous of, XXVI, 386
 Fredericksburg-Washita (Edwards-Georgetown) contact in, XVIII, 1698
 references on oil prospects in, FOP, 101; XXV, 1533
 regional structure of Cretaceous on, XVI, 691, 944
 structure section across, FOP, 100; XXV, 1532
 unconformity between Permian and Pennsylvanian in, FOP, 99; XXV, 1531
 Edwards Plateau, western, counties of Texas including, XXVI, 380
 western, Texas, pre-Cretaceous topography of, XXVI, 380
 Edwards Plateau area, XXV, 1692; XXIX, 782
 Edwards plateau region, Texas, map, FOP, 100; XXV, 1532
 Edwards pool, Kansas, XXIII, 806
 Edwardsville fauna, XXIV, 808
 Edwardsville formation, XXIV, 798
 Eel-grass (*Zostera*), RMS, 436
 Eel River, CAL, 14, 233, 309
 Eel River basin in Northern California compared with Southern California basins, XXI, 552
 Eel River Basin samples, areal variation of properties of sediments in, SBP, 108-126
 (well 1), SBP, 98-130
 Eem system, RMS, 332, 333, 343
 Effect of angularity of grain on porosity and permeability of unconsolidated sands, XXII, 1272
 Effective porosity of gas fields in Jackson County, Missouri, XXV, 1405
 Effects of structure upon oil and gas production in Osage, statistical investigation of, III, 407
 of transportation on sedimentary particles, references on, RMS, 45
 some, of capillarity on oil accumulation, I, 140
 Effing, W. L., XX, 492; XXVII, 3
 Efremov, XXXIV, 263
 Egan field, Louisiana, XXIX, 796
 Egloff and Rittman, XXI, 1468
 Egloff, Gustav, earth oil, review, XVII, 567
 Egloff, Gustav, and Morrell, Jacques C., STR II, 39; IV, 59; XII, 740
 Egypt, Mexico, and Persia, reflected buried hills in oil fields of, X, 422
 production during 1938, XXIII, 966
 review, VI, 386
 unconformities in, X, 434, 439
 Egyptian oil fields, X, 433
 Ehlers, PROB, 533
 Ehlers, Allen, XXVII, 1589
 Williston basin wildcat test, Oliver County, North Dakota, XXVII, 1618
 Ehlers, George M., XXII, 133; XXIV, 2151; XXV, 729, 733; XXVI, 1377; XXVII, 572, 593; XXVIII, 196

- Ehlers, George M., and Radabaugh, Robert E., XXII, 398; XXIV, 1961; XXVIII, 178
- Ehrat, X, 417, 418
- process of oil mining, X, 417
- Ehremov, I. A., XXII, 776
- Ehrenberg, C. G., XII, 556, 970; XX, 892; XXV, 1219
- Ehrenburg, D. O., XVI, 1264
- Ehrenburg, D. O., and Watson, R. J., XVI, 1292
- Ehrman, F., SD, 46; IX, 327
- Eichelberger, O. H., SD, 718; IX, 536
- Eichelberger, O. H., and Thompson, S. A., XVII, 1507
- Vinton salt dome, Calcasieu Parish, Louisiana, XII, 385
- Eichenberg, W., RMS, 594
- Eicher, Donald, XXV, 1241
- Eiderstedt Peninsula, RMS, 335
- Eifer, G. K., Jr., XXVIII, 832
- Eight Mile Lake anticline, Frontier water in, XXIV, 1243
- Muddy and Cloverly waters in, XXIV, 1260
- 1870 Hill, MSC, Fig. 14 (in pocket)
- 1870 Hill shale faunule, MSC, Fig. 14 (in pocket)
- Eighth Callender zone, XXI, 979
- Eimer and Amend, X, 934
- Einführung in die Geologie; ein Lehrbuch der inneren Dynamik*, XXI, 276
- Einstein, A., IX, 713, XVII, 1222
- Einstein's theory of relativity, XXVI, 766
- Eirich, Constance, XI, 1055
- Eisenglanz, RMS, 627
- Eitel, RMS, 622
- Ekblaw, George E., GAS, 813; XXIII, 1563, 1564; XXIV, 769
- Ekblaw, Sidney, XXIII, 1519, 1520
- Ekman, F. L., RMS, 648, 650, 651, 652
- Ekman, V. W., RMS, 50, 103, 108, 118, 119, 120, 121, 124, 648, 650, 651, 652
- Ekman coring tube, RMS, 648, 652
- Ekstrom, Gunnar, XXV, 656
- El Abra formation, XIV, 78
- El Abra limestone, MEX, opp. iii, 24, opp. 31, 35, 36, 38-43, 46, 48, 62, 67, 103, 107, 108, 160, 204, 206, 207, 209-211, 213, 215-217, 219, 221-224, 226, 233, Fig. 12 (in pocket); PROB, 378-380, 393-398; XXVIII, 315, 1094, 1096, 1129
- in Southern fields, MEX, 23, 40, 205
- El Abra range, MEX, 58
- El Abra reef limestone in front ranges west of Tampico, XXVIII, 1132
- El Barco, MEX, 28, 141, 164, 201
- El Barco pool, MEX, 183
- El Barco syncline, MEX, 172
- El Burro field, GAS, 1008
- El Cabo, XX, 1282
- El Cantil formation, XXVIII, 7
- fossils of, XXVIII, 8
- largely Aptian and lower Albian, XXVIII, 8
- El Capitan, PTNM, 540, 590; XXI, 842; XXVI, 540, 590
- El Capitan field, PROB, 189
- El Capitan pool, PROB, 190
- El Dorado, Arkansas, maps, notice, V, 427
- El Dorado, Arkansas, oil field, and its relation to north Louisiana structures, VI, 193
- relation of quality of oil to structure at, VII, 350
- El Dorado oil field, Arkansas, V, 90, 111, 427; VI, 54, 180, 187, 193, 350, 355, 358, 473, 477, 479, 554; XXV, 21; XXVI, 1256
- relation of quality of oil to structure at, VII, 350
- reviews, VI, 554, VII, 198
- El Mulato, MEX, 84, 85, 91, 109. (See Mulato)
- El Nacimiento, MEX, 26, 31, 45, Plate I
- El Naranjo Ranch, MEX, 38, Fig. 12 (in pocket)
- El Novillo Cañon, MEX, 28
- El Paso limestone, IV, 104; XXIV, 154
- type section in Franklin Mountains, XXIV, 162
- El Paso Natural Gas Company, GAS, 429, 430
- El Paso Range, CAL, 39, 64, 309
- El Potrero de los Vaqueros, MSC, opp. iii
- El Potrero de San Carlos, MSC, 36
- El Reno group, XXI, 1554; XXIV, 7; XXV, 84, 1682
- of Oklahoma, San Andres group equivalent to, XXV, 83
- El Río Oils, Ltd., XXII, 706
- El Salvador, Honduras, and southern Nicaragua, Metapán beds of, XXVIII, 1114
- El Segundo field, California, XXI, 979
- extension, XXII, 711
- (wells 36-41), SBP, 87-153, 403
- El Segundo Plain, SC, 115; XX, 1661
- El Tigre area of northeastern Sonora, Cretaceous section in, XXVIII, 1187
- El Toro, MSC, 260
- Elasmobranch-bearing coquina, XXV, 132
- Elastic flow, XXVII, 53
- Elastic-wave energy most useful method of probing subsurface, XXVIII, 914
- Elastic-wave surveys in California and elsewhere, results of, XIV, 1557
- Elastic waves in Amherst sandstone, effect of moisture upon velocity of, XIX, 9
- Elasticity of reservoir rocks and fluids with special reference to East Texas oil field, XXVIII, 1032
- relation of uplifts to, XXIX, 1645
- Elastico-viscosity, XXIX, 1645
- Elbe River, RMS, 195, 200, 201, 225, 335
- Elberta field, XXVIII, 743
- Elbing and Burns domes, Kansas, PROB, 320
- Elbing field, Kansas, STR I, 60; PROB, 294, 317, 319, 410, 770; IV, 255; V, 144, 422, 507, 580; VI, 429; XI, 922
- a typical dome, STR II, 677
- Elbridge pool of Tioga field, XXII, 255
- Elder, S. F., XXIV, 1450
- Elderville, Texas (well 334), SBP, 292-335, 409
- Eldorado anticline, PROB, 599; STR II, 160-163; XXIV, 1111
- Eldorado district, Kansas, PROB, 319, 339, 596, 616, 995
- Eldorado-Elbing-Burns district, Kansas, thinning on structure in, PROB, 598
- Eldorado field, Kansas, GAS, 1055; STR II, 160; IV, 90, 255; V, 120, 138, 146, 422, 423, 509, 564, 576, 580; VI, 79, 321, 374
- (Eldorado)
- isothermal contours, XIV, 550
- (wells 259, 260), SBP, 255-285, 407
- Eldorado pool, Kansas, PROB, 294, 770; XV, 1435
- Eldridge, SC, vii; XX, 1533
- Eldridge, George H., VII, 606, 612, 630; X, 711, 757, 759; XI, 404; XIII, 492, 493, 495; XIX, 1668, 1674, 1675; XXIII, 1444; XXIV, 1729
- Eldridge, George H., and Arnold, Ralph, VII, 411, 417; X, 753; XII, 118, 560; XIII, 510; XV, 374; XXIV, 649, 651
- Eldridge, H. E., XII, 747, 751
- Eldridge, John H., and Arnold, Ralph, VIII, 74, 789
- Eldridge, W. J., and Arnold, Ralph, VI, 311
- Eldridge, W. J., and Robinson, W. L., correlating gumbos, IX, 906
- Electra arch, XIII, 574; XXI, 1019; XXIV, 71, 89, 98, 111, 1045, 1052; XXV, 1065; XXVI, 1040; XXVII, 771; XXVIII, 835, 837
- Electra axis, XXV, 1078
- Electra field, III, 49, 93, 94, 171; IV, 121; V, 154; XXV, 21
- Cisco formation productive in, XXV, 1677
- Electra-Muenster uplift, XXV, 1071
- Electric and electromagnetic prospecting for oil, XIV, 1199
- Electrical charge of clays, RMS, 534
- Electrical conductivity of water, RMS, 68, 71
- Electrical conductivity measurements, PROB, 955
- Electrical curves, XXIII, 1287
- Electrical diagrams, interpretation of formation content by use of, XXIII, 1306
- Electrical discharge, free radicals in, XXVIII, 941
- reactions in, XXVIII, 939
- Electrical investigation in the oilfields of Texas, review, XI, 1125
- limitation in depth, XIV, 1200
- Electrical log, correlation of formations by means of, XXIII, 1608
- discovery well, Eola field, XXIV, 710
- of Paleozoic limestone in Turner Valley field, XXIV, 1638
- resistivity diagram of, XXIII, 1296
- self-potential diagram of, XXIII, 1288
- Electrical log correlations in Mississippi, XXVIII, 38, 42, 44, 48, 49, 54, 57, 58
- Electrical-log cross section, New Harmony field, XXVI, 1599-1602
- through South Cotton Lake field, XXV, 1908
- Electrical-log profile showing Cockfield section through Live Oak and Bee counties, Texas, XXV, 2017
- showing Cockfield section through Polk and Liberty counties, Texas, XXV, 2014
- Electrical logging, future of, XXIII, 1311
- of bore holes, XXV, 1262
- of wells, GC, xii
- useful in interpretation of Wilcox deposits, XXIV, 1894
- value of, XXIV, 1372
- Electrical logging diagrams, use for subsurface correlation, XXIII, 1303

- Electrical logging publications, bibliography of, XXIII, 1312
- Electrical logging survey, XXIII, 1659
- Electrical logs, XXVI, 154
- cross section utilizing, indicating variations in porosity, Refugio field, XXII, 1210
- Del Valle and Newhall-Potrero oil fields, XXVI, 195
- Eola field, XXV, 1372, 1378, 1380
- importance in prospecting, XXI, 712
- La Rosa field, XXV, 300
- of important wells showing features of Wilcox formation XXIV, 1901
- use in Saxet field, XXIV, 1817
- use in South Texas, XXV, 1043
- used for correlations in proved areas in California, XXIV, 1709
- West Ranch field, XXVIII, 199
- Electrical method of prospecting for oil, XIV, 204
- Electrical methods of exploration, XXV, 1260
- Electrical polarization, XXVIII, 936
- Electrical prospecting, deep, XIX, 64
- for oil structure, XIV, 1145
- some aspects of, applied in locating oil structures, review, XVI, 616
- Electrical resistivity equipment, XXVI, 1800
- Electrical survey of structural conditions in Salt Flat field, Caldwell County, Texas, XIV, 1177
- Electrical surveys of deep wells, technique and equipment for making, XXI, 790
- Electrical well-log correlations of Edna producing sands, XXV, 114
- redrafted for lantern-slide copy, XXVI, 1663
- Electrical well logging, XXIII, 1287; XXIV, 1359
- Electrical well logs used for correlations of sand and shale intervals in East White Point field, XXV, 1979
- Electricity, fuels used in production of, in United States, GAS, 1134
- Electro-chemical effect, XXIII, 1290
- Electrodes, disposition of, XIX, 65
- Electrodialysis in removing excess electrolytes, RMS, 540
- Electro-filtration, XXIII, 1288
- Electrokinetic and osmotic forces, RMS, 536
- Electrolytes, RMS, 536, 540
- effect of, on clays, RMS, 482, 487
- excess, removal of, RMS, 537
- Electrolytic dissociation of water, RMS, 67
- Electromagnetic and electric prospecting for oil, XIV, 1199
- Electromagnetic separations, RMS, 531, 598, 601
- Electromagnetic waves in sea, RMS, 84
- Electrometric titration, SBP, 46, 52-54
- Electrometric titration apparatus, schematic diagram of, SBP, 53
- Electromotive force, SBP, 53
- Electrons, RMS, 419
- Electro-osmosis, XXIII, 1289
- Electroscope, determinations of radium content in ocean bottom sediments by means of, XXIV, 1531
- determinations of radium content in travertine by means of, XXIV, 1531
- Electrostatic methods in petrologic studies, RMS, 534, 601
- Elements of geology, XXIII, 1251
- of the petroleum industry, XXV, 904
- Elevation of the island area, CD, 184
- Elevations with plane table and speedometer, XVIII, 1534
- Eleventh annual field conference, Kansas Geological Society, September, 1937, XXII, 100
- Eley, Hugh Moore, memorial of, XVI, 1550
- Elgin pool, VI, 468
- Elgin sandstone, II, 122
- Ehas, Maxim K., STRAT, 81; XVIII, 1500; XIX, 1304; XX, 690, 1475; XXI, 954; XXIII, 497, 502, 1756; XXIV, 97, 293, 296, 318, 321, 322; XXV, 401; XXVI, 1517; XXIX, 168
- discussion of Permian and Pennsylvanian sediments, XX, 1475
- geological calendar, XXIX, 1035
- origin of cave-ins in Wallace County, Kansas, XIV, 316
- Elias, Maxim K., and Schultz, C. B., symposium on loess, review, XXIX, 846
- Elias, Maxim K., Moore, R. C., and Newell, N. D., XXIV, 318
- Eliashovich, M. K., XIII, 460
- Elion, L., PROB, 915; X, 1278; XIV, 143
- Elizabeth Lake Canyon, MSC, 71
- Elizabeth Lake Canyon upwarp, XXI, 230
- Elizabeth Lake Quadrangle, SC, 74; XX, 1620
- Elizabeth sand, V, 368; XXV, 806
- Elk Basin, XXVII, 856
- Elk Basin anticline at Elk Basin field, Wyoming and Montana, STR II, 581
- Elk Basin field, Park and Carbon counties, Montana, shadowgraphic treatment of map of, XXV, bet. 2166 and 2167
- Elk Basin field, Wyoming, extensions in 1943, XXVIII, 798
- gas-producing portion of, extended into Carbon County, Montana, in 1939, XXIV, 1108
- outcrop section h, SBP, 243-255 (well 200), SBP, 194-243, 406; XXVII, 455
- Elk Basin field, Wyoming and Montana, STR II, 577; PROB, 698, 933, 935, 936; GAS, 250, 291; IV, 37; VII, 95
- Elk basin oil field, Frontier water in, XXIV, 1237
- Elk Basin pool, XXVIII, 791
- Elk City field, GAS, 495-497
- Elk City sandstone, XXI, 1570
- Elk Hills, Buena Vista Hills, and Temblor Range, relation of, GAS, 146
- California, CAL, 253; SC, 50; XX, 1596
- California, aeromap, STR II, 47
- California, typical anticline, STR II, 676
- Elk Hills field, California, GAS, 143; PROB, 202, 229, 747, 802, 840, 961, 962, 985; STR II, 44; IV, 21; V, 458, 624; VI, 57, 316; XXVII, 872
- Elk Hills structure, PROB, 198, 406
- Elk Hills waters, content of, PROB, 962
- Elk Mountain, Wyoming (well 226), SBP, 194-243, 407
- Elk Mountains, Gunnison County, Colorado, stratigraphy of Pennsylvanian Hermosa formation in, XIX, 1668
- Elk-Poca field, West Virginia, XXII, 183, 1160; XXV, 1146; XXVI, 1126; XXVII, 851
- gas variations in, XXVI, 23
- isometric nitrogen lines, per cent by volume, Oriskany gas, XXVI, 22
- iso-THV lines, inert free Oriskany gas, XXVI, 22
- Oriskany gas, per cent by volume, iso-THV nitrogen lines, XXVI, 22
- wells completed in, during 1939, XXIV, 973
- Elkhart, Anderson County, Texas, XXII, 728
- Elkhart field, XXV, 1086
- Elledge, G. A., VI, 93, 98
- Elledge sand, XXIX, 773
- Ellenburger and Simpson contact, XXIV, 122, 129, 131
- Ellenburger beds, Big Lake field, GAS, 441
- reduction in thickness in Hamilton and Taylor counties, Texas, XXIV, 71
- Ellenburger discovery, Pecos County, XXVIII, 819
- Ellenburger dolomite, PROB, 353; XXV, 1067, 1071; XXVI, 1042, 1046; XXVIII, 819; XXIX, 764
- in Pecos and Crane counties, Texas, XXIV, 20
- productive in Sand Hills area, Texas, XXIV, 129
- Ellenburger formation, III, 70, 78, 139, 157, 169, 175, 188, 219, 222, 243, 296, 334; IV, 83, 161, 283; V, 376, 503; VI, 150; XXII, 696; XXV, 1630; XXVII, 761, 762; XXVIII, 837
- classification of insoluble residue types as applied to, XXVI, 1400
- cross section of, from Sand Hills, Crane County, to Apco, Pecos County, XXVI, 1406
- cross section of, from Sand Hills, Crane County, to Todd, Crockett County, XXVI, 1402
- discovery of oil in, K. M. A. oil field, Wichita County, Texas, XXIV, 1494
- insoluble residues of, XXVI, 1399
- in West Texas, correlations of insoluble residues from, with those of Missouri, XXVI 1404
- in West Texas, division of, XXVI, 1401
- in West Texas, subsurface study of, XXVI, 1398
- productive in Big Lake field, XXVI, 1398
- productive in Cedar Lake field, XXIV, 1031
- productive in Richard's Masterson No. 1 in Pecos County, Texas, XXIV, 1037
- truncation of, during pre-Barnett, evident in Concho arch region, XXIV, 72
- underground position of, in north-central Texas, IV, 283
- Ellenburger group productive in Llano uplift, FOP, 99; XXV, 1531
- Ellenburger limestone, PROB, 764, 765; XXI, 526; XXIII, 854; XXV, 1072, 1635; XXVI, 205, 212, 1045; XXVII, 777, 778, 780; XXIX, 413
- Bend Arch district, GAS, 628
- Bryson field, STRAT, 541, 542
- Hull-Silk pool, STRAT, 671

- (Ellenburger)
(Oe) (Cambrian and Ordovician), SBP, 285-292, 415
Petrolia field, Texas, STR II, 550
productive in north- and west-central Texas, XXIII, 848
Ellenburger limestone production, K.M.A. field, XXV, 1065
Ellenburger-Mississippian limestone (Boone) unconformity in Bend Arch district, GAS, 626
Ellenburger production, XXV, 1057; XXVII, 751
Barnhart pool, XXVIII, 826
Central Basin platform, XXVIII, 819
Crane County, XXVI, 1028, XXVII, 763
extended into Winkler County, XXVIII, 817
in West Texas in 1944, XXIX, 750
Jack County, Texas, XXVII, 777
Reagan County, XXVII, 764
Ellenburger ridge, XXI, 1019
Ellenburger section in north-central Texas, XXI, 1022
productive in Texas fields, XXI, 1019
Ellenburger strata, Llano region, Texas, field conference on, XXIX, 1064
Ellenburger structure map of central Texas, XXV, 1600
Ellenburger wells, GAS, 445
Ellensburg formation, XXIX, 1386, 1395
Eller, W., PROB, 43
Elles, Gertrude L., XX, 305, 1255; XXV, 653
Elles, Gertrude L. and Wood, Ethel M. R., XXVI, 858; XXVIII, 873
Ellington, J., Survey, Texas (well 337), SBP, 292-335, 409
Ellinwood west pool, Kansas, XXIII, 804
Elliot, A. R., VI, 345
Elliott, George R., geologic factors in unitized pressure maintenance, Jones and reservoir, Schuler field, Arkansas, XXVIII, 217
Elliott, J. E., VII, 127, 614; VIII, 136; XII, 861; XIII, 1095
core drilling with rotary tools in California, VII, 250
memorial of Edward Dana Nolan, XI, 221
Elliott Consolidated Oil Company (well 101), SBP, 87-153, 404
Elliott Core Drilling Company, VII, 127
Elliott County oil field, Kentucky, STR I, 82-85; XI, 487
Ellipses, tidal, RMS, 132, 133
Ellipsoidalinae, MSC, 306
Ellis, A. D., Jr., XXIII, 1835
Ellis, A. H., Jr., and Garrett, J. B., XXVIII, 1357
Ellis, A. J., and Lee, C. H., PROB, 814; XVII, 732
Ellis, Brooks F., XXVII, 940
Ellis, Brooks F., and Messina, Angelina R., XXV, 1216
Ellis County, Kansas, example of directional drilling as applied to geology in, XXVII, 87
production in 1936, XXI, 1002
Ellis County, Texas (well 382), SBP, 292-335, 409
Ellis field, XXVIII, 837
Ellis formation, FOP, 42; GAS, 20, 250, 273; PROB, 698; V, 257; VI, 146; XXI, 732; XXV, 1153, 1474; XVII, 470, 1304; XXIX, 659,
(Ellis)
1019, 1025, 1262
age and stratigraphic relations, XXI, 731
Alberta, GAS, 21
Border-Red Coulee field, STRAT, 301, 319, 320
Jurassic of Montana, type section of, XXIX, 451
Kevin-Sunburst field, Montana, STR II, 258, 263
Kevin-Sunburst field, Montana gravity of oil at, XXVIII, 797
Montana, XXI, 720
Red Coulee field, Alberta, ALTA, 38, 41; XV, 1166, 1169
Yellowstone National Park and Montana, XXI, 731
Ellis formation waters, XXVI, 1353, 1355
characteristics, XXVI, 1357
in Montana, XXVI, 1356
in Sweetgrass arch fields, XXVI, 1356
in Sweetgrass Hills fields, XXVI, 1357
Ellis group, Belt Creek section of, XXIX, 1298
Craig section of, XXIX, 1296
of Sweetgrass arch, time relations of, with standard European Stages, XXIX, 1264
Rierdon Gulch section through, XXIX, 1291
Sun River section of, XXIX, 1296
Swift reservoir section of, type section for Swift formation, XXIX, 1293
Ellis-Kootenai unconformity, XXIX, 1263
Ellis-Madison contact at Kevin-Sunburst field, Montana, STR II, 260, 263
Ellis-Madison disconformable contact, PROB, 705
Ellis Northwest pool, XXVIII, 772
Ellis pool, Kansas, STR II, 158; XXVII, 809; XXVIII, 772
Ellis pool, Texas, XXIX, 763
Ellis sand, PROB, 707; XXIX, 1268
Bannatyne field, XIII, 797
Kevin-Sunburst field, Montana, STR II, 259, 265
Ellis section, XXIX, 1276
at East Butte, Sweetgrass Hills, Montana, ALTA, 29; XV, 1157
Ellis shale, PROB, 159, 165
Cut Bank field, STRAT, 339
productive in Red Coulee field, PROB, 167
Ellis waters in Montana correlative with Jurassic waters of Wyoming, XXVI, 1357
Ellis well logs showing lithologic features, XXIX, 1299
Ellisburg pool, XXII, 258; XXV, 1144
Ellison, McBride, Haberle, and Thornton, XXI, 1066
Ellison, Robert S., what an oil company expects of the geologist, VI, 516
Ellison, Samuel, project method for teaching petroleum geology, XXVI, 1277
Ellison, Samuel P., Jr., and Cullison, James S., diamond-drill core from Bourbon High, Crawford County, Missouri, XXVIII, 1386
Ellisor, Alva Christine, GAS, 653, 683; GC, 392, 395, 397, 749; MEX, 72; MSC, 179; SD, 211, 214, 229, 243,
(Ellisor)
250, 528, 529, 564, 660, 720; VIII, 539, 551; IX, 87, 538, 661, 1282; X, 3, 21, 35; XI, 6, 10, 11, 12, 308; XIII, 1066, 1348; XV, 535, 537, 746; XVI, 212, 586; XVII, 623, 626, 627, 1364, 1459, 1460; XVIII, 955; XIX, 393, 690, 1375; XX, 495, 985; XXIII, 161, 165, 168; XXIV, 381, 476, 477; XXV, 1222, 1250; XXVIII, 908, 981, 1011; XXIX, 25, 1721
age and correlation of chalk at White Cliffs, Arkansas, with notes on subsurface correlations of north-east Texas, IX, 1152
Anahuac formation, XXVIII, 1355
coral reefs in Oligocene of Texas, X, 976
correlation of Claiborne of East Texas with Claiborne of Louisiana, XIII, 1335
Jackson group of formations in Texas with notes on Frio and Vicksburg, GC, 470; XVII, 1293
Polamides matsoni zone of Texas (Burkville beds), XX, 494
reviews, XVIII, 1206, XX, 505; XXV, 1810
subsurface Miocene of southern Louisiana, XXIV, 435
Ellisor, Alva Christine, and Cushman, Joseph A., XIX, 1660; XXII, 1106; XXVIII, 1357
Ellisor, Alva Christine, and Rolshausen, F. W., STR II, 237, 238
Ellisor, Alva Christine, and Teagle, John, GAS, 652, 659
correlation of Pecan Gap chalk in Texas, XVIII, 1506
Ellisor, Alva Christine, Applin, Esther Richards, and Kniker, Hedwig T., GAS, 689; IX, 24; XIV, 730; XVII, 640, 641
subsurface stratigraphy of coastal plain of Texas and Louisiana, IX, 79
Ellis sampler, RMS, 641
Ellis, S. C., XI, 28; XIX, 154, 157, 167; XXII, 1134, 1146, 1149, 1150, 1152
discussion of *in situ* theory of origin of bitumen in McMurray oil sands, XXII, 1149
Ellsworth, XXIV, 499
Ellsworth, H. V., CD, 43
Ellsworth, green, and brown Antrim shales, alternation of, XXV, 714
Ellsworth to Traverse limestone section of southwestern Michigan, isopachous studies of, XXIV, 2150
Ellsworth formation, XXII, 397, 405, 410
productive of gas in Ravenna field and Grand Rapids field, XXIV, 985
variations in thickness of, XXIV, 2153
Ellsworth shale, XXIV, 2151; XXV, 714, 727
approximate extent of lime and dolomite occurring above, in western Michigan, XXV, 718
distribution of, XXV, 729
Elm Bayou field, XXVII, 733
Elm Creek limestone, XXIV, 41, 42
Elm Grove gas field, II, 67; IV, 132; VI, 189, 195
Elm Ridge field, XXVIII, 275
production at, XXVIII, 275
Elmdale formation, I, 112, 113; II, 74; XXI, 561

- Elmira field, New York, XXIX, 668
 Elms, Morris A., abstract, XXII, 1712
Elphidium zone, XXIII, 56
 Elsinore, CAL, 133, 309
 Elsinore fault, CAL, 39
 Elsmere Canyon, CAL, 250, 302
 Elsmere field, PROB, 756
 Elson, W. H., STRAT, 436
 Elster, J., and Geitel, H., XVIII, 65
 Elster glaciation, RMS, 332
 Eltran, XXIII, 877
 Eltran anomaly at Bancroft oil field, a type of geoelectrical halo, XXIV, 1458
 Eltran map, Bancroft oil field, Beauregard Parish, Louisiana, XXIV, 1413
 Elutriation methods and apparatus, RMS, 545, 546, 594
 Elvehjem, C. A., XXVII, 1184
 Elvira group of Mississippian of Eastern Interior basin, XXIV, 835
 Elvirga paleontology, XXIV, 841
 Elwood anticline, PROB, 189
 Elwood dome, PROB, 756
 Elwood field, California, GAS, 166; MSC, 28, 222, 304, 324, 331, 335, Fig. 14 (in pocket); PROB, 189, 742 (well 27) SBP, 130-153, 403
 Elworthy, R. T., GAS, 27, 1059, 1067
 Elwyn sandstone and shale in Kentucky, XXII, 276
 Ely, Fred B., IV, 118 theories relative to oil and gas deposits, VIII, 94
 Ely, Northcutt, XXII, 572
Emarginula fissura, faecal pellets of, RMS, 517, 520
 Emba area, regional structure of, XXIII, 499
 Emba Basin, Russia, XI, 509
 Emba domes, comparison with German domes, XXIII, 512
 depth classification of, XXIII, 503
 Emba region, methods of exploration in, XXIII, 510
 Emba salt-dome area, development of, XXIII, 496
 districts of, XXIII, 493
 map showing location of, XXIII, 494-495
 similar to Texas-Louisiana Gulf Coast, XXIII, 492
 stratigraphy of, XXIII, 496
 Emba salt-dome district, Russia, XXII, 759; XXIII, 951
 Emba salt-dome region, age of salt in, XXIII, 497
 comparisons of, with other salt-dome areas, XXIII, 511
 production in, XXIII, 509
 source of oil in, XXIII, 509
 Union of Socialist Soviet Republics, and some comparisons with other salt-dome regions, XXIII, 492
 U.S.S.R., comparison of Iranian (Persian) salt-dome area with, XXIII, 514
 Emba salt series of Upper Permian age, XXIII, 497
 Embar field, Andrews County, Texas, XXVII, 538
 Embar formation, GAS, 288; III, 357; IV, 38, 314; V, 190, 259, 410; VI, 226; XVIII, 1672, 1679; XXI, 991; XXVII, 465, 856; XXVIII, 798 (Ce) (Permian), SBP, 193, 198-243, 413
 Grass Creek field, Wyoming, STR II, (Embar) 625; XVI, 872
 marine beds of, source beds, XXI, 1252
 Rocky Mountain states, PROB, 163
 source of Permian and Pennsylvanian oil, PROB, 164
 source material from, in Tensleep fields of Wyoming, XXI, 1252
 Embar formation waters, XXIV, 1283
 in Wyoming fields, analysis of, XXIV, 1284
 Embar group, XXIII, 1449; XXV, 887, 889
 Embar group and Chugwater formation, gypsum in, XXV, 895
 Embar high, Grass Creek field, Wyoming, STR II, 632
 Embar limestone, PROB, 349, 687, 930; XXIII, 911
 Elk Basin field, Wyoming and Montana, STR II, 580
 Grass Creek field, Wyoming, STR II, 633, 634
 Wyoming, XVI, 870
 Embar marine beds, XXI, 1253
 Embar Permian field, XXVII, 760
 Embar pool, XXVII, 751, 756; XXVIII, 826
 Embar structure, XXVII, 760
 Embar-Tensleep fields in central Wyoming, map showing productive, STR II, 628
 Embar water, large proportion of calcium and magnesium sulphates in, XXIV, 1290
 Embar waters in Big Horn basin, XXIV, 1288
 in Sweetwater basin, XXIV, 1288
 in Wind River basin, XXIV, 1288
 in Wyoming, PROB, 942
 largely of primary saline type, XXIV, 1285
 representative, in Wyoming fields, XXIV, 1288
 Emendorfer, E., XII, 3
 Emerald green shale, MEX, 33, 49
 Emergence at end of Maestrician in Pánuco-Sierra Tamaulipas area, MEX, 97
 Emerson & Sutton, SD, 348
 Emerson, B. K., XX, 906
 Emery, X, 827
 Emery, K. O., RMS, 246, 253, 274, 281, 551
 Emery, K. O., and Dietz, Robert S., abstract, XXII, 1717
 Emery, K. O., and Shepard, Francis P., submarine topography off the California Coast: canyons and tectonic interpretation, review, XXV, 1940
 Emery, Wilson B., XXI, 135
 Emery, Wilson B., GAS, 269, 323; PROB, 309; VI, 217, 219; XI, 802, 803, 804; XIV, 1015; XXII, 1022
 gas fields of Big Horn Basin structural province, Wyoming and Montana, GAS, 277
 Lance Creek oil and gas field, Niobrara County, Wyoming, STR II, 604
 memorial of Dean Eddy Winchester, XXI, 135
 Rock River oil field, Carbon County, Wyoming, STR II, 614
 Emery sandstone in Rocky Mountain area, XXI, 907
 Emery zone, PROB, 225
 Emery zone in West Coyote field, GAS, 206
 Emigrant Gap structure, Tensleep water in, XXIV, 1299
 Eminence-Cardareva uplift, XVI, 630
 Emma pool, XXIX, 747
 Emmett, XXVIII, 1518
 Emmons, S. F., XVII, 110; XIX, 977; XXII, 94; XXVI, 1377, 1384, 1385
 Emmons, William Harvey, MEX, 143; PROB, 254, 435; VII, 621; VIII, 722; XVI, 395; XVII, 716
 experiments on accumulation of oil in sands, abstract, V, 103
 geology of petroleum, 2d ed., review, XV, 850
 Emmons, William Harvey, and Calkins, F. C., VII, 2
 Emmons, William Harvey, and Lewis, J. O., VIII, 719
 Emperor limestone, MEX, 137
 Empire Gas and Fuel Company, SD, 563, 568, 646, 676, 719, 721, 724, 727, 730, 735
 Empire Oil and Gas Company, GAS, 529; XXIII, 857
 Crawly 1 (well 260), SBP, 255-285, 407
 De Noya 1 B (well 277) SBP, 255-285, 407
 State Land 774 (well 412), SBP, 349-379, 410
 Empire pool, New Mexico, STR I, 113
 Emrick, D. G., memorial of Samuel W. Ruter, XXV, 2100
 Emrnck, E. Byers, XIII, 784; XXIX, 1265
 Emrick sand, XXIX, 1268
 Emscherian, MEX, 54, 57, 60
 Emtage, R. H., XXIV, 1550, 1575
 Emulsified oil, MEX, 169, 174
 Emulsion in wells, MEX, 229, 230, 233, 239
 En échelon anticlines in western part of Northern Geosyncline, SC, 84; XX, 1630
 En échelon domal axes and faults, SC, 127; XX, 1673
 En échelon fault belts, MEX, 185, 186, 209
 En échelon fault belts, discussion, XIV, 330
 En échelon faults, XIV, 1178
 in north-central Oklahoma, origin of, XIII, 31
 in Oklahoma, XVIII, 243
 origin of, discussion, XIII, 1398
 En échelon folds in Valle Grande, XIII, 219
 En échelon folds and fractures, hypotheses to account for, SC, 130; XX, 1676
 En échelon fractures, small, in Santa Barbara County, California, XIV, 320
 En échelon relations and origin, STR II, 688
 En échelon tension fissures and faults, XIII, 627
 Enas field, XXVIII, 743
 Encarnación, alkaline rock at, MEX, 147
 Encill pool, GAS, 497, 498
 Encroachment of edge water, PROB, 809, 837, 839
 Endell, K., RMS, 457, 625, 628
 Endemic groups, relationships within, MSC, 183
 Endicott sand zone in Blackwell field, Oklahoma, STR I, 167
 Endicott sands in Garber field, Oklahoma, STR I, 178

- Endothermic reactions, PROB, 244
- Energy, RMS, 58
amount of, received from sun, RMS, 58, 84
balance, as related to heat received by sea at different latitudes, RMS, 85
in sea, RMS, 58
necessary for anaerobic reduction of fatty acids, PROB, 46
of impact, effect of, on rounding, RMS, 39
source of, for micro-organisms, PROB, 37, 41
sources of, in bacteria, RMS, 444
- Energy propagation usable as intangible probe, XXVIII, 913
- Engel, René, CAL, 68, 133; SC, 13; XXVIII, 788; XX, 1559
- Engineering, XXI, 711
- Engineering and Mining Journal, SD, 642
- Engineering astronomy, essentials of, XXI, 1352
- Engineering Congress, World, XIV, 325
- Engineering Corps of the United States Army, work on shadow-graphic contour maps, XXV, 2163
- Engineering geologist, duties of, XXVI, 1798
- Engineering geology, application of, XXVI, 1801
development and use of, XXVI, 1797
development and use of: foreword, XXVI, 1795
sources of information on, XXVI, 1798
- Engineering Laboratories, Inc., XXV, 1769
- Engineering principles in production of reservoir, XXII, 1442
- Engineering report on Oklahoma City oil field, Oklahoma, XXI, 815
- Engineering studies and results of acid treatment of wells, Zwolle oil field, Sabine Parish, Louisiana, review, XIX, 127
- Engineering surveys, review, XIX, 1241
- Engineering viewpoint on well spacing, XXII, 1441
- England, RMS, 142, 322, 331, 347
Carboniferous-Permian boundary in, XXIV, 293
northern, sections showing lower and upper boundaries of Carboniferous system in type region of, XXIV, 286
- Englehardt, H., XXVI, 819
- Engleman, Rolf, geology of Venezuelan Andes, XIX, 769
- Engler, C., PROB, 36, 72, 261, 450; SBP, 2; III, 346, 351; X, 1016; XI, 494; XV, 611, 612, 613, 624; XVII, 1252, 1254, 1257; XXVIII, 731; XX, 280, 285, 294, 296; XXIV, 1533, 1534; XXIX, 1743
- Engler, C., and Hsfer, H., X, 1115; XV, 443; XVI, 1100
das Erdöl (Petroleum), reviews, XV, 849; XVI, 947
- Engler theory of origin of petroleum from heat decomposition, XV, 612; objections to, XV, 614
- Engler's data on fractions of crudes from various localities, XXI, 1469
- Englevalle channel sandstone of Pennsylvanian age, southeastern Kansas, XIX, 1061
- English, XI, 614
- English, J. C., XV, 183
- English, Leon, XIII, 946
- English, Walter A., CAL, 177, 208; GAS, 119, 207, 210; MSC, 1, 163; SBP, 92; SC, 53, 69, 77, 80, 82; VII, 411, 418, 607; VIII, 55; IX, 229; X, 495; XII, 524, 525; XIII, 204, 217, 220; XIV, 409, 418, 1447, 1449; XVII, 732, 833; XVIII, 800; XIX, 523; XX, 1599, 1615, 1623, 1626, 1628; XXI, 270; XXIII, 37; XXIV, 649, 651, 664; XXV, 194, 213, 226, 256, 1333; XXVI, 165; XXVII, 204, 206, 255, 1364, 1372; XXVIII, 953
- memorial of Irving V. Augur, XIV, 681
- notes on the McKittrick, California, oil field, STR I, 18; XI, 617
- planetable methods, VIII, 47
- use of airplane photographs in geologic mapping, XIV, 1049
- English, Walter A., and Pack, R. W., XIII, 218; XIV, 404; XVI, 10; XIX, 1822, XX, 1615
- English, basic, for geology, XXIX, 1516
- English Bayou-Gillis structure, GC, 190, 191; XIX, 377
- English channel, RMS, 51, 145, 326, 332-334
- English coast, RMS, 325
- English River sandstone, XXIV, 785, 792
- Engistown sand, shell fragments from, XXIX, 891
- Engraving and printing photographs of megafossils, XXIX, 1511
- Engster, H., XVII, 214
- Engstrand, Clinton, memorial of Lewis Samuel Coryell, XXVII, 105
- Enid formation, I, 104; II, 74, 114
subdivision of, X, 786
- Enid group, correlation of, in south-central Oklahoma, XVI, 120, 125
in Oklahoma City field, XVI, 965
top of, is at base of Blaine gypsum in Kansas and northern Oklahoma, XXI, 1520
- Enke, Ferdinand, Moos, A., Steinbrecher, H., and Stutzer, O., *Deutsches Erdöl*, review, XVIII, 1092
- Ennis, Texas (well 382), SBP, 292-335, 409
- Enos Creek field, GAS, 291
- Ensemble photography, burn-out, XXIX, 1506
- Ensenada sub-province of Lower California, XX, 1279
- Enstatite, RMS, 602
- Enterprise anticline, GAS, 529
- Enterprise dolomitic shale, XXI, 505
- Enterprise field, XXVIII, 763
- Enterprise shale, II, 75
- Entrada formation, relation of, to underlying formations in Colorado, XXIII, 1164
- Entrada-Jelm contact at Owl Canyon, XXIII, 1160
- Entrada sandstone, PROB, 688; XXIII, 1170
- Curtis fossils in, XXIII, 1175
- possible equivalents in northwestern New Mexico of sequence from, to Junction Creek sandstone, XXV, 1759
- section at Uravan, Colorado, showing upper part of, and overlying Morrison formation, XXV, 1756
- southwestern Colorado, correlation of beds overlying, with those in
- (Entrada)
- Utah, XXV, 1758
- Utah, correlation of Sundance sand of Wyoming with, XXIII, 1155
- Utah, nitrogen in, GAS, 1057
- Entrada-Wingate relationships in western New Mexico, XXIII, 1170
- Entrenched streams in Corpus Christi area, GC, 213; XVII, 916
- Entrenched valleys, RMS, 156
- Enville series, XXIV, 293
- Environment of deposition, relation of, to nitrogen-reduction ratio, SBP, 391, 392
- Environmental conditions of deposition, RMS, 179, 231, 525, 526, 590
effect of, on grain size, RMS, 249
in tidal flat areas, RMS, 199
on continental shelf, RMS, 234
- Environmental conditions that produce quietness of water, favorable for origin of black shales, XXIII, 1187
- Environmental factors, MSC, 84
geographic, XXVI, 1748
physiographic, XXVI, 1749
- Environmental progression, XXVI, 1739
of crinoidal sediment, XXVI, 1741
- Environmental realms of sedimentary materials, XXVI, 1740
- Environmental reconstruction and stratigraphical analysis, XXVI, 1697
- Environmental studies, dynamic, XXIX, 1246
- Environmental theory for predominance, GAS, vi
- Environments of origin of black shales, XXIII, 1178
references on, XXIII, 1197
- Enzymatic hypothesis, PROB, 44, 266
- Enzymes, RMS, 419, 420, 440
- Eocene, CAL, 5-8, 10, 14, 15, 17-20, 22, 35, 36, 38, 45, 46, 52, 92, 103, 106-108, 120-149, 151, 152, 154, 156-158, 160-162, 166, 172, 177, 180, 199, 202, 208, 243, 276, 284, 285, 292-296, 299, 303, 304; GAS, 231, 240, 999; MEX, 86, 89-91, 98-120, 136, Fig. 12 (in pocket); MSC, 51, 85, 102, 103, 109, 114, 119, 123, 127, 152, 161, 174, 177, 181, 239, 317; PROB, 57, 111, 171, 172, 183, 188, 191, 192, 237, 403, 724, 754, 790; SC, 68, 70, 79, 95, 134; XX, 1614, 1616, 1625, 1641, 1680; XXI, 995; XXIX, 262
- Alaska, VI, 295
- American salt domes, SD, 168, 170
- Antillean-Caribbean region, XXIV, 1578
- Anzoategui, XXI, 235
- areal geology of, in northeastern Mexico, XIX, 1357
- Arkansas, VI, 350; IX, 167
- Barbados, XXIV, 1558
- Basal, in Venezuela, XIII, 618
- Belgian Congo, V, 663
- Bellevue field, Louisiana, STR II, 241
- bibliography on foraminiferal correlations in, XXIV, 1936
- Bigford member of Mount Selman formation (Tb), SBP, 292-349
- Borneo, V, 417
- boundary of sea at different stages, SC, 23; XX, 1569
- Burma, XI, 562
- Cadell clay (Tcd), SBP, 335-349
- Caliente Range, XXV, 214

(Eocene)

- California, SBP, 97; VI, 305, 482; VIII, 792, 794; XXIII, 937, 943; XXIV, 1113, 1732; XXVI, 175, 1145; XXVII, 873
- California, great variation in thickness, XXIV, 1943
- California, lenticular beds in, XXIV, 1943
- California, specimens of *Turritella* from, XXVII, fol. 12
- California outcrop section E, SBP, 167-194, 411
- carbon content, SBP, 27-31
- carbon-nitrogen ratio, SBP, 34, 35
- Carpathian Mountains, XV, 6
- Carrizo sand (Tc), SBP, 292-349
- Catahoula Parish, Louisiana, XIV, 433, 438
- Chico Martinez Creek, California, XXVII, 1365
- references on, XXVII, 1385
- Eocene, Claiborne group, SBP, 336
- Clay Creek salt dome, XV, 46
- coal in, near Bakersfield, California, XXIV, 1676
- Coal Measures and arid regions, CD, 37
- Coalinga, SC, 58; XX, 1604
- coastal Louisiana, XXV, 1365
- coastal Texas and Louisiana, XXIV, 1891
- Coldwater sandstone (Tcw), SBP, 95, 168-174
- Colombia, X, 388
- Colorado, VI, 340; XXII, 1029; XXV, 1153
- Conroe oil field, Texas, GC, 798; XX, 745
- Costa Rica, III, 364
- Cozy Dell shale (Tcz), SBP, 95, 168-194
- Crockett formation (Tcs), SBP, 335-349
- Currie field, Texas, VII, 26
- Dakota basin, XXVI, 1560
- Delaware, XXIX, 900
- Devils Den area, SC, 58; XX, 1604
- Domengine formation (Tdo), SBP, 95, 168-194
- early Middle, clastic facies of Cook Mountain age, XXVIII, 1695
- early Middle, Florida and southern Georgia, XXVIII, 1693
- Ecuador, XIV, 281
- Edison field, STRAT, 4
- Europe, VI, 526
- Fayette County, Texas, GC, 530; XVII, 528
- Fayette sandstone (Tfa), SBP, 335-349
- Florence field, Colorado, STR II, 78
- Florida, III, 290
- French fields, XVI, 1137
- Georgia, XXII, 791
- Government Wells field, GC, 636; XIX, 1136
- Gulf Coast, XXIII, 1409; XXV, 2015
- Gulf coastal domes, GAS, 694
- Hardin field, STRAT, 567
- Hiawatha gas field, XIX, 539
- Hockley dome, Texas, IX, 1050
- Hoffman field, XXIV, 2129
- Homer field, Louisiana, STR II, 198
- Iran, XXIII, 960
- Irma field, Arkansas, STR I, 4, 6
- Jackson, from borings at Greenville, Mississippi, XXIII, 1393
- Jackson, generalized outcrop of,

(Eocene)

- XXIII, 1395
- Jackson, of eastern Mississippi, micro-paleontologic analysis of, XXI, 80
- Jackson, of Mississippi MSC, 179
- Jackson gas field, GAS, 882
- Jackson group, SBP, 336
- Japan, nitrogen in, GAS, 1061
- Kern Front field, STRAT, 12
- Kreyenhagen shale (Tk), SBP, 95, 168-194
- Lance Creek field, Wyoming, STR II, 605
- Laredo district, Texas, STR I, 391; XXI, 1426
- late Middle, Florida and southern Georgia, XXVIII, 1686
- Lopez field, STRAT, 689
- Louisiana, GC, 384; V, 631; VI, 180, 252; X, 7, 225, 227, 232, 281; XVII, 614; XXII, 1507; XXIII, 298; XXIV, 2088; XXV, 1374
- Louisiana, XXIX, 25, 37, 1171
- Louisiana and Arkansas, XXVII, 911
- Lower, Florida, Georgia, and Alabama, XXVIII, 1698
- Lower, Lisama and Upper Cretaceous Umir formations probable source beds of Colombia asphaltic oils, XXIX, 1136
- Lower, Sabine uplift, XXIX, 52
- Lower, south Texas, XXIII, 865
- Lower, Tejon Quadrangle, XXI, 214
- Lower, trend in South Texas, XXIX, 783
- Lower, west Florida, Wilcox fauna in clastic facies of, XXVIII, 1699
- lower Magdalena Valley, 'XXIX, 1092
- Luling field, Texas, STR I, 273; VIII, 776
- Lytton Springs field, Texas, X, 956
- Matlila sandstone (Tmt), SBP, 95, 168-194
- McElroy formation (Tml), SBP, 335-349
- Mexia zone, Texas, X, 1261
- Mexican fields, GAS, 997
- Mexico, XIX, 1358
- Middle, MSC, 7, 110, 243; SC, 24; XX, 1570
- middle Magdalena Valley, XXIX, 1097
- Mississippi, XXVIII, 47, 804
- Monroe field, GAS, 745, 758
- Montana, VI, 144
- Mount Selman formation, SBP, 336
- north of Coalinga, Fresno County, California, correlations in, XXIV, 1724
- North Carolina, XXIX, 910
- North Dakota, XXIII, 926; XXVII, 1568
- north Louisiana, XXVI, 1251
- North Sea, RMS, 332
- northeastern Mexico, areal geology of, GC, 588
- northern Mexico, XV, 876
- northwestern Colorado, STR II, 98; XXI, 986
- Oligocene, and Cretaceous fossils of Florida, plates, XXVIII, bet. 1688 and 1689
- Oligocene, Miocene, and Pliocene in Celebes, XXVIII, 1450
- or Miocene in Colombia, XI, 153
- orogenic disturbances at or near end of, SC, 28; XX, 1574
- Panama and Costa Rica, III, 364

(Eocene)

- Peru, XII, 10
- Pine Island field, Louisiana, STR II, 169
- Poland, XVIII, 897; XXI, 1187
- Powder Wash field, Colorado, XXII, 1023
- pre-Upper, MSC, 162
- Queen city member of Mount Selman formation (Tq), SBP, 335-349
- Refugio field, Texas, XXII, 1194
- Reklaw member of Mount Selman formation (Trk), SBP, 335-349
- Richland field, GAS, 777
- Ridge Basin, California, XXIII, 531
- Rocky Mountain region, XXVII, 424
- Roumania, IX, 1171
- Roumania and Poland, XVIII, 739
- Roumanian Carpathians, SD, 93
- Russia, XI, 510
- Sabine uplift, XXIX, 60
- San Joaquin valley, California, foraminiferal correlations in, XXIV, 1923, 2049
- Santa Lucia Mountains, MSC, 101
- Santa Ynez Mountains and in eastern part of San Rafael Mountains, SC, 90; XX, 1636
- Saratoga field, Texas, IX, 268
- Schuler field, XXVI, 1473
- south Arkansas, XXVI, 1251
- South Texas, XXIII, 860; XXV, 1037
- South Texas, depositional history of, XXVI, 270
- southeastern Virginia, XXIX, 80
- southern California, VII, 413
- Southern fields, MEX, 108
- southwestern part of Blue Mountains, XXIX, 1386
- Sparta formation (Tes), SBP, 335-349
- Stephens field, Arkansas, STR II, 2, 7
- stratigraphy of, between Laredo and Rio Grande City, Texas, XXVI, 256
- subdivisions in Georgia, XXIX, 921, 924
- Sugar Creek field, XXII, 1507
- Sumatra, XXVIII, 1445
- Talara region of northern Peru, XXIX, 536
- Tamaulipas, Mexico, IX, 129
- Tampico district, Mexico, IX, 142
- Texas, STRAT, 567, 689, 728; X, 7, 155, 769; XXII, 1432; XXVI, 261; XXVII, 732
- Texas coast region, VIII, 441
- to Recent, lowlands of northern Colombia, XXIX, 528
- Trinidad, XX, 1442
- undifferentiated beds (Eocene ?), SBP, 197, 416
- undifferentiated beds (Te, Tco, Tu), SBP, 92, 95, 130, 167-194, 197, 415, 416
- upper, MSC, 97, 101-103, 175, 194, 214, 252
- upper, climate of, SC, 27; XX, 1573
- upper, Florida and southern Georgia, XXVIII, 1683
- upper, -Oligocene, in Anzoategui, XXI, 237
- upper, Poway conglomerate, MSC, 318
- upper, redbeds, SC, 27; XX, 1573
- upper, South Texas, XXIX, 783
- upper Magdalena Valley, XXIX, 1102

(Eocene)

- upper Middle, in Tejon Quadrangle, XXI, 214
 Urania field, Louisiana, STR I, 93
 Utah, VI, 223, 340, XXIII, 125, 126
 Venezuela, XXII, 1227; XXIII, 701, 959; XXVIII, 26
 Ventura Basin, SC, 98; XX, 1644
 Vermilion Creek area, XIV, 1023
 Virginia, XXIX, 904, 905
 Weches greensand member of Mount Selman formation (Twe), SBP, 335-349
 West Columbia field, Texas, STR II, 459, 466
 Wilcox formation (Tw), SBP, 292-349
 Wind River Canyon area, XXIII, 1451
 Wind River Mountains, Wyoming, XXV, 139
 Wyoming, FOP, 50; V, 53, 206, 408; VI, 340, VII, 138; XXIII, 481, 483, 1447; XXIV, 1220; XXV, 1152, 1482, 2027, 2042
 Wyoming and Colorado, FOP, 58; XXV, 1490; XXVII, 470
 Yegua formation (Ty), SBP, 335-349
 Eocene and Cretaceous formations near Coalinga, California, XXIV, 1732
 Eocene and Cretaceous strata of trans-Pecos Texas, columnar section of, XXII, 1428
 Eocene and Cretaceous stratigraphy of Barrilla and eastern Davis mountains of trans-Pecos Texas, XXII, 1423
 Eocene and Gulf subsurface strata, southern Arkansas, XXII, 961
 Eocene and Miocene in Rattlesnake Hills, XVIII, 848
 Eocene and Miocene production in Fresno area, California, XXVII, 865
 Eocene and Oligocene age of Alazán beds, MEX, 120
 Eocene and Paleocene in Rocky Mountains, XXIII, 1150
 marine, of north Germany and south Scandinavia, XXII, 315
 Eocene and Paleocene rocks in Rocky Mountain region, map showing, XXIII, 1148
 Eocene and Upper Cretaceous formations in East Texas geosyncline, XII, 531
 Eocene age, gas from Tertiary sands of, in Wyoming, XXII, 686
 of lower beds of Catahoula formation in Texas, GC, 537; XVII, 535
 Eocene Avon Park limestone, Florida and parts of Georgia and Alabama, map, XXVIII, 1686
 Eocene basins and deposits, SC, 17; XX, 1563
 Eocene beds, early Middle, Florida and parts of Georgia and Alabama, map showing structure on top of, XXVIII, 1727
 in California, unconformities in, XXIV, 1943
 of Chico Martinez Creek area and strata of near-by areas, correlation between, XXVII, 1379
 of Cook Mountain age, Florida and parts of Georgia and Alabama, map, XXVIII, 1696
 Mount Shasta region, CAL, 128

(Eocene)

- of Wilcox age, Florida and parts of Georgia and Alabama, map, XXVIII, 1700
 Eocene coal, CAL, 131
 Eocene correlation chart, Sparta-Wilcox trend, XXIV, 702
 Eocene-Cretaceous contact in Marysville Buttes, XXIX, 981
 Eocene-Cretaceous transition beds in Covington County, Mississippi, GC, 379, XIX, 1158
 Eocene deposition in Rio Grande embayment, XXIX, 1322
 variations in amount of, sections, XXIX, 1323
 Eocene diagnostic fossils, CAL, 136
 Eocene dikes, SC, 72; XX, 1618
 Eocene embayment in Oregon and Washington, XXIX, 1406
 Eocene exploration in California, XXIV, 1940
 Eocene fauna, MSC, 172
 from Ecuador, XXVI, 1651
 from Moctezuma River, Mexico, IX, 298
 Eocene faunas, CAL, 136; MSC, 84
 in northern Europe, XV, 152
 Eocene faunule, MSC, 108
 Eocene fields, new, at Coalinga, contours on top Gatchell sand showing relationship of, XXIV, 1115
 Eocene folding, SC, 27; XX, 1573
 at Powder Wash, XXII, 1036
 Eocene foraminifera, MSC, 78; XXIX, 924
 from the type Lodo formation, Fresno County, California, XXVII, 1269
 in Mercure formation, XXVIII, 18
 Texas, VIII, 443
 Trinidad, XX, 1443
 Eocene foraminiferal assemblages from Zemorra Creek, Chico Martinez Creek, and Cameros Creek, XXVII, 1372
 in California, distribution of, XXIV, 1924
 Eocene formations, California, Coalinga district, XXIV, 1944
 California, range through all types of sediments, XXIV, 1943
 California, tentative foraminiferal correlation of, XXIV, 1929
 diverse lithology of, SC, 24; XX, 1570
 Laredo-Monterrey highway section, GC, 611; XIX, 1380
 Laredo-Monterrey railroad section, GC, 611; XIX, 1380
 Louisiana, SD, 284, 333
 northeastern Mexico, thickness of, GC, 619; XIX, 1388
 Poland, XXI, 1189
 San Ignacio-Sauz section, GC, 614; XIX, 1383
 unconformities at bases of, FOP, 56; XXV, 1488
 Eocene fossil plants in Swauk formation, XXIX, 1393
 Eocene fossils, SC, 17, 21; XX, 1563, 1567; XXIX, 893. (See Fossils)
 California, IX, 992
 Colombia, X, 392
 Conroe field, GC, 798; XX, 745
 Gulf Coast, XXVI, 1188
 Hiawatha gas fields, Wyoming and Colorado, GAS, 351
 in well at Topila, MEX, 119
 Vicksburg, GC, 337, 338; XIX, 1647

- Eocene gas production, XXI, 985
 Eocene Gulf Coast crude oil, PROB, 125, 131
 variation of, with depth, PROB, 120, 122
 Eocene land mass extending southeast from San Francisco Bay, map, XXVII, 641
 Eocene localities in Salinas valley district, California, XVII, 81
 Eocene macrofossils, XXIX, 81
 Eocene mammalian fossils in Wind River Mountains, XXV, 141
 Eocene-Miocene contact, structural contour map of southeastern Virginia drawn on, XXIX, 84
 Eocene mollusca, Louisiana Midway, check list of, XXV, 737
 of Tejon age, MEX, 114
 Eocene Ocala limestone, Florida and parts of Georgia and Alabama, map, XXVIII, 1684
 Eocene oil production on Santa Elena peninsula, Ecuador, XXIX, 536
 Eocene oils, PROB, 98, 137, 138, 141, 142
 Eocene-Oligocene (Jackson-Byram) contact, MEX, 124
 vertical movements in, MEX, 162
 Eocene-Oligocene Mercure formation, Venezuela, XXIX, 526
 Eocene-Oligocene-Miocene fauna in Latin America, MSC, 177
 Eocene orbitoid foraminifera, MSC, 33
 Eocene paleogeography, SC, 25; XX, 1571
 Eocene pool, East Coalinga, structure section through, showing northward pinch-out of Gatchell sand, XXIV, 1946
 Eocene production from Gulf Coast domes, GC, 14; XVIII, 513
 in Laredo district, XXIV, 1077
 Wilcox, at Segno field, Polk County, and Cleveland field, Liberty County, Texas, XXII, 1274
 Eocene rocks, Punjab oil region, XVIII, 294
 Santa Lucia Mountains, California, MSC, 162
 Santa Lucia Mountains, California, distribution of, XX, 491
 Eocene sands, PROB, 130
 histograms of some, XXIV, 1740
 Eocene sandstone, Coalinga region, California, XIV, 415
 Eocene sandstones in Santa Ana Mountains, CAL, 126
 Eocene section near El Carmen in northern Bolivar, XXIX, 1092
 of Cierro Hills, SC, opp. 26; XX, opp. 1572
 Eocene sections, map of California showing location of, XXIV, 1924
 Eocene sediments, XXIX, 73
 in Virginia Coastal Plain, uniform thickness of, XXIX, 85
 near Morgan Hill, California, XXVII, 643
 Eocene series in Gulf Coastal Plain, XXIII, 155
 in southern Arkansas, XXII, 956, 979
 in Sugar Creek field, XXII, 1508
 Eocene shales, PROB, 194
 Alazán region, MEX, 123
 Eocene strata, Channel Islands, SC, 108; XX, 1654
 classification of, SC, 19; XX, 1565

- (Eocene)
columnar sections of, SC, 20, 21; XX, 1556, 1567
correlation of, SC, 22; XX, 1568
Eocene stratigraphic accumulations, XXIV, 1948
Eocene stratigraphy in Chico Martinez Creek area, Kern County, California, XXVII, 1361
in Santa Ynez Mountains, bibliography on, XXVII, 19
in western Santa Ynez Mountains, Santa Barbara County, California, XXVII, 1
Eocene structural accumulations, XXIV, 1945
Eocene structures, relation of Upper Cretaceous to, in Louisiana and Arkansas, VII, 379
Eocene Tallahassee limestone and equivalent non-fossiliferous limestone, Florida and parts of Georgia and Alabama, map, XXVIII, 1690
Eocene-Tertiary formations, correlations of, GAS, 657
Eocene volcanic rocks in trans-Pecos Texas, XXII, 1432, 1434
Eocene Wasatch red and variegated shales and sandstones overlapping unconformably all older beds, XXIII, 1150
Eocene Wilcox, oldest productive series on Gulf Coast, XXIII, 875
Eocene Yokut sandstone north of Coalinga, California XXIV, 1722
Eocene zones in Rocky Mountain fields, XXVII, 472
Eocene, CAL, 157, 158
Eola, map of south-central Louisiana showing relation of, to adjacent fields, and to regional sub-sea Wilcox structure, XXV, 1364
Eola and Ville Platte fields, comparison of coreographs from, XXIV, 1921
Eola area, Avoyelles Parish, Louisiana, reflection-seismograph structure map of, XXIV, 709
Eola field, Avoyelles Parish, Louisiana, XXIV, 1083, 1903
analyses of oil in, XXV, 1393
bottom-hole pressures at, XXV, 1393
columnar section, XXV, 1369
cross section showing discontinuity of producing sands; top Wilcox as datum, XXV, 1380
development map of, XXV, 1368
electrical log, discovery well, XXIV, 710
estimates of reserves at, XXV, 1395
geophysical exploration at, XXV, 1365
graben-and-horst faulting in, XXVIII, 544
gravity of oil at, XXV, 1379, 1393
history of development of, XXV, 1365
isopach maps of, XXV, 1387-1390
Jackson fauna in, XXV, 1374
production data, XXV, 1391
proration at, XXV, 1395
reflection-seismograph structure map of, XXV, 1366
relief model of, prepared on top of Wilcox, showing fault patterns, XXV, 1384
rotary drilling at, XXV, 1391
stratigraphy in, XXV, 1367
structure in, XXV, 1381
structure-contour map of, drawn on (Eola)
sub-sea top Cockfield sand, XXV, 1385
structure-contour map of, drawn on sub-sea top of Wilcox, XXV, 1382, 1386
unconformity above Vicksburg at, XXV, 1371
unconformity at Cane River-Wilcox contact in, XXV, 1381
Vicksburg fauna in, XXV, 1371
west-east cross section drawn from electrical logs, XXV, 1372
Eola oil field, Avoyelles Parish, Louisiana, geology of, XXV, 1363, 1597
Eolian deposits in marine sediments, RMS, 496
references on, RMS, 502
Eolian sands, RMS, 279
Eotvös, Baron, XIII, 1177; XVIII, 925
Eotvös torsion balance, IX, 807; XIX, 22; XXV, 1261
Schweydar-Bamberg type, X, 1201
used in discovery of Nash salt dome in Texas, XIX, 501
Eötvös torsion-balance principles, X, 1210
Eouvergerninae, MSC, 243
Epeirogenesis, XXI, 1596
Epeirogenic movements, MEX, 92, 94, 95, 97
Epeirogenic part of Miocene, duration of, in comparison with orogenic disturbances, SC, 51; XX, 1597
Epeirogenic type of diastrophism and sedimentation, XXVI, 1753
Epeirogeny, SC, 141; XX, 1687
lower Mesozoic, SC, 6; XX, 1552
Epi-anticlinal faulting, XXVII, 455
at Salt Creek field, Wyoming, STR II, 594
Epitaxial faults, X, 116
description and genesis, XXV, 2187
discussion, XI, 1233
movement, XXV, 2189
vertical, sections in planes of, XXV, 2190
Epibathyal zone, ammonoids principal element of fauna in, XXIV, 1201
Epicontinental seas, PROB, 303; RMS, 242, 332
possible indications of zones of weakness and stress, CD, 219
shallow, which are nearly tideless, favorable for deposition of black muds, XXIII, 1193
Epidote, RMS, 290, 498, 499, 602, 609
Epidote group, XXVIII, 76
Epidote zone, XXIV, 2097
assemblage of mineral, XXIV, 2088
lower, XXIV, 2095
lower, assemblage of minerals, XXIV, 2088
transgression of paleontologic horizons, XXIV, 2098
Epigenetic processes and changes affecting crinoidal sediment, XXVI, 1769
Epigenetic residues, XX, 1093
Epigenetic structures, XXVI, 1723
Epithermic or shallow neritic bottoms, XXIV, 1168
Epoch, XXIII, 1087
Eponides zone of Gulf Coast section, XXII, 295
Eponides yeguaensis zone, GC, 426; XIX, 690
Gulf Coast, XXII, 1006
Hardin field, STRAT, 568
Eppenaer, A. R., XXVI, 204
Epsom salts, XXVIII, 1213
Equal-pound-loss law, X, 901
Equations, kinematic, coefficients in, RMS, 73
Equatorial misfit of shifted American continents, CD, 110
Equatorial regions, RMS, 56, 117, 121, 131, 396
Equators, CD, 143, 144
Equatorward drift, CD, 35, 180
Equatorward force unfavorable to Wegener's theory, CD, 149
Equilibrium in ocean, RMS, 54
mechanism of maintenance, RMS, 57
Equilibrium constant of calcium carbonate in sea water in Baltic, RMS, 316
Equilibrium profile, of shoreline, RMS, 272
Equipment for impregnating porous materials, XXI, 262
used in California in 1941, XXVI, 1136
used in Cunningham field, Kansas, XXI, 523
Equipotential surfaces, curvature of, XVI, 1250
in sea, RMS, 109-111
Equivalent concentration of ions in sea water, RMS, 65
Equivalent radius, RMS, 542
Equus beds, Kansas, II, 82
Nikkel pool, STRAT, 106
Era, XXIII, 1087
Erath, XXV, 1011
Erath field, Vermilion Parish, Louisiana, XXVIII, 1256; XXIX, 797
electric-log cross section, XXVIII, 1257
Erb, E. R., XX, 950
Erb, J., MEX, ix
Erb, Josef Theodor, memorial of, XIX, 309
Erdbebenkunde, Grundlagen der, review, XI, 766
Erdgeschichte und Bewegungsbild der Erde, XXI, 1595
Erdmann, Charles E., GAS, 248, 258, 268, 1065; SBP, 196; STRAT, 327; XV, 1181, 1190; XXIII, 462; XXVI, 1318; XXIX, 1265
Upper Cretaceous of Rocky Mountain area, discussion, XXI, 1592
Erdmann, Charles E., and Bartram, John G., natural gas in Montana, GAS, 245
Erdmann, Charles E., and Davis, N. A., STRAT, 303, 304
Cut Bank area, STRAT, 365
Erdmann, Charles E., and Dobbin, C. E., GAS, 248, 250, 258, 272; STRAT, 273, 283, 303; XXVI, 1356
geologic occurrence of oil and gas in Montana, PROB, 695
structure contour map of Montana plains, review, XVI, 1045
Erdmann, Charles E., and Schwabrow, J. R., GAS, 248; XXVI, 1343
Border-Red Coulee oil field, Toole County, Montana, and Alberta, Canada, STRAT, 267
Erdmann, E., XXI, 1274
Erdöl, Allgemeine Erdölgeologie und Überblick über die Geologie der Erdölfelder Europas, review, XVI, 104
in Deutschland, review, XVI, 424
reviews, VII, 584; XV, 849; XVI, 947; XX, 1504

- Erdöl und seine Verwandten*, review, VII, 584
- Erdöl-Lagerstätten und Schlammlvulkane in Kolumbien, Sudamerika*, review, XVII, 1284
- Erdöl-Muttersubstanzen*, review, XIX, 1551
- Erdöltagung der Deutschen Geologischen Gesellschaft in Hannover, 5-7, Mai, 1932*, review, XVI, 1161
- Erdölwerkstätten von Volkroda*, review, XVI, 613
- Erickson, GAS, opp. 128; SC, opp. 80
- Erickson, A., XX, 1231
- Erickson, E. Theodore, VI, 294, 299, 302; XI, 762
- Erickson, E. Theodore, and Wells, R. C., XX, 296, XXVIII, 927
- Erie County, New York, GAS, 951
- Medina in, XXII, 82
- Erikson, D., XXVII, 1181
- Erin basin, XXIV, 2103, 2110
- Erin syncline, Trinidad, XXIV, 2114
- Ermisch, Karl, XXVI, 820, 824; XXIX, 534
- petroleum, Erdöl-Lagerstätten und Schlammlvulkane in Kolumbien Sudamerika*, review, XVII, 1284
- review, XVII, 1283
- Erosion, PROB, 181, 228; RMS, 6, 8-12, 169, 235, 243, 270, 285
- critical velocity of, RMS, 11
- in Baltic, RMS, 300
- marine, RMS, 238
- of Atlantic coast line, RMS, 232
- of beaches, RMS, 213, 243
- of coast line by sea, RMS, 201, 243, 396
- of reservoir rocks, preservation of oil during, XVII, 827
- of salt stock in Gulf Coast salt plug in late Oligocene, evidence of, XXIII, 604, 1576; XXVII, 86
- of sediments at time of deposition, RMS, 526
- of shells, RMS, 287
- of stream bed, RMS, 9
- of uplifted area, effect in reducing pressure and raising temperature, XXIII, 1333
- processes of, RMS, 26
- rate of, on sea cliffs, RMS, 270
- relation of, to transportation, RMS, 8
- results of epicycles of, XXI, 440
- submarine, RMS, 268
- submarine, in Baltic, RMS, 317
- types of, RMS, 8
- velocity in streams, RMS, 9-12
- wave, RMS, 270, 272, 275
- with silt-laden water, RMS, 11
- Erosion and deposition, diagram of zones showing change in position of zones in transgressing sea, XXV, 2019
- Erosional changes inconsistent with Wegener's hypothesis, CD, 114
- Erosional interval within Sundance formation, XXI, 770
- Erosional slumping, XXIX, 202
- Erosional terraces in Artesia field, New Mexico, STR I, 113
- Erosional unconformities, GAS, 106
- Erosional unconformity at base of St. Peter sandstone, XXI, 775
- Erratic boulders in Johns Valley shale, XVIII, 992
- of Ouachita region inclusions within Johns Valley shale, XXIX, 200
- Erratic mass on McLish sand in Murray County, Oklahoma, XXIX, 199
- Erratic masses of Arbuckle Mountains, XXIX, 195
- of Arbuckle region, comparison of, with erratic boulders of Ouachita region, XXIX, 200
- of Caney shale, XVIII, 999
- south of Sulphur, theories of origin of, XXIX, 201
- south of Sulphur, thrust faulting possible cause of, XXIX, 203
- Ervin, Waldemar M., XIV, 37
- Erwin, Homer, XIV, 1353
- Esarey, Ralph E., XIV, 423, 428; XXIV, 968; XXVII, 818; XXIX, 691
- discussion of structure of Tri-County field, XIV, 428
- Tri-County oil field of southwestern Indiana, STR I, 23; XI, 601
- Ebbjerg, RMS, 331
- Escalante Desert, XXIII, 1307
- Escalera-Aldamas terrace, XV, 885
- Escalera anticline, MEX, 75
- micro-fauna from, MEX, 74
- Navarro-Midway contact, MEX, 90
- Escapado Canyon, XXIX, 990
- Escapado Canyon section, XXIX, 982
- Escarpment, RMS, 219, 220, 246, 254
- Eschbacher, Benjamin, XXIV, 672
- Escher, B. G., and Kuehner, P. H., XVIII, 1176
- Escher, B. G., and Kuenen, Ph. H., XIV, 504; XV, 59
- experiments in connection with salt domes, review, XIV, 107
- Escher, Frank, MEX, 157
- Escola, Peutti, CD, 10
- Escondido beds near Ramones, MEX, 68
- Escondido Canyon section, XXV, 2152
- Escondido formation, V, 27; VI, 324
- Esgen, W. K., PROB, 353, 600, 604, 605
- relation of accumulation of petroleum to structure in Stephens County, Texas, STR II, 470
- Washburn field, La Salle County, Texas, XXVI, 276
- Eskridge shale, I, 113; II, 74
- Esmeraldas formation, XXIX, 1098
- Esperanza anticline, XXIX, 1127
- Esperson dome, Liberty County, Texas, PROB, 418; GAS, 728; GC, 857; XVIII, 1632; XXI, 1086
- Esperson field, Liberty County, Texas, Yegua sand productive at, XXIV, 1089; XXVIII, 858
- Esperson oil, PROB, 115
- Esperson salt dome, Liberty County, Texas, torsion-balance survey of, XIV, 1129
- Esquias formation, XXVIII, 1116
- Essential factors in valuation of oil properties, III, 367
- Essentials of engineering astronomy, XXI, 1352
- Essex, H., and Smith C., XXVIII, 937
- Esserville oil field, Michigan, XXIX, 695
- Estabrook, Edward L., PROB, 722, 838, 911; IX, 1296; X, 118, 1076, 1083, 1087, 1099; XIII, 113; XIV, 142; XX, 63; XXV, 2187
- an alibi for geologists, IX, 1205
- faulting in Wyoming oil fields, VII, 95
- occurrences of oil and gas in Wyoming, VIII, 515
- Wyoming oil-field waters, IX, 235
- Estero Bay and Morro Rock, view showing sand spit and lagoon, (Estero)
- XXVI, bet. 154 and 155
- Estero Topila, MEX, 64, 134, 135, Fig. 22 (in pocket)
- Esters, PROB, 261
- in sediments, RMS, 443
- Estill County, Kentucky, Corniferous at Irvine, XXVIII, 531
- unexposed Silurian section and producing zone of Irvine oil field, XXII, 1447
- Estimate of gas, STRAT, 103, 104
- Estimating oil reserves, this matter of, XXV, 164
- Estimation by volumetric methods of recoverable oil and gas from sands, XXV, 1302
- of developed petroleum reserves XXII, 566
- of natural gas reserves, GAS, 1016, 1035; XII, 1095
- of reserves of natural gas wells by relationship of production to closed pressure VI, 444
- Estonia, oil shale in, XXIV, 392
- Estuaries, RMS, 229, 271
- sediments of, RMS, 257
- Etard, A., XVII, 1254
- Etard, A., and Oliver, L., X, 1272
- Etchegoin, MSC, 174
- Etchegoin claystone, Kern Front field, STRAT, 11
- Etchegoin formation, CAL, 232-236, 248, 288, 309; MSC, 157, 168, 172, 174; PROB, 202, 406, 747, 792, 796; SC, 63; VI, 58; XX, 1609; XXIII, 33
- ash beds in, CAL, 243
- diatoms from, CAL, 246
- Elk Hills field, California, STR II, 49, 55
- exposed in North Dome, CAL, 46
- Kettleman Hills, CAL, 240, 245, 246, 254
- Kreyenhagen Hills, CAL, 236
- McKittrick field, California, STR I, 18; XI, 618
- micro-paleontological divisions, Sunset-Midway oil region, California, X, 487-489
- San Joaquin Valley, XVI, 370
- south of Coalinga, CAL, 279
- Wheeler Ridge, California, X, 497
- Etchegoin group, Kettleman Hills, GAS, 129
- Etchegoin overlap in San Emigdio Mountains, XI, 615
- Etchegoin Pliocene of middle California, MSC, 172
- Etchegoin sand, McKittrick field, XVII, 8
- Etchegoin sands, PROB, 201; XXIX, 651
- Kettleman Hills, XVIII, 482
- unconformable upon Reef Ridge, XXIII, 34
- Etchegoin time, SC, 64; XX, 1610
- Etching of grains, RMS, 604, 608
- Eteroscopic model of topography, faults of, XXIX, 1757
- Ethane, GAS, 808, 1075, 1149; XXVI, 32
- Ethane-oxidizing bacterium, XXVII, 1180
- Ether, RMS, 435, 594
- extract of sediments, RMS, 441-443
- Ether cuts, relation of, to properties of sediments, SBP, 160-165
- Etheridge, R., Jr., XX, 1038, 1050; XXV, 374

- Etherington, Thomas John, MSC, 154, 163, 171, 172; XXVI, 794; XXIX, 1088, 1135
 free oil in ammonites, Colombia, South America, XVIII, 875
 Ethics, professional, of geologists, I, 127
 code of, American Association of Petroleum Geologists, XVIII, 964-965; XIX, 1844-1845, XXI, 1234-1235; XXIV, 1519-1520; XXVI, 511-512; XXVIII, 164-165; XXIX, 395-396
 report of committee on code of, XXIX, 117-118
Étude synthétique sur le Mésozoïque mexicain, review, XV, 92
Études géologiques et prospections minières par les méthodes géophysiques, review, XVII, 444
 Etzikon Coulee, Alberta, well, VII, 155
 Eubanks sand Richland field, Louisiana, GAS, 780, 781, 784; XV, 947
 Eucha section of Osage, XXIII, 333
 Eucutta field, Wayne County, Mississippi, XXVIII, 802; XXI, 827
 fossils from, XXIX, 1009
 Upper Cretaceous index fossils in wells in, XXIX, 1011
 Eugene formation, MSC, 161
 Eunson, H. J., XXV, 1219
Euomphalus fauna of San Andres limestone, XXI, 850
 Eurasia, CAL, 301, 304
 tectonics of, CD, 69
 Eureka, California, RMS, 280
 (well 1), SBP, 87-153, 403
 Eureka, Nevada, CAL, 61
 Eureka and Bammel fields, oil and gas in, XXIII, 878
 Eureka anticline, PROB, 191
 Eureka Canyon field, PROB, 191
 Eureka district, XXII, 533
 Eureka section of Little Hatched Mountains, XXII, 529
Europäischen Erdölagerstätten, zur Bildung der, review, XVI, 220
 Europe, CAL, 80, 98, 120, 157, 209, 223, 301; MSC, 92, 98, 173-175, 180, 181, Fig. 14 (in pocket); RMS, 225, 547
 central, recent tectonics of, XX, 855
 clays in, RMS, 483
 continental, crude-oil production of, XXV, 1272
 Czech-Slovakia, VI, 523
 dust falls in, RMS, 498
 helium and nitrogen in Mesozoic in, GAS, 1069
 late Paleozoic orogenic movements in, XIX, 1257
 Lower and Upper Carboniferous in, XXIX, 131
 natural gas industry in, GAS, 1090
 northern, MSC, 169
 northwest, structure of salt domes as revealed in salt mines, SD, 45; IX, 326
 northwestern, salt domes of, I, 85
 oil movements in, XXV, 359
 possibility of oil and gas production from Paleozoic formation in, XX, 1476
 production and reserves of Axis controlled countries, XXVIII, 1499
 salt domes in, I, 85
 sediments of, map of, RMS, 226
 sulphate-reducing organisms, PROB, 917
 Switzerland, IV, 87
 Tongrian of, MSC, 174
 (Europe)
 western, controlled crude production in, XXV, 1274
 western, search for Paleozoic oil in, XIX, 1824
 widely differing classifications of Carboniferous beds in, XXIX, 133
 Europe and Asia, status of Americans in petroleum developments, IX, 1089
 Europe and California, Middle Tertiary correlation between, MSC, 173
 Europe and North America, comparison of Carboniferous-Permian boundary in, XXIV, 321
 importance of agreement in definition of boundaries of Carboniferous and Permian systems in, XXIV, 292
 late Paleozoic crustal movements of, XIX, 1253
 European and American late Paleozoic crustal movements, correlation of, XIX, 1296-1303
 European and Californian sequences, MSC, 175
 European correlation, Crickmay's XXI, 757
 European countries and Japan, uses of oil in, XXV, 353
 European domes, SD, 3, 45, 87, 148, 177-206
 European equivalent of Texas Cretaceous sections, XVI, 744
 European geophysical notes, XII, 1181
 European journals and the war, XXIII, 1852
 European Middle Tertiary, MSC, 181
 European Miocene, MSC, 180
 European oil and gas occurrences and their relationship to structural conditions, XVIII, 736
 European powers, major, problems of oil supply of, XXV, 365
 European regions favorable for accumulation of oil and gas, XX, 1491
 European salt domes, IX, 328
 European sections, standard, Carboniferous-Permian boundary in, XXIV, 293
 European sequence, MSC, 176
 European stages, standard, time relations of Ellis group of Sweetgrass arch with, XXIX, 1264
 European standard section, difficulties of correlation of Gulf Coast formations with, XXII, 988
 European Tertiary, MSC, 20
 European Tertiary column, age of California Stage sequence with respect to, MSC, 168
 European theories of orogenic disturbances, SC, 143; XX, 1689
 European type section, age of Wyoming Jurassic rocks compared to, XXI, 754
 Jurassic of Sundance of northwestern United States correlated with, XXI, 758
 'Eury, Grand, XXIV, 1755, 1757
 Eurythermal type, MSC, 171
 Eustatic adjustment, XXV, 2012
 Butaw formation, I, 154; V, 492, 655; XXII, 820, 1632, 1644, 1645, 1648; XXVII, 905; XXVIII, 41; XXIX, 821
 Covington County, Mississippi, GC, 381; XIX, 1160
 Kentucky, XIV, 851
 marine, XXII, 790
 Butaw sands, XXIX, 817
 Eutrophic lakes, XXV, 834
 Euxinic deposits possible source rocks of petroleum, XXI, 1136
 Euxinic facies, XXI, 1115
 Evaluation of new geophysical methods, XXIX, 865
 of petroleum in oil sands by its index of refraction, XXI, 1464
 Evangeline oil field, GC, 965; XIX, 1311
 Evans, CD, 215
 Evans, Charles S., STRAT, 271, 273, 281, 283, 297; XVIII, 1391; XXII, 1146
 Milk River area and Red Coulee field, Alberta, Canada, review, XVI, 425
 review, XXV, 1950
 Evans, Charles S. and Hume, G. S., XVI, 792
 Evans, David L., XII, 244
 Evans, David M., XXV, 1897; XXVIII, 831
 Evans, E. A., Survey, Texas (well 313), SBP, 292-335, 408
 Evans, E. W., PROB, 7, 12, 13; XIV, 610
 Evans, Frank G., Bailey, Thomas L., and Adkins, W. S., revision of stratigraphy of part of Cretaceous in Tyler basin, northeast Texas, XXIX, 170
 Evans, J. P., XXI, 1071
 Evans, John William, CD, 94; XXI, 113
 radioactive energy not all converted into heat, CD, 47
 theory of continental drift, CD, 34, 214
 Evans, Louis H., memorial of John R. Roberts, XVIII, 277
 Evans, Noel, XII, 1024; XVII, 252; XX, 1468, 1470, 1471, 1472; XXI, 1514, 1524, 1527, 1528, 1538, 1571; XXIII, 1754, 1794, 1795, 1797, 1798, 1800, 1810, 1811, 1813; XXV, 1679, 1685; XXVI, 1582
 discussion of Quartermaster unconformity of Weatherford area of Oklahoma, XXI, 1529
 Quartermaster unconformity of Weatherford area, Oklahoma, XXII, 110
 stratigraphy of Permian beds of northwestern Oklahoma, XV, 405
 stratigraphy of Weatherford area, Oklahoma, XII, 705
 Evans, O. F., XXVIII, 1018
 Evans, P., RMS, 606
 Evans, P., and Reid, A., drilling mud: its manufacture and testing, review, XXI, 812
 Evans, Robley D., XXIV, 1530, 1535, 1536, 1540; XXIX, 5
 Evans, Robley D., and Goodman, Clark, XXIX, 15, 16, 1485
 Evans, Robley D., and Kip, A. F., XIV, 1532
 Evans, Robley D., and Raitt, R. W., XIV, 1531, 1539
 Evaporation, PROB, 466, 834, 874, 910; RMS, 88, 89, 124
 as a cause of dynamic equilibrium, RMS, 125
 as related to attitude, RMS, 88, 89
 as related to rainfall on sea, RMS, 87, 88
 effect on currents, RMS, 188
 effect on salinity of sea, RMS, 87, 88
 effect on vertical circulation, RMS, 90

- (Evaporation)
intensity of, RMS, 88
of water by gas, STRAT, 825
of water, quantity of, per year, RMS, 89
- Evaporation pans, RMS, 499
- Evaporation theory of origin of Gulf Coast crude oil, argument against, XXI, 938
- Evaporative effect of gas, PROB, 851
of migrating natural gas, PROB, 482
- Evaporite, lower, in Goldsmith field, XXIII, 1528
stratigraphic position of, XVIII, 1247
upper, in Goldsmith field, XXIII, 1528
- Evaporite deposition, XXVI, 230
in Delaware basin, XXIII, 1684, 1693
in Guadalupe time, PTNM, XXVI, 757
- Evaporite deposits of Permian in West Texas region, PTNM, XXVI, 730
- Evaporite salts in Green River basin, Wyoming, exploration for, XXV, 1799
- Evaporites, XXIV, 341
of Ochoa series, XXIII, 1676; XXVIII, 1598
of Ochoa series, origin of, XXVIII, 1616
of Salado formation, XXVIII, 1608
of Whitehorse group, XXVIII, 489
- Ewart field, Michigan XXVI, 1103, XXVII, 823, 828; XXVIII, 763; XXIX, 700
- Eve, A. S., XVI, 1264
- Eve, A. S., and Keyes, D. A., applied geophysics in search for minerals, review, XIII, 1571
- Even-bedded member of Whitehorse in Kansas, XXIII, 1805
- Everglades, Florida, deep test in, XXIII, 1713
- Evidence for upper Jurassic landmass in eastern Mexico, XXVII, 524
of erosion of salt stock in Gulf Coast salt plug in late Oligocene, XXIII, 604; XXVII, 85
- Evidences of oil and gas, FOP, 3, XXV, 1435
- Evolution of Gulf Coast crude oil, XXI, 914
methanation theory of, XXI, 943
- Evolution of living matter, XXIX, 492
of Pacific Ocean, observations on, XXV, 1811
of petroleum, discussion, XVIII, 143
- Evolutionary development, gaps in, XXVI, 53
- Ewald, R., SD, 709
- Ewald, R., and Kreummer, A. W., IX, 729
- Ewalt pool, XXIX, 764
- Ewell, R. H., RMS, 485
- Ewing, B. R., Jr., XXII, 542
- Ewing, Maurice, XXI, 333, 338, 339; XXIX, 83, 89, 92
- Ewing, Maurice, and Leet, L. Don, XVIII, 112
- Ewing, Maurice, Crary, A. P., and Rutherford, N. M., XXIX, 950
- Ewing, Maurice, Crary, A. B., Rutherford, H. M., and Miller, Benjamin, XXIX, 79
- Ewing, Maurice, Woollard, G. P., and Vine, A. P., XXIX, 893, 895, 896
- Examination of fragmental rocks, XXIII, 612
- Example of directional drilling as applied to geology in Ellis County, Kansas, XXVII, 87
- Excavation, lake basins due to, XXV, 828
- Exceptional Silurian brine near Bay City, Michigan, XXIX, 567
- Excess base, RMS, 143, 147
in Baltic, RMS, 317
in sea water, RMS, 143, 144
- Excess charges on clay particles, RMS, 476, 481
- Excess electrolyte, removal of, in mechanical analyses, RMS, 537
- Excessive production, effect of, on discovery rate in California, XXIII, 934
- Exchange (Austausch) coefficients, RMS, 7, 22-24
- Exchange of heat between cement and surrounding formations, factors affecting, XXI, 796
of sulphate for carbonate in waters, XXIV, 1221
- Exchange capacity of sediments, effect of, on mechanical analyses, RMS, 537
- Exchangeable cation, RMS, 428, 480, 482
- Excrements. (See Faecal pellets)
of diatoms, RMS, 197
- Executive department, cooperation of geologist with, XXII, 519
- Exercise on amount of source bed required to furnish Oklahoma City oil pool, XXV, 1706
- Exfoliation of Tamesí, MEX, 83
weathering by, of Méndez, MEX, 70
- Exline limestone, XXV, 32, 43, 56, 63, 65; XXVI, 1592
- equivalent of *Trepostira* zone, XXV, 65
- unconformity above, XXV, 32
- Exogyra cancellata* zone, XXII, 1651, 1654
in Atlantic and Gulf coastal plains, XVII, 1351
in Texas, XII, 47
traced twenty-five hundred miles, XVII, 1351
- Exogyra costata* zone XII, 791
in Texas, XII, 56
- of Selma chalk and Prairie Bluff chalk, XXII, 1653
- Exogyra ponderosa* zone of Tombigbee sand and Selma chalk, XXIII, 1653
- Exogyra* zone, XXII, 531
- Exothermic reactions, PROB, 244, 267
- Exotic boulders, XXII, 896
- Expanding gas, evaporative effect of, PROB, 868
- Expansion per unit volume of water, RMS, 69
- Expansion and contraction of oil and water, PROB, 833
- Experiment on compressibility of sand, XIX, 1053
with a drop auger, X, 722
- Experimental and geophysical evidence, recent, of mechanics of salt-dome formation, XXVII, 51
- Experimental methods of study of hydrocarbon-oxidizing bacteria, XXVII, 1176
- Experimental procedure in preparation of shadowgraphic contour maps, XXV, 2165
- Experiments with lights, shadows, and contours, and the resulting shadowgraphic contour maps, XXV, (Experiments)
2161
- Exploitation of Wasson field, XXVII, 517
- Exploration, crude-oil prices as incentive to, XXVII, 989
for evaporite salts in Green River basin, Wyoming, XXV, 1799
for new oil fields in Azerbaidjan, summary of the methods of, review, XIX, 1826
for oil, XXI, 155
for oil and gas in western Kansas during 1943, XXVIII, 1759
geological, and wildcat drilling in California, XXIII, 717
geophysical, SSIV, 2186
important, in Gulf Coast in 1939, XXIV, 1090
important, in Louisiana, in 1936, XXI, 1062
important, in Texas, in 1936, XXI, 1062
in China, III, 99
in Kansas, method of, XXV, 1108
in Llano Estacado, FOP, 97; XXV, 1529
in Oklahoma in 1941, methods of, XXVI, 1062; XXVIII, 792
in South Texas in 1942, XXVII, 739
in southern states, comparative statistics on, XXIX, 639
in Texas Panhandle in 1944, XXIX, 724
notes on present status of problem of, XXVI, 1214
organization of, XXI, 711
outlook for research in, XXIX, 1203
role of petroleum geologist and geophysicist in, XXVII, 932
- Exploration and development, expansion of, in West Texas and southeastern New Mexico in 1943, XXVIII, 830
in California, 1940, XXV, 1159
in California, 1941, XXVI, 1135
in South Texas, trend in, XXVIII, 863
- Exploration and discoveries in Oklahoma during 1939, XXIV, 1013
- Exploration activities, factors involved in, XXVII, 933
- Exploration departments, ratios of geologists to seismographs in, XXVII, 915
- Exploration drilling in 17-states area, new proved reserves currently attributable to, XXIX, 1589
- Exploration geology, petroleum engineering as an aid in, XXIV, 137
- Exploration Geophysicists, Society of, XXIII, 1592; XXIV, 891
annual meeting, 1938, XXII, 578
annual meeting, 1939, XXIII, 722
annual meeting, 1940, XXIV, 400, 905
- Exploration geophysics, XXIV, 2186
XXV, 170
- Exploration methods, foreword, XXIV, 1353
in Mississippi in 1944, XXIX, 833
in north and west-central Texas XIV, 1047
in Trinidad, XXIII, 963
- Exploration problem in California XXV, 1165
- Exploration work, VII, 615; VIII, 65; in Colombia, XXIII, 963
in south Texas in 1941, XXVI, 1001

- Explorations, geological, east of Andes in Ecuador, XI, 1253
- Explorations and discoveries in Oklahoma during 1940, XXV, 1092
- Exploratory drilling, classification of, and statistics for 1943, XXVIII, 701
- committee on statistics of, XXIX, 630
- definition, XXVIII, 704
- for petroleum, classification of, definitions, XVIII, 703
- in California, 1920-1939, results of, XXIV, 1712, 1714
- in California, in 1943, results of, XXVIII, 750
- in California in 1944, results of, XXIX, 647
- in California, in 1944, summary of, 648
- in Illinois in 1941, XXVI, 1087
- in New York, Pennsylvania, and eastern Ohio in 1943, XXVIII, 719
- in 1943, statistics on, XXVIII, 711, 712
- in 1944, XXIX, 629
- in 1944, map, XXIX, 635
- Exploratory drilling and proved oil reserves in area of eleven selected states, statistics on, XXVIII, 714; XXIX, 643
- in seventeen-states area, statistics on, XXIX, 1584, 1586
- Exploratory drilling statistics, XXVIII, 709
- Exploratory drilling statistics, 1938-1944, review of, XXIX, 1581
- Exploratory footage, XXIX, 631
- Exploratory holes, XXVIII, 702
- drilled from 1939 to 1944, increasing average depth of, XXIX, 1585
- drilled in 1943, basis for locating, XXVIII, 716
- drilled in 1944, basis for locating, XXIX, 619
- in area of eleven selected states, statistics on, XXVIII, 718
- preliminary small, economy of drilling, XXII, 647
- Exploratory methods in California developments in 1943, XXVIII, 746
- in developments in Eastern Interior basin in 1943, XXVIII, 757
- in engineering geology, XXVI, 1799
- in Gulf Coast region, XXIII, 872
- in Illinois in 1942, XXVII, 816
- in New Mexico, trends in, XXIX, 755
- in Oklahoma in 1944, XXIX, 717
- in Oklahoma fields, largely seismograph surveys in 1943, XXVIII, 787
- in south Arkansas and north Louisiana in 1944, XXIX, 814
- in South Texas, XXVIII, 863
- Exploratory methods and developments in West Texas and southeastern New Mexico in 1943, XXVIII, 827
- Exploratory methods and results, XXIX, 652
- in Canada in 1944, XXIX, 663
- in Illinois in 1944, XXIX, 687
- in southeastern United States in 1943, XXVIII, 805
- Exploratory results of major companies and independents in Oklahoma during 1940, comparison of, XXV, 1098
- Exploratory statistics, comparative, for southern states, XXVIII, 715
- Exploratory test wells in 1939 in Oklahoma, XXIV, 1014
- in 1940 for ten leading counties in Oklahoma, XXV, 1093
- Exploratory tests, important, in East Texas, in 1937, XXII, 733
- important, in East Texas, in 1938, XXIII, 895
- important, in East Texas, in 1940, XXV, 1088
- important, in East Texas in 1941, XXVI, 1055
- important, in East Texas, in 1942, XXVII, 788
- important, in East Texas, in 1943, XXVIII, 849
- important, in East Texas in 1944, XXIX, 772
- in New Mexico in 1940, XXV, 1063
- number of oil wells, gas wells, and dry holes drilled as, in 1943, XXVIII, 715
- number of oil wells, gas wells, condensate wells, and dry holes drilled as, in 1944, XXIX, 637
- Exploratory well drilling in Houston district, results of, XXVII, 1100
- Exploratory wells, classification of, XXVIII, 709; XXIX, 630, 1588
- completed in southeastern New Mexico, 1943, XXVIII, 825
- completed in West Texas, 1943, XXVIII, 822
- completed in West Texas, 1944, XXIX, 736
- drilled in Illinois in 1943, downward trend in number of, XXVIII, 757
- in California completed in first quarter of 1944, XXVIII, 1045
- in southern states, 1944, XXIX, 636
- of 1943, distribution of, by classes and results of drilling, XXVIII, 719
- of 1944, distribution of, by classes and results of drilling, XXIX, 644
- tabulation of statistics on, XXVIII, 710
- Exploratory work in California during 1939, XXIV, 1125
- in Oklahoma in 1938, XXIII, 824
- in Oklahoma, in 1941, XXVI, 1062
- in Oklahoma in 1942 compared with similar work in 1941, XXVII, 794
- in Oklahoma in 1943 and 1942, comparative summary of, XXVIII, 788
- in Rocky Mountain region, XXII, 692
- Exploring for oil in new regions, need for, XXVII, 968
- Export of United States oil, XXV, 354
- Exposure, time of, in photographing megafossils, XXIX, 1500
- Exposure technique in X-ray studies, RMS, 619
- Exposures of Vicksburg Oligocene fauna in western Louisiana, XXIII, 246
- Exshaw black shale, XXVII, 44
- Extension of Rose dome intrusives, Kansas, XII, 757
- Extension wells, definition, XXVIII, 707
- Extensions, areal, of California fields during 1940, XXV, 1165
- important, in Louisiana in 1938, XXIII, 886
- in Rocky Mountain region in 1944, XXIX, 1598
- marked and discoveries in north- and west-central Texas during 1938, XXIII, 850
- (Extensions)
- new pools, and new zones discovered in Oklahoma during 1940, XXV, 1094
- to California fields in 1937, XXII, 710
- to California fields in 1939, XXIV, 1118
- to California fields in 1942, XXVII, 870
- to Elk Basin field, Wyoming, in 1943, XXVIII, 798
- to known fields in Canada in 1944, XXIX, 660
- to New Mexico pools in 1943, XXVIII, 821
- to old fields in Colorado in 1942, XXVII, 857
- to old fields in Montana, XXII, 684
- to old fields in Montana in 1942, XXVII, 857
- to old fields in Montana in 1943, XXVIII, 797
- to old fields in New Mexico, XXVII, 858
- to old fields in New York, 1941, XXVI, 1111
- to old fields in Rocky Mountain district during 1940, XXV, 1151
- to old fields in Rocky Mountain region, XXI, 995
- to old fields in Rocky Mountain region during 1939, XXIV, 1104
- to old fields in south Texas, 1938-1939, XXIII, 869
- to old fields in Utah, XXVII, 858
- to old fields in Wyoming, XXII, 684; XXVII, 858
- to old oil-producing areas in Rocky Mountain region in 1938, XXIII, 909
- to old pools in western Kansas, XXII, 674
- to pools in Eastern Interior basin in 1943, XXVIII, 753
- to proved areas in Texas during 1940, XXV, 1010
- to proved fields in Gulf Coastal region, XXI, 1061
- to proved fields in Louisiana in 1941, XXVI, 990
- to San Joaquin Valley fields during 1939, XXIV, 1125
- Extensions and development, north Louisiana, XXV, 1036
- south Arkansas, XXV, 1036
- Extensions and developments of fields in East Texas in 1937, XXII, 731
- of fields in East Texas in 1938, XXIII, 892
- Extensions and discoveries in north and west-central Texas in 1939, XXIV, 1056-1059
- Extensions and new pools in California in 1943, XXVIII, 746
- Extensions and new sands in Coastal Louisiana fields, XXVII, 737
- in Coastal Texas, XXVII, 733
- in Texas fields in 1941, XXVI, 987
- Extent of sand, relation to reserves, XXV, 1309
- Extent and interpretation of Hogshooter gas field, III, 212
- discussion, III, 216
- Exformation, IV, 75
- External agencies in sea, RMS, 77, 117
- effect of, on composition of water, RMS, 51, 58
- External boundary regions, RMS, 124

- External extinction angle of clay minerals, RMS, 470
- External forces in sea, RMS, 103, 111, 121
- Extinction zone of an oil field, XIX, 607
- Extracting oil from cores, apparatus for, XXVII, 66
- Extraction curves for oil shales with different solvents, XIII, 319
- Extraction flask, for bitumen determinations, SBP, 65, 66
- Extrapolation, geological, and pseudabyssal sediments, XXVI, 765
- suggestions for, XXVI, 770
- Extraterrestrial hydrocarbons and petroleum genesis, XIX, 900
- Extrusive rocks, MEX, 145, Fig. 12 (in pocket)
- Eylau field, XXIX, 769
- Eyoub, Djavad, PROB, 309
- discussion of geology of northeast Mexico, XV, 891
- petroleum possibilities of Turkey, XV, 629
- prospective oil territory in Turkey, discussion, XIV, 1088
- review, XVII, 1016
- Eyring, H., Hirschfelder, J. O., and Taylor, H. S., XXVIII, 937
- Ezzell field, McMullen County, Texas, XXII, 754
- F
- Fabric of Bethel sandstone, XXVIII, 95
- of crinoid sediment, XXVI, 1717
- of sedimentary deposit, XXVI, 1716
- Fabric classification and analysis of a sedimentary deposit, XXVI, 1716
- Facies, RMS, 202
- Aragón as, of upper Chicotepec, MEX, 109
- argillaceous, of San Felipe, MEX, 63, 66, 67
- Barrancón beds as, of Tamesí, MEX, 86
- bathyal, of limestone, MEX, 22-24, 96, 160
- change of, in San Felipe, MEX, 65-67
- changes of, in relation to glauconitization, RMS, 513
- fyisch, of Tamesí, MEX, 88, 89
- marly limestone, replaced by gray shales, MEX, 55
- mixed, of El Abra and Tamaulipas limestone, MEX, 35, 43, 223
- more calcareous on anticlines, MEX, 172
- neritic, MEX, 95
- reef, MEX, 23, 24, 36, 60, 222
- Tantoyuca beds as, of Chapapote, MEX, 117
- Facies and foraminiferal sequence, MSC, 83
- Facies and structure, geologic characteristics as indicated by, MSC, 157
- Facies changes in Upper Cretaceous toward east in Alabama, XXII, 1648
- in Upper Cretaceous toward north in Mississippi, XXII, 1645
- Facies factors, MSC, 82
- Factors affecting porosity and permeability of aggregates of grains, XXII, 1272
- Factors, essential, in valuation of oil properties, III, 367
- governing estimation of recoverable oil reserves in sand fields, discussion, XVIII, 1078
- in volumetric estimates, XXV, 1303
- influencing oxidation factor, SBP, (Factors)
- 42-44, 56-60
- influencing properties of sea water, RMS, 70
- influencing transport of detritus by wind, RMS, 496
- influencing variations in sea, RMS, 58
- principal, of natural gas land valuation, III, 378
- Facts, objective, relative importance in stratigraphic classification, XXIX, 128
- Faecal mud, RMS, 201
- glauconitization of, RMS, 506-509
- pictures of, RMS, 520
- Faecal pellets, RMS, 197, 202, 289, 443, 509-512
- at Great Salt Lake, XXII, 1401
- at Great Salt Lake, chemical analyses of, XXII, 1404
- at Great Salt Lake, origin of, XXII, 1405
- in relation to marine deposits, RMS, 516
- of *Modiolus phaseolina*, RMS, 517, 520
- references on, RMS, 523
- Fage, RMS, 7
- Fairbanks, H. W., CAL, 10, 21, 68, 83, 86, 89, 98, 107, 112, 118; MSC, 115; SC, vii, 88, 96; X, 130; XII, 132; XV, 374; XIX, 523; XX, 1533, 1634, 1642; XXI, 949; XXIII, 53, XXV, 194, 1332; XXVI, 163; XXVII, 114, 116, 191, 192, 203, 204, 254, 1343; XXVIII, 459, 472, 499
- Fairbanks to Westfield, cross section, XXIX, 270
- Fairbanks and Satsuma fields, XXIII, 686
- Fairbanks area, GAS, 743
- Fairbanks field, Harris County, Texas, XXI, 1051, 1055; XXIII, 878
- Fairchild, Herman Le Roy, RMS, 215
- Fairchild, Herman Le Roy, a chapter in earth science history. The Geological Society of America, 1888-1930, review, XVII, 97
- Fairchild Petroleum Company, SD, 646
- Fairfax field, California, XXIX, 650
- Fairfax Oil and Gas Company, Paugh 3 (well 426), SBP, 349-379, 410
- Fairfax pool, PROB, 775
- Fairgrounds pool, PROB, 763
- Fairport field, Russell County, Kansas, STR I, 35; STR II, 676; GAS, 467
- production, XXI, 500
- Fairport pool, PROB, 777
- Falcon, N. L., and Harrison, J. V., XXIV, 2115
- Falcon area of Arkansas, XIV, 833
- Falcon field, XXIII, 896
- Falcon graben, XIV, 838
- Falcon sandstone member, XXVI, 263
- Falconer, J., XIX, 1215
- Falfurrias dome, SD, 759, 760
- geology, IX, 578
- Fall City pool, Nebraska, XXV, 1111; XXVII, 813
- gravity of oil in, XXV, 1112
- Fall River sandstone, XXVI, 1534
- Osage field, STRAT, 851
- Fall zone, XXIX, 73
- Fallas y petróleo en la Antigua Zona de Reserva Fiscal de cinco mil hectáreas de Comodoro Rivadavia, review, XVI, 267
- Fallon County, Montana, Cedar Creek (Fallon)
- anticline in, XXI, 991
- Falls City field, Nebraska, XXVI, 1084
- Misener sand productive in, XXV, 1657
- Falls City pool, Nebraska, acidization in, XXVI, 1084
- oil production in, FOP, 84; XXV, 1516
- Falls City shale, GC, 490; XVII, 1314
- Falls County, Texas (wells 393, 394), SBP, 292-335, 410
- False bedding in Chicotepec, MEX, 99
- in Mesón beds, MEX, 136
- Family, MSC, 184, 185, 186, 187, 189, 190, 193, 195, 196, 227, 229, 239, 247, 306, 307, 327, 338, 343, 346, 356
- Famosa sand, Kern Front field, STRAT, 12
- Fan method applicable to search for piercement-type salt domes in Gulf Coast embayment, XXIV, 1406
- for use of refraction seismograph, XXIV, 1406
- Fan-shaped folds, MEX, 159
- Fancher, George H., XXVII, 83
- Fancher, George H., Lewis, J. A., and Barnes, K. B., XXVI, 1723
- Fanelli, E., STRAT, 327
- Fanglomerates, XIII, 501
- Fanguy, Nolan Anthony, memorial of, XXVI, 1854
- Fankhouser pool, Kansas, STR II, 157
- Fannett dome, GC, 171, 176, 177; XIX, 357
- effect of character of rim syncline on production at, XX, 1422
- Fannett field, Jefferson County, Texas, XXV, 1010
- Frio sand productive at, XXIV, 1089
- Fanning, Leonard M., rise of American oil, review, XX, 1130
- Fano, RMS, 335
- Fanshawe, John R., XXIII, 478
- structural geology of Wind River Canyon area, Wyoming, XXIII, 1439
- Fanshawe, Mrs. John R., XXIII, 1446
- Fanska pool, XXVIII, 772
- Fant Tuff member, XXV, 2003
- Far East, speculative possibilities for exploration, XXVIII, 1504
- Far eastern area, consumption of oil in, XXV, 356
- Farenwald, A. W., XXV, 2177
- Faresite, XXI, 425
- Fargo field, XXV, 1067
- Fargo pool, XXVI, 1047
- Fargo, R. L., CAL, 51
- Farish et al, SD, 645
- Farish, Linn Markley, MSC, 23, 24, 202, 206, 344, 347, Fig. 14 (in pocket); XVIII, 1407; XIX, 1432
- memorial of XXVIII, 1783; XXIX, 1530
- review, XXIV, 751
- Farish, Linn Markley, and Snider, L. C., natural gas in Quebec and maritime provinces, GAS, 89
- Farish, W. S., XVIII, 1459
- Farmington fault, GAS, 981
- Farmington field, Pennsylvania, GAS, 978, 981; XV, 672, 684
- Farmington sand, GAS, 369
- Farmington structure, XV, 927
- Farnham anticline, Utah, GAS, 381, 1066
- Farnham dome, XXVII, 461, 467
- gas in Permian beds at, FOP, 67; XXV, 1499

- (Farnham)
 horst in, XXVIII, 548
 Farnsworth, H. R., Woodring, W. P., and Roundy, P. V., GAS, 146; PROB, 747
 Faroes, foraminifera of, MSC, 12
 Farr, C. Coleridge, and Rogers, N. M., GAS, 1061
 Farr, Coleridge, XVIII, 239
 Farrar, W., XVII, 1003, 1008
 Farshey, SD, 343
 Fash, R. D., IX, 646
 Fash, Ralph H., PROB, 835; XII, 911; XVII, 838; XXIV, 1353, 1444; XXVI, 865
 analyses of Woodbine cores for presence of salt water, XVIII, 265
 discussion of Venezuelan oil-field waters, XV, 908
 theory of origin and accumulation of petroleum, XXVIII, 1510
 Fash, Ralph H., and Berger, Walter R., relation of water analyses to structure and porosity in West Texas Permian basin, PROB, 869
 Fash, Ralph H., and Whitehead, R. B., STR I, 373, 374, 382, 383, 384
 Fash, Ralph H., Rosaire, E. E., and McDermott, Eugene, *et al.*, discussion of geochemical exploration (soil analysis), XXIV, 1434
 Fashing clays, GC, 492; XVII, 1315
 Fat, decomposition of, PROB, 40
 formation of, PROB, 46
 Fath, Arthur Earl, SC, 130; STRAT, 451; STR II, 366, III, 266; V, 546, 575, 577; VI, 43, 79, 81, 321; VII, 7, 9, 11; X, 293, 295, 297; XII, 507, 715; XIII, 25, 32, 35, 627; XIV, 1550; XVIII, 243, 248, 1075; XX, 1182, 1676
 is the Stapleton pay of Eldorado field, Butler County, Kansas, Ordovician or Mississippian in age? VI, 374
 structure map of Eldorado pool, Kansas, STR II, 164
 suggestion of origin of faults in Oklahoma, X, 295
 Fath, Arthur E., and Moulton, G. F., GAS, 305
 oil and gas field of Lost Soldier-Ferris district, Wyoming, review, IX, 363
 Fats, RMS, 435, 441, 443
 decomposition of, RMS, 422
 Fats and oils, PROB, 41, 45
 Fatty and waxy substances, conversion of, into petroleum hydrocarbons, XVII, 1251
 Fatty acids, PROB, 36, 38, 39, 45, 261, 265, 450, 452; RMS, 424
 bacterial genesis of hydrocarbons from, XV, 441; discussion, XV, 703
 Fatty oils, XXIX, 13
 Fatty oils and fatty acids as source material for petroleum, XX, 296
 Fault, PROB, 416, 417, 419; XXVI, 1823
 active, in Buena Vista Hills field, Kern County, California, current movement on, XVII, 594
 an important factor in formation of Big Lake dome, Texas, STR II, 522
 around mud lumps, RMS, 172
 Balcones, PROB, 578
 Bradford field, Pennsylvania and New York, STR II, 419
 Cabin Creek field, West Virginia, STR I, 469
 Caracol pool, MEX, 185
 (Fault)
 Centralia-area, Illinois, Sandova STR II, 123
 complementary, relation to major fault, XXVIII, 1304
 compound, at Luling field, Texas, STR I, 267
 Fault, Currie, STR I, 312
 definition, XXVII, 1246
 Depew area, Oklahoma, STR II, 375
 determination of type locality of, XIV, 797
 Hewitt field, Oklahoma, STR II, 299
 Iles dome, Colorado, STR II, 99
 in Bahama area, RMS, 286
 in Mesón beds, Paso Abajo, MEX, 179, 180
 in Tuscaloosa formation, XXV, 2051
 Inglewood, PROB, 216
 Irma, part of an extensive fault system, STR I, 10
 Irma field, Arkansas, STR I, 7
 Irvine, PROB, 518
 Irvine-Paunt Creek, in eastern coal field, Kentucky, STR I, 78
 La Rosa field, XXV, 313
 Long Beach field, California, STR II, 72
 low-angle thrust, in Blairmore series on South Sheep River, Alberta, XIX, 1455
 Luling field, Texas, STR I, 257, 263
 Mata de Chapapote, MEX, 184
 McKittrick field, California, STR I, 18, 19
 Mexico, PROB, 330, 577
 near Lamberts Station, Alabama, plant-bearing clays separated from breccia by, XXIII, 1534
 near Natchez, XXIX, 34
 near-surface location of, by shallow holes, XXIII, 1305
 Nigger Creek, similarity to Mexia structure, STR I, 352
 normal, in Henne-Winch-Farris field, Texas, STR I, 403
 normal, in Texon zone on east side of Big Lake pool, Texas, STR II, 520
 of Balcones system, McLennan County, Texas, recent movements on, XVII, 439
 Oklahoma City field, XIV, 1527
 of flank of Tishomingo anticline, XXIV, 2146
 overthrust, Artesia field, New Mexico, STR I, 117
 overthrust, McKittrick field, not controlling feature, XI, 619
 overthrust, underlying Turner Valley, XXVIII, 866
 Pine Mountain, in eastern coal field Kentucky, STR I, 78
 Raccoon Bend field, GC, 687; XVII, 1470
 reverse, dividing State Line field, XXII, 259
 reversed, Depew fold terminated on east by, STR II, 372
 Salt Flat field, XIV, 1411
 San Manuel, MEX, 175
 Saxet field, XXIV, 1813
 sole, XIX, 1446
 Sulphur Mountain, effects in Sulphur Mountain fields, PROB, 192
 surface, in Nigger Creek structure, STR I, 412
 through Hampton Roads, XXIX, 87
 thrust, in Jefferson formation, XXV, 1736
 Trout Creek, in Salt Creek area, (Fault)
 XIX, 996
 underthrust, XXII, 182
 Ventura Avenue field, California, STR II, 30
 West Columbia field, Texas, STR II, 461, 463
 Whittier, PROB, 214, 751
 Zacamixtle pool, MEX, 215
 Fault belts in central and northern Oklahoma, XIV, 69
 Fault-block mountains and depressed basins developed in Pleistocene and late Pliocene time, SC, 74; XX, 1620
 Fault-block nature of Kansas structures suggested by elimination of regional dip, XIX, 1540
 Fault block reservoirs, XXIX, 1570
 Fault contact between Chimana formation and Guerecul formation, XXVIII, 10
 Fault escarpment in Fairport field, Kansas, STR I, 39
 Fault fields of Texas, composition of Woodbine waters from, STR I, 376
 structural data, STR I, 352
 Fault fissures in Southern fields, MEX, 207
 Fault line in south Texas, XXIII, 864
 Fault-line and Cretaceous discoveries in Texas, 1937-1938, XXII, 751
 Fault-line fields, comparison of Oklahoma City recovery curves with those of, XXVIII, 246
 in Navarro County, XXVI, 1053
 Woodbine, XXVII, 786
 Fault-line production in Alabama, XXIX, 817
 Fault-line scarp on Beaumont Terrace, GC, 246; XVII, 955
 Violet-Viola, in White Point and Saxet oil and gas fields, GC, 242
 Fault Line trend, XXVII, 743
 Fault map of California, CAL, 276
 Fault movement, effect in producing domes, XXI, 208
 Fault outcrops between Tuscaloosa and Ripley formations and Mississippian, XXV, 2051
 Fault pattern in surface rocks, Kettleman Hills north dome, California, XXVII, 1259
 Fault patterns of deep-seated domes, XXVIII, 1252
 Fault planes, migration along, GAS, 75
 Fault scarps, submarine, RMS, 254
 Fault segment reservoirs, XXIX, 1570
 typical reservoirs in, XXIX, 1571
 Fault structure, cause of drilling in Chiesman area, XXIII, 865
 of Mexia-Powell type at Talco, XXI, 1063
 Fault structures, PROB, 418
 along Powell-Mexia fault line, XXI, 111
 Fault system at site of Friant Dam, XXVI, 1823
 Fault terminology, XXV, 2181
 Fault trap, XV, 63
 accumulation in Padre Canyon field caused by, XXI, 981
 Fault trap reservoirs, XXIX, 1568, 1569, 1572
 Fault-trapped field, narrow, rigid 40-acre spacing pattern unfavorable for pay zone in, XXVIII, 249
 Fault troughs of deposition, SC, 145; XX, 1691
 Fault valley, submarine, RMS, 268

Fault wedge reservoirs, XXIX, 1570
 Fault zone, Balcones, STR I, 305
 extending from Union County, Illinois, to Ste. Genevieve County, Missouri, XXIV, 770
 Laredo district, Texas, STR I, 395
 Long Beach field, California, STR II, 68
 Mexia, STR I, 305
 West Columbia field, Texas, STR II, 467
 Fault zone fields of northeast Texas to salt-dome area of Gulf Coast, section from, XXI, 1085
 Fault-zone waters in east Texas, STR I, 373, 374
 Fault zones, STR II, 690
 at site of Grand Coulee Dam, XXVI, 1812
 Balcones, Luling, and Mexia, in Texas, XXIX, 1733
 in Texas, probable Cretaceous, Oligocene, Miocene, and Pliocene dates of movement along, XXIX, 1736
 Faulted anticline, structural trap at Ardmore pool, XXVII, 802
 Faulted anticline and syncline, map, XXV, 2184
 Faulted anticlines, Elk Basin field, Wyoming and Montana, STR II, 580
 Faulted anticlines and domes, XXVII, 464
 in Rocky Mountain region, oil and gas fields on, XXVII, 355
 Faulted belts, *en echelon*, MEX, 185
 Faulted condition in Carter Oil Company's Grisso well No. 1, Keokuk pool, XXIII, 238
 Faulted conditions, complex, of Allegheny synclinorium in Pennsylvania, XXVIII, 732
 Faulted dome at Van, XXI, 1084
 Raccoon Bend field, GC, 676; XVIII, 1459
 Faulted fields, PROB, 328
 Faulted folds, southeastern Utah, XIX, 1487
 Faulted graben, Corpus Christi area, GC, 248; XVII, 960
 Faulted monocline, XXIII, 959
 Irma field, Arkansas, STR I, 2
 Faulted troughs, grabens in Gulf Coast anticlines and their relation to other, XXVIII, 541, 697
 Faulted zone in Wind River Canyon area, XXIII, 1466
 Faulting about salt structures, PROB, 674
 active, in Lavaca County, Texas, XXII, 104
 Appalachians, XXV, 417
 apparent reversed, in Trinidad, XXIV, 2120
 at close of *Margulinina* time at Jennings dome, effect on accumulation of oil and gas, XXVII, 1121
 Bellevue field, Louisiana, STR II, 231, 243, 247
 between Saucian and Relizian, MSC, 158
 Billings dome, XXIV, 2015
 butt, in Trinidad, XX, 1450
 buttress and truncated sands at Wheeler Ridge, XVI, 370
 Caliente Range, XXV, 259
 California, PROB, 737, 745, 749, 750
 Central basin of Appalachian geosyncline, XXV, 823

(Faulting)
 central Tennessee, XXVII, 1050
 Coast Ranges, CAL, 50
 complex, at Saxet field, XXIV, 1816
 contemporaneous with deposition, GAS, 525
 in Amarillo district, GAS, 393
 in Arkansas basin, GAS, 516
 in Dover field, GAS, 71
 in Mexia, GAS, 674
 in northeast Texas, GAS, 664
 Cretaceous or later, in western Kentucky, evidences of, XXV, 2051
 Crinerville field, Oklahoma, STR I, 201
 Cromwell field, Oklahoma, STR II, 302, 305, 307
 Cunningham field, Kansas, XXI, 513
 Currie field, Texas, X, 64
 Dakota basin, XXVI, 1570
 Darrow dome, XXII, 1416
 dominant form of local deformation within the large dome folds in Seminole district, Oklahoma, STR II, 359
 dominant structural influence in northern Duval and McMullen counties, XXI, 1437
 east flank of Ozark uplift, XXIII, 1357
 East White Point field, XXV, 1991, 1993
 eastern sides of Man Mountain and Burning Springs anticlines, XXV, 824
 effect of, on production at Saxet field, XXIV, 1830
 effects of, at Saxet field, XXIV, 1829
 effects on carbon ratios, PROB, 89
 effects on temperature, PROB, 998
 Elk Basin field, Wyoming and Montana, STR II, 581
 Elk Hills field, California, STR II, 45; 51, 54
en echelon, in Texas Panhandle field, XIX, 1099
 Eola field, XXV, 1383
 epi-anticlinal, in Salt Creek field, Wyoming, STR II, 594
 Finger Lakes region, New York, XVI, 688
 Fitts pool, XX, 971
 foothills of Cordillera Oriental, XXIX, 1132
 Government Wells field, GC, 638; XIX, 1138
 graben, in coastal plain of northeastern Brazil, XXIX, 549
 Grass Creek field, Wyoming, STR II, 635
 High Island dome, GC, 932; XX, 583
 horizontal, experiments relating to results of, XII, 715
 horizontal-shift, in Trinidad, XXIV, 2114
 importance at Inglewood field, XII, 647
 important examples, STR II, 686-688
 in Cretaceous limestones in Yates area, Texas, XXIV, 142
 in Monterey shales, Santa Maria district, California, STR II, 20
 in Van Horn sandstone, XXIV, 153
 in Willis formation, XXII, 104
 Illinois fields, influence of, review, V, 107
 Illinois oil field region, STR II, 119
 Jesse pool, XXII, 1569

(Faulting)
 Kansas, XIV, 1553
 Kay County, Oklahoma, STR I, 160
 Keokuk pool, Oklahoma, XXIII, 237
 Kettleman Hills North Dome, XXVII, 1260
 Livingston County, Michigan, PROB, 548
 major, in early Cotton Valley time, XXVII, 1469
 McFaddin-O'Conner field, GC, 673, 674; XVIII, 529
 Mendoza province, Argentina, XII, 701
 Mexico, PROB, 390, 392, 396
 minor, recurrent since major Appalachian faulting, XXV, 2050
 modification of former structural relations by, STR II, 691
 Moffat dome, Colorado, STR II, 103
 Moose Mountain anticline, XXVII, 49
 Mount Sylvan dome, GC, 1049; XIII, 1368
 multiple hinge, in Dog Canyon area, XXI, 842
 nature of, in southern part of Eastern Interior basin, XXIV, 852
 near beginning of widespread Middle Miocene transgression, SC, 123; XX, 1669
 Nemaha Mountains, Kansas, STR I, 66
 normal, XXII, 182; XXIX, 202
 normal, in Illinois-western Kentucky fluorspar district, XXI, 780
 north-central Texas, XXIV, 105
 Olympic Mountains, XXIX, 1399
 Orange field, GC, 892; XX, 543
 Osage County field, Oklahoma, STR II, 387
 Panhandle anticline, Texas, X, 741
 post-Appalachian, in western Kentucky, XXV, 2046
 post-Cretaceous, relation to salt cores, in Utah, XI, 386
 post-Hamilton, XXII, 1547
 post-Miocene, PROB, 804
 post-Pottsville, in western Kentucky, XXV, 2048
 primary, XXII, 837
 primary cause of oil accumulation in Schott-Aviator field, Texas, STR I, 406
 probable at West Ferris dome, Wyoming, STR II, 659
 progressive, of salt domes in Gulf Coast region, XXIX, 1328
 Quebracha field, ME2, 198
 Raccoon Bend field, GC, 688; XVII, 1472
 radial, accumulation of oil at Anse la Butte dome controlled by, XXVII, 1151
 Refugio field, XXII, 1213
 relation to anticlinal accumulation, STR II, 691
 relation to migration, STR II, 690
 relation to structural relief, XXVIII, 1254
 Rio Grande region, XXI, 499
 Rock Crossing, Texas, XXI, 526
 Rocky Mountain region, X, 105
 Salt Creek field, Wyoming, STR II, 594
 San Joaquin Hills area, SC, 134; XX, 1680
 San Joaquin valley, XIII, 101
 San Marcos quadrangle, XI, 829
 secondary, XXII, 841

(Faulting)

- sections showing accumulation of oil before and after, XXVIII, 1309
southeastern Virginia, XXIX, 85
southern Oklahoma, XXI, 1011
southwestern Arkansas, XIV, 829
Spindletop, XXI, 488
step, in Eastern Cahillia anticline (pool), MEX, 183
Tehuacana zone of, STR I, 324, 357
Thomas field, Kay County, Oklahoma, discussion, XII, 769
Thornburg dome, Colorado, STR II, 103
thrust, XV, 398
thrust, possible cause of erratic masses south of Sulphur, XXIX, 203
thrust, and coarse clastics in Temblor Range, California, XXV, 1327
Union County, Illinois, XXI, 779
western Kentucky, evidences of Cretaceous or later, XXV, 2051
Wilmington oil field, XXII, 1057
Wind River Mountains, XXV, 148
Wyoming, Colorado, and New Mexico, PROB, 722, 723
Wyoming oil fields, VII, 95
Faulting and doming in south Louisiana, age of, XXVIII, 1305
Faulting and folding in Keokuk pool in Pennsylvanian time, XXIII, 236
Faulting and petroleum accumulation at Mexia, Texas, VII, 226; discussion, VII, 233
Faults, PROB, 133, 295, 397, 409, 561, 739, 747; XVII, 550
accumulation of oil and gas related to, PROB, 257, 526
affecting site of Boulder Dam, XXVI, 1807
Amelia field, XXIII, 1649
as channels, PROB, 426
associated with Mid-Continent anticlines, PROB, 613
associated with Nye-Bowler lineament, Montana, XX, 1177
at site of Shasta Dam, XXVI, 1820
Bakersfield region, SC, 71; XX, 1617
barriers to up-dip migration, PROB, 578
Bellevue field, XXII, 1678
Bowers field, XXVII, 37
Caddo field, Louisiana, STR II, 184, 192, 194, 195
Chico Martinez Creek area, XXVII, 1370
Coalinga district, mostly of Pleistocene age, SC, 69; XX, 1615
Coast ranges, XIII, 200
Comodoro Rivadavia oil field, Argentina, XVI, 556
Creek and Osage counties, Oklahoma, origin of, X, 293, discussion X, 727
circular, XXIX, 202
classification of, XXVII, 1245
discussion, XXVII, 1633
and thrust fault on Barranquilla-Cartagena highway, Colombia, discussion, XXVIII, 1649
Clay Creek dome, GC, 772; XX, 83
complementary, XXVIII, 1303
Conroe field, GC, 790, 801; XX, 737, 749
deep-seated, relation of, to surface structural features of Central America, VII, 1
deep-seated, relation to surface

(Faults)

- structural features of Central Montana, VII, 1
Depew area, Oklahoma, STR II, 368
East Texas, oil migration in, STR I, 383, 384
effect on migration of oil and gas, X, 125
effect on oil accumulation in Little Lost Soldier dome, Wyoming, STR II, 648
effect on per acre total production unknown until field is developed, XXII, 567
effect on porosity of compact limestone, MEX, 170
Eldorado field, Kansas, STR II, 163
en échelon, GC, 266; XVII, 1209
en échelon, in central Oklahoma, PROB, 615
en échelon, in Oklahoma, XVIII, 243
en échelon in Oklahoma and Kansas, XIX, 956
Faults, epantoclinal, X, 116
discussion, XI, 1233
origin and significance as revealed by experiments, XI, 853
Faults, favorable to oil accumulation in Elk Basin field, Wyoming and Montana, STR II, 686
favorable to oil accumulation in Salt Creek-Teapot Dome field, Wyoming, STR II, 686
Florence field, Colorado, STR II, 83
geosynclinal boundary, XX, 910
Glass Mountains, Texas, X, 879
high-angle, XXVII, 430
higher concentration of salts in Woodbine waters along, XXVIII, 1635
Homer field, Louisiana, STR II, 215, 217
horizontal, XXVII, 1255
Huntington Beach field, PROB, 220
importance in connection with dam sites, XXVI, 1795
important bearing on amount of production in Caddo field, Louisiana, STR II, 186
in cap rock at Jefferson Island dome, GC, 1003; XIX, 1622
in Columbia lime, West Columbia field, Texas, STR II, 466
in Cretaceous rocks of Kansas, XXI, 954
in Paluxy formation, and oil wells in Sulphur Bluff field, Hopkins County, Texas, map showing location of XXI, 112
in relation to production, PROB, 389
increased production near, STR II, 688
influence in causing segregation and accumulation of oil, VII, 219
influence of, as possible traps in Oriskany sands, XXI, 1585
intersecting, XXVI, 1144
intersecting, in Austin chalk, XXVIII, 550
lateral, XXVII, 1260
limited to strata at or near the surface, STR II, 689
limited to subsurface strata, STR II, 689
Little Lost Soldier dome, Wyoming, X, 120
low-angle overthrust, XVIII, 1584
low-angle thrust, XIX, 1469
low-angle thrust, in Canadian Foot-

(Faults)

- hills region, XIX, 1435
Luling field, Texas, STR I, 265
major, in south Louisiana fields, XXVIII, 1302
major, influencing distribution of carbon-ratio values, PROB, 85
Mexia and Tehuacana fault zones, Texas, STR I, 305, 346, 355
natural gas as factor in oil migration and accumulation in vicinity of, VII, 14
near Natchitoches, XXIX, 34
Nigger Creek field, Texas, STR I, 414, 416
normal, MEX, 168
normal, at Keokuk pool, XXIII, 236
normal, in Austin chalk, XXVIII, 548
normal and reverse, in Wind River Canyon, XXIII, 484
northern trans-Pecos Texas, XIX, 252
oblique, in Southern fields, MEX, 212, 214
of Balcones system in central Texas, evidence of recent movements along, XX, 1357
on west slope of Delaware Mountains, XXI, 893
Oklahoma, PROB, 616
Osage County field, Oklahoma, STR II, 382
overthrust, in Rocky Mountain basin, XIII, 431
Raccoon Bend field, XVII, 1473
Raccoon Bend field, geologic cross sections through, GC, 690
radial, XXVIII, 1303
radial, at Jennings dome, XXVII, 1109
relation to accumulation of oil and gas in Laredo district, Texas, STR I, 396
relative displacements of, above and below a contact, XXVI, 57
reverse, MEX, 168
Rocky Mountain basin, XIII, 432
role of, STR II, 686
role of, in modifying distribution of oil in reservoir rocks, XXVII, 1614
roughly proportional to number of wells in south Louisiana domes, XXVIII, 1301
St. George district, Utah, XXIII, 125
San Joaquin Valley, XI, 614
Seminole district, Oklahoma, STR II, 335, 338
series of, at Saret field, XXIV, 1818
series of, paralleling Gulf of Aqaba and Red Sea, XXII, 1218
Sierra Tamulipas, maximum displacement of, MEX, 162
small displacement, of in Méndez and Tamesh shales, MEX, 183
southern trans-Pecos Texas, XIX, 254
Staples, Larremore, and Lytton Springs line of, in Guadalupe, Caldwell, and Bastrop counties, XXIX, 1734
steep hade strike, importance in McKittick, California, fields, STR I, 21
Stephens field, Arkansas, STR II, 8
strike, common in south Texas, XXIII, 869
strike, important factor in creation of traps throughout Conroe trend, XXIII, 888

(Faults)

- Tejon Quadrangle, California, XXI, 221
 tendency of, toward radiation, STR II, 688
 tension, XXVII, 1258
 Tercio Park dome, Colorado, X, 121
 Texas, X, 1261
 theories of cause of, in Elk Basin field, Wyoming and Montana, STR II, 583
 theory postulating migration of oil along, XXI, 269
 thrust and normal, effect on accumulation at Dominguez field, California, XXIV, 1123
 Tioga field, XXII, 255
 trace-slip, XXV, 2181
 transverse, XI, 855
 transverse, at Salt Creek field, Wyoming, STR II, 594
 western Kentucky, all Paleozoic formations transected by, XXV, 2048
 Wertz dome, Wyoming, X, 120
 Wheeler Ridge, California, X, 499
 Wortham and Lake Richland, IX, 172
 Faults and fissures, tension, en échelon, XIII, 627
 Faults and flexures, Wind River Canyon area, XXIII, 1456-1457
 Faults and folds, diminishing intensity of dynamic metamorphism, PROB, 73, 74
 in Leonard beds, XXIV, 113
 Faults and local overlaps in Emba salt-dome region, XXIII, 508
 Fauna. (See Foraminifera, Fossils).
 abrupt changes in, XXVI, 53
 ammonite, in dolomite at Falls of Salt Croton Creek, XXI, 462
 Alazán locality, MEX, 120
 Atlantic, MEX, 139
 Barbados, XXIV, 1554-1556, 1558, 1559, 1564, 1570, 1574, 1586, 1590, 1591, 1593
 Brazilian XXI, 121
 Carwood, XXIV, 808
 Claiborne, XXV, 1374
 Clore, XXIV, 841
 Cook Mountain, XXV, 1375
 Edwardsville, XXIV, 808
 Eocene, CAL, 136
 Eocene, in Ecuador, XXVI, 1651
 Fern Glen, XXIV, 806
 Garber field, Oklahoma, STR I, 179
 Guadalupan, XXV, 1717
 in *Uvigerina littoralis* zone, list of, XXIV, 439
 Jackson, in Bala field, XXV, 1374
 Keokuk, bryozoans abundant in, XXIV, 807
 Little Hatchet Mountains, XXII, 535
 lower Miocene, CAL, 179
 Manass, XXIX, 176
 marine, of Owl Creek formation, XXI, 808
 marine invertebrate, of Belden shale member, XXVI, 1387
 marine molluscan, in Poncho Rico formation, XXI, 1343
 Midway, of western Gulf province, analysis of, XXV, 644
 Miocene, in Tepetate oil field, Louisiana, XXII, 291, 293-296, 300-304
 Miocene, in Texas, environmental distribution of, XXVIII, 997

(Fauna)

- Miocene marine invertebrate, in southern California, XXIII, 533
 Morrow, XXV, 1666
 Neocomian, XXV, 1794
 New Providence, XXIV, 807
 of Alamogordo member of Lake Valley formation, XXV, 2132, 2134
 of Anahuac formation, XXVIII, 1367
 of Arco member, XXV, 2135
 of Argovian age in Smackover formation, XXVIII, 1449
 of Barnett Hill formation, XXII, 909
 of Bigfork chert, Oklahoma, XXI, 8
 of Bliss limestone of Van Horn region, age of, XXIV, 154
 of Brownstown beds, Arkansas, IX, 1158
 of Burlington limestone, XXI, 1160
 of Caballero formation, Sacramento Mountains, XXV, 2124
 of Casey limestone, XXV, 689
 of Chester in Breckinridge County, Kentucky, XXII, 282
 of Chickasaw Creek siliceous shale, 878
 of Chickasawhay marl, GC, 365; XIX, 1169
 of Des Moines series, XXV, 43
 of Dinwoody formation, XVIII, 1668
 of Dip Creek formation, XXVIII, 516
 of Dona Ana member, XXV, 2127
 of Fossil Cliff stage, XXV, 377
 of Four Mile Dam formation, basis for correlation of Hamilton group of New York with Traverse beds in western Michigan, XXVII, 589
 of Frio formation in Texas, GC, 504; XVII, 1326
 of Glen Dean formation rich in bryozoans, XXIV, 835
 of Glenn formation in Ardmore quadrangle, VII, 342
 of Jackson formations in Texas, GC, 447-479, 481, 482, 485, 492, 494-498; XVII, 1301-1304, 1309, 1315-1321
 of Keokuk formation, XXI, 1161
 of Knoxville series, XXI, 1346
 of Kreyenhagen shale, XXIV, 1930
 of La Blanca structure, Texas, XXI, 947
 of Limestone Gap shale, XXII, 902
 of Lissie formation, non-marine, XXIII, 190
 of Lower Keyser formation, XXIV, 1985
 of Luisian, a medium-depth fauna, MSC, 124
 of Madison group, XXVI, 311
 of Markham Mill formation, XXII, 885
 of Monterey in California, XXV, 243
 of Moyers formation, XXII, 874
 of Neocomian beds in Chiapas, XXVIII, 1118
 of New Mexico Pennsylvanian, correlation with Mid-Continent fauna, XXIV, 176
 of Osage formations, XXIV, 806
 of Pascagoula clay, GC, 415; XVII, 646
 of Point Sal formation, XXVII, 1345
 of Prairie Bluff chalk, XXI, 807
 of Prairie Mountain formation, XXII, 884
 of Primrose formation, XXII, 901
 of Round Prairie formation, XXII, 899

(Fauna)

- of St. Joe formation of Oklahoma, XVIII, 1140; XXVIII, 327
 of San Pablo group, MSC, 172
 of Santa Anita formation, XXVIII, 13
 of Sargasso Sea, XXI, 1149
 of Saucusan Stage, MSC, 115
 of Seagen formation, XXVII, 618
 of so-called Dakota formation of north-central Colorado and its equivalent in southeastern Wyoming, review, VII, 306
 of Solomon Creek member, XXVII, 617
 of Tampa formation, XXV, 265-269
 of Tampa limestone, GC, 407; XVII, 637
 of Temblor in California, XXV, 228
 of Tenmile Creek formation, XXII, 870
 of Travis Peak, XXIII, 639
 of type Good shale, MSC, Fig. 14 (in pocket)
 of type Whites Creek member of Shoal River formation, list of, XXV, 275
 of Union Valley formation, XXII, 890
 of upper Helderberg limestone, XXIV, 1987
 of upper Vaqueros, ecologic change in, XXV, 223
 of vaqueros, XXV, 219
 of Vicksburg formation in Texas, GC, 498-501; XVII, 1321-1324
 of Vinales limestone, XXVII, 1521
 of Wapanucka limestone, XXII, 908
 of Wapanucka limestone in Atoka quadrangle, VII, 341
 of Wesley shale, XXII, 889
 of Whitehorse formation, XXV, 1683
 of Wildhorse formation, XXII, 880
 oldest known marine, on Sabine uplift, XXIX, 58
 Pacific, MEX, 139
 Pendleton, XXIX, 62
 Permian, in Val Verde County, Texas, XXV, 78
 Phosphoria, of Park City formation, XXIV, 624
 Silurian and Devonian, in Shipley field, XXV, 426
 Starks field, XXIII, 1835
 Vienna, XXIV, 841
 Wind River Mountains, XXV, 129
 Fauna and age of Asuncion, XXVIII, 501
 Fauna and flora, associated, maps of, XXIX, 1256
 Monterey shale of California at its type locality with a summary of its, XII, 969
 Faunal and floral connections across Atlantic, DC, 133, 137
 Faunal and lithologic facies, MSC, 96
 Faunal belts in Caliente Range, XXV, 207
 Faunal break at Midway-Arkadelphia contact, XXIII, 297
 between Cretaceous and Tertiary, XXV, 640
 between San Miguel and Escondido formations, XXVIII, 1180
 Faunal connections on opposite sides of Atlantic, CD, 137
 Faunal distribution on deltas, RMS, 174
 Faunal facies units, MSC, 96

- Faunal horizons of Coast ranges, MSC, 174
- Faunal list of blue-gray marl facies, San Andres Canyon, San Andres Mountains, XXV, 2156
- Faunal lists of Uralian, confusion in use of, XXIV, 253
- Faunal provinces of Recent oceans, MSC, 13
- Faunal record of Cuyama Valley, XXV, 247
- Faunal relations in Sundance formation, XXI, 749
- Faunal relationship between Prairie Bluff chalk, Owl Creek formation, and Corsicana marl of Texas, XXI, 809
- Faunal sequence, California Middle Tertiary, MSC, Fig. 6 (in pocket) continuous, evidence for, MSC, 85
- Faunal studies of Navarro group of Texas, summary of, XXV, 637
- Faunal succession in Cuyama valley and Caliente Range, XXV, opp. 224
- Faunal transitions, major, of Caliente Range, XXV, 234
- Faunal zones bounded by regional discontinuities in Permian section from Texas to Nebraska, XXIII, 1698
- diagnostic, in Anse la Butte dome, XXVII, 1132, 1134
- diagnostic, in Eola field, XXV, 1369
- of Brazier formation, XXIX, 1145
- of Upper Cretaceous in Gulf region, XXII, 1635
- Faunas, foreign, relation to Midway fauna of Texas, XV, 149
- graptolite, RMS, 367
- interior marine, XXII, 1636
- marine, of Wilcox strata, XXIV, 1892
- marine invertebrate, of Cowlitz and Arago formations, XXIX, 1408
- migration of, from the Pacific and from the Caribbean, into Bolivar geosyncline in Colombia, XXIX, 1076
- Miocene, Louisiana, IX, 88
- Miocene, Texas, IX, 85
- Mississippian, significance in three-fold subdivision, XXIV, 771
- of Blaine and Dog Creek formations, XXVIII, 1026
- of Catahoula formation, GC, 536; XVII, 534
- of Jackson group of eastern Mississippi, XXI, 92
- of Leonard and Guadalupe series, characteristically Permian, PTNM, 583; XXVI, 573
- of Missouri and Virgil series in Mid-Continent region, XXIX, 169
- of Finery limestone member, PTNM, 602; XXVI, 602
- of upper Relizian and Luisian Stages, MSC, 19
- of Warsaw and Salem formations, XXIV, 808
- Oligocene, CAL, 155
- Permian invertebrate, XcIV, 301
- Pliocene, Texas and Louisiana, IX, 83
- Potosi-Eminence, XXV, 1630
- Tertiary, MSC, 89
- Tertiary, of northern Colombia, XXIX, 1076
- Tertiary and Quaternary, climatic relations of, MSC, 81
- (Faunas)
- Upper Cretaceous, of southern California, XXVI, 176
- Faunas and formations, Pliocene, of southern California, classification of, CAL, 230
- Upper Cretaceous, of southern California, XXVI, 162
- Faunas and their containing sediments, relationships between, XXVII, 1065
- Faunule from near Briceland, MSC, Fig. 14 (in pocket)
- in McLure shale, Reef Ridge, MSC, Fig. 14 (in pocket)
- Pennsylvanian, from Park City formation, XXIII, 86
- Faunules in basal part of Wells formation, XXIX, 1152
- in Freeman and Jewett silt, MSC, Fig. 14 (in pocket)
- in Mendocino County, MSC, Fig. 14 (in pocket)
- in upper Concord formation, MSC, Fig. 14 (in pocket)
- Fausse Point dome, effect of character of rim syncline on production at, XX, 1422
- Faust, L. V., XVIII, 118
- reviews, XVII, 444, 1395; XVIII, 149, 1375
- Faust, L. V., and Weatherby, B. B., influence of geological factors on longitudinal seismic velocities, XIX, 1
- Favosites corals, XXI, 1589
- Favre, XVI, 1097
- Faxe limestone, XXVII, 270
- Fay, Albert H., PROB, 630; XVII, 491
- Fay, Thornwell, Jr., SD, 468; IX, 495
- Fayette, Lavaca and Colorado counties, Texas, section showing rapid down dip "shaling-out" of Claiborne sands and rapid rate of Claiborne thickening, XXIV, 1907
- Fayette beds, thickness, GC, 608; XIX, 1377
- Fayette County, Pennsylvania (well 421), SBP, 349-379, 410
- wells completed and drilling in Summit pool during 1940, XXV, 1138
- Fayette County, Texas, GC, 529
- detailed study of beds commonly known as Catahoula formation in, with particular reference to their age, GC, 528
- Fayette field, V, 358
- Alabama, GAS, 870
- Fayette formation, GC, 530, 592; PROB, 403; XVII, 528; XIX, 1361; XXVI, 266
- equivalent of producing horizons of Pettus field in Bee County, Texas, GC, 607; XIX, 1376
- Laredo district, Texas, STR I, 392
- northern Mexico, GC, 607; XIX, 1376
- Orchard salt dome, Fort Bend County, Texas, galena and sphalerite in, XIII, 384
- Texas, I, 35, 73, 74; II, 22; III, 313; V, 625
- Texas Gulf Coast, XXIII, 161
- Fayette member of Jackson formation in Driscoll pool, GC, 623; XVII, 819
- Fayette sand in Driscoll pool, GC, 628, 630; XVII, 824, 826
- Fayette sands, GC, 471; XVII, 1294
- Fayette sandstone (Eocene) (Tfa), SBP, 337-349, 415; XXV, 2005
- (Fayette)
- in Miranda and Pettus districts, XV, 761
- Jackson age of, GC, 473, XVII, 1297
- Fayette section, Rancherías-San Pedro de Roma, GC, 617, XIX, 1386
- Fayetteville formation, III, 271; IV, 180; V, 121, 147, 344, 405; XXV, 1653
- Arkansas, XI, 290
- Interior Highlands of Arkansas, GAS, 542
- Fayetteville shale northwest Arkansas, XIV, 127, 129
- of Mississippian in Arkansas coal field, XXI, 1407
- Fayol, XVIII, 1501
- Fayole, H., XIV, 319
- Fearnside, W. G., and Bulman, O. M. B., geology in the service of man, review, XXIX, 230
- Feather-edge porosity reservoirs, XXIX, 1558
- Feather River, CAL, 16
- Featherston area, GAS, 524
- Featherstone field, XXVI, 1044
- Featherstonhaugh, George William, XXII, 1251, 1253
- employed in 1834 under United States Topographical Engineers as geologist to inspect mineral and geological character of Ozark Mountains, XXII, 1252
- first geologist of the United States government, XXII, 1254
- Fecht, Arthur J., XIX, 1230
- Federal Reserve Board Index of Industrial Production, relationships between well completions and, XXII, 636
- Federal service, geologists needed in, XXIX, 239
- Federoff universal stage, XXIX, 1028
- Fedorow net, XXII, 1266
- Fedorow universal stage for use in solution of problem of two tilts, XXI, 350
- Fehr, W. R., MEX, 54
- Feigl, F., and Leitmeier, H., XXII, 1367
- Fekete, Eugene, MEX, 184
- Feland, O. D., STRAT, 601
- Feldspar, MEX, 145, 148
- laboratory study of percentage distribution of, in Red Clastic series, in Hinckley sandstone, and in Mt. Simon sandstone, XXIV, 745
- occurrence of, in California sandstones, discussion, XII, 1023
- Feldspar group, XXVIII, 76
- Feldspars, RMS, 44, 197, 211, 257, 382, 485, 487, 499, 531, 593, 604, 620, 623, 626; XXII, 556
- alkali, RMS, 602
- content of, of beaches, RMS, 211
- effect of transportation on, RMS, 33
- glauconitization of, RMS, 506-509
- identification of, by X-ray, RMS, 624
- Felix, Johannes, XXVII, 1511; XXVIII, 1078
- Feltham, C. B., XXVII, 1077
- Feltham, C. B., and ZoBell, C. E., XX, 261; XXVII, 1177
- Fence Post formation, II, 81
- Fenestelloid bryozoans, XXV, 2136
- Fenn, I. J., XXIV, 1428, 1432
- Fenneman, Nevin M., GAS, 706, 708, 742; GC, 910; RMS, 238; SD, 15, 347, 418, 484, 496, 501, 515, 516,

- (Fenneman)
717; I, 33; VII, 608, IX, 263, 277, 601, 744, 845, 861, 1285, 1289; XVII, 1492, 1505, 1511; XX, 561, 1283; XXIII, 147, 210, 1158, XXVII, 1123, 1140
description of oil and gas at Saratoga field, Texas, IX, 277
physiography of western United States, review, XV, 558
theory of origin of salt domes, IX, 845
Fenner, XI, 1293
Fenner, C. N., CD, 43
Fennoscandia, RMS, 331, 332, 344
Fenske, M. R., XXVII, 1596, 1599
Fenton, A. F., RMS, 516
Fenton, A. F., and Fenton, C. L., MSC, 10, 97; XXVIII, 376
Fenton, Carroll Lane, RMS, 516
Fenton, Carroll Lane, and Fenton, A. F., MSC, 10, 97; XXVIII, 376
Fenton, Carroll Lane, and Fenton, Mildred Adams, story of great geologists, review, XXIX, 1520
Fenton, Mildred Adams, and Fenton, Carroll Lane, story of great geologists, review, XXIX, 1520
Ferbero pool, V, 505
Ferghana Basin, Russia, XI, 510
Fergus, Preston, XXIII, 1402
Monroe gas field, Louisiana, GAS, 741
Fergus and Garfield counties, Montana, geology of Cat Creek oil field, V, 252
Ferguson, Glenn C., XXVI, 1608, 1615, 1622; XXVIII, 954
Ferguson, H. L., Jr., XXIII, 1446
Ferguson, John L., PROB, 608; XXVIII, 1049; XXVI, 218; XXVIII, 893
Charles Newton Gould, honorary member, XXVIII, 440
distinguished lecture tours, XXVIII, 170, 297, 448, 697, 1560, 1672, 1789; XXIX, 124, 249, 474
oil and gas prospects in vicinity of Buttonwillow, Kern County, California, review, VI, 57
progress report of distinguished lecture committee, XXVI, 1864
report of committee for securing distinguished speakers for affiliated societies for 1941, XXVI, 940
report of distinguished lecture committee, XXVII, 693
report of distinguished lecture committee for 1943, XXVIII, 669
report of distinguished lecture committee for 1944, XXIX, 605
reviews, V, 522; XXV, 328, 760, 1940; XXVII, 654, 874, 1164, 1268; XXVIII, 877
Ferguson, R. D., GAS, 1059; XXIV, 1215
Ferguson, R. N., SC, 126, 129; XXVIII, 435; XX, 1672, 1675; XXIV, 1215
Ferguson, R. N., and Willis, C. G., PROB, 749; SC, 126, 129; XI, 424; XIII, 640; XX, 1672; XXVI, 397
dynamics of oil-field structure in southern California, VIII, 576
Ferguson, Wm. Boyd, GC, 762; XII, 1167; XX, 73, 74
Ferguson, Wm. Boyd, and Minton, Joseph W., Clay Creek dome, Washington County, Texas, GC, 757; XX, 68
Ferguson, Wm. Boyd, Heath, F. E., and Waters, J. A., PROB, 648, 649, 654; XV, 279
(Ferguson)
Clay Creek salt dome, Washington County, Texas, XV, 43
Ferguson Crossing dome, Brazos and Grimes counties, Texas, application of, XXIII, 1092
Ferguson formation, II, 114
Fermentation, PROB, 38, 39, 261
of agar and carbohydrates, RMS, 421, 424
rôle of, XXIV, 1889
Fermentation products from fatty acids, XV, 451
Fern Glen fauna, XXIV, 806
Fern Glen formation, XXI, 1159; XXIV, 793
much of lower boundary of, unconformable on older beds, XXIV, 893
of Missouri correlated with lower zone of Mississippi lime of Kansas, XXII, 1591
Fern Glen green glauconitic shale, XXII, 1540
Fern Glen limestone, V, 151
Fernando beds, PROB, 751
Fernando formation, CAL, 248, 249; VI, 306
in Long Beach field, California, STR II, 70
Fernando group, CAL, 230, 257, 309
Los Angeles Basin, California, X, 759
Ventura Avenue field, California, STR II, 30
Fernando pool, RMS, 381
Ferndale sandstone (Pliocene) outcrop section A, SBP, 167-194, 410
Ferne in Alberta, GAS, 21
Ferne formation, XXVII, 41
in Spring Coulee region, Alberta, ALTA, 147; XV, 1275
Ferne sandstones, PROB, 348
Ferne shale, PROB, 159; IV, 250; XXIX, 1166
Ferne formation, STRAT, 149, 150
Ferne limestone, XXII, 1565; XXV, 1635, 1638
siliceous replacement of fossils at top of, XX, 1101
Viola, in Oklahoma, XX, 1110
Zenith pool, STRAT, 148-151
Ferrando, Al, XVII, 816
Ferrando, Al, and Richardson, H. T., Barataria field, Jefferson Parish, Louisiana, XXV, 322
Ferren, J. E., XXV, 884
Ferric (See Iron)
Ferric hydroxide, RMS, 148
Ferric ions, RMS, 482, 483
Ferric iron, RMS, 467
relation of, to ferrous iron in glauconite formation, RMS, 510, 511
Ferric oxides, RMS, 529
Ferrer, W. F., XV, 610
Ferriiferous rutile, RMS, 602
Ferris, Grindley, XXI, 296
Ferris dome, Wyoming, STR II, 656-659; PROB, 343-344
geothermal variations at, PROB, 991
Ferris field, PROB, 688; XXVII, 470
Ferro-alumino-silicate, RMS, 456
Ferromagnesian minerals in beaches, RMS, 211
Ferron Point formation, XXVII, 581
fossils of, XXVII, 582
Ferron sandstone, VI, 222
in Rocky Mountain area, XXI, 906
Ferron sandstone series of Utah, XXI, 1264
Ferroales field, MEX, 164
Ferroales well, Otates horizon in, MEX, 192
Ferrous ammonium sulfate, SBP, 48-54
Ferrous iron, RMS, 422, 510
Ferrous oxides, RMS, 529
Ferruginous series, XXV, 387
Ferry Lake anhydrite, XXIX, 1419
Ferry Lake formation, correlation chart showing Bacon limestone member, XXIX, 840
Ferry Lake high at Pine Island field, Louisiana, STR II, 174
Fertility of tidal muds, RMS, 204
Fertilizer chemicals, GAS, 1118
Feruglio, Egidio, XVI, 561, 562, 573; XXIX, 503
Festschrift zum 60. Geburtstag von Hans Stille, XXI, 352
Fettke, Charles R., PROB, 285; SBP, 356; STRAT, 495, 496; X, 871; XI, 1301; XIII, 819, XVI, 374; XIX, 796, 798, 915; XX, 1020, 1022
geology and oil resources of Bradford field, Pennsylvania and New York, review, XXI, 1354
memorial of Louis Samuel Panyity, XXVII, 1399
Music Mountain oil pool, McKean County, Pennsylvania, STRAT, 492
Oriskany as source of gas and oil in Pennsylvania and adjacent areas, XXII, 241
physical characteristics of Bradford sand, Bradford field, Pennsylvania, and relation to production of oil, XVIII, 191
review, XXII, 1282
Fettke, Charles R., Newby, Jerry B., Torrey, Paul D., and Panyity, L. S., PROB, 316, 844
Bradford oil field, McKean County, Pennsylvania, and Cattaraugus County, New York, STR II, 407
Fiddler, J. W., XV, 687
Fiddler Creek structure, XX, 1174
Fidler, XXIX, 1607
Fidler, M. M., XXII, 1235
Fiehsienkuan shale, XXV, 2062
Field, Richard Montgomery, PROB, 358; RMS, 285; XIV, 711; XVI, 645
principles of historical geology from the regional point of view, review, XXVIII, 553
Field, Richard Montgomery, Bailey, E. B., and Collet, L. W., XVIII, 1006
Field, definition, XXVIII, 704
or surface geology, XXIX, 470
Field and laboratory procedure in differentiating types of sand, XXIX, 220
Field and wildcat developments in south Arkansas in 1942, XXVIII, 326
Field balance, horizontal, X, 1191
vertical, X, 1190
Field balances, application, X, 1194
construction, theory, and application, X, 1189
Field conference, eleventh annual, Kansas Geological Society, September, 1937, XXII, 100
on Ellenburg strata, Llano region, Texas, June, 1945, XXIX, 622, 1064
Field development problems at Powder Wash, XXII, 1046

- Field-development well, XXIX, 631
 Field developments in Basin district, Michigan, 1943, XXVIII, 763
 in East Texas in 1943, XXVIII, 845
 in north Louisiana in 1942, XXVIII, 333
 Field experience, where shall young graduates in petroleum geology acquire it? Editorial, XXII, 1613
 where will young graduates in petroleum geology acquire it? XXIV, 1386
 where will young graduates in petroleum geology acquire it? Discussion, XXIV, 2047; XXV, 167, 1180
 Field extensions in South Louisiana in 1944, XXIX, 797
 Field flooding, PROB, 274
 Field geologists, handbook for, review, VI, 260
 Field geology, XXVI, 1537
 future of, discussion, XXV, 324
 review, VII, 300; XV, 1297
 Field mapping for the oil geologist, review, V, 634
 Field methods in petroleum geology, review, V, 425
 Field photography for geologists, XX, 186
 Field rules for Wasson field, XXVII, 518
 Field studies of sediments, RMS, 525, 526
 recent, in Osage, Washington, and Nowata counties, Oklahoma, results of, XXIV, 716
 Field study of lithologic and fossil samples for stratigraphical analysis, XXVI, 1701
 Field wells, definition, XXVIII, 705
 Field work, subsidized independent, XXIII, 1575
 Fieldner, A. C., SBP, 21; XX, 42; XXVII, 1210
 Fields, J. H., Survey, Texas (well 307), SBP, 292-335, 408
 Fields, active, and discoveries in Michigan in 1939, XXIV, 979
 application of oil indexes to, XXVII, 1320
 decrease in average size of newly discovered, XXVII, 956
 dependent on stratigraphic change from porosity to non-porosity, XX, 525
 discovered each year in 17-states area, number of, grouped according to estimated total ultimate reserves, XXIX, 1591
 discovered in Coastal Texas in 1942, XXVII, 732
 discovered in Louisiana in 1942, XXVII, 735
 discovered in south Texas in 1941, XXVI, 1001
 discovered in South Texas in 1942, XXVII, 742
 discovered in South Texas in 1944, XXIX, 780
 discovered in upper Gulf Coast of Texas in 1944, XXIX, 787
 extensions, and new producing formations in Michigan discovered in 1944, XXIX, 696
 formed by differential settlement of sediments over buried hills, XXV, 20
 in coastal belt in south Texas, XXII, 756
 in New Mexico, XXIV, 1034
- (Fields)
 in southeastern New Mexico, XXIX, 731
 in southeastern New Mexico and West Texas, XXI, 1040
 in West Texas, XXIV, 1034
 Michigan production by, XXV, 1130
 new, discovered in Rocky Mountain region in 1943, XXVIII, 792
 new, discovered in Wyoming in 1944, XXIX, 1596
 producing oil and gas from zones of different ages in Rocky Mountain region, XXVII, 476
 Fields and producing areas, new, in East Texas in 1938, XXIII, 889
 Fields and wells having heaving shale in Texas Coastal Plain, XXIII, 216
 Fields pool, Carson County, Texas, XXIII, 1047
 pre-Redbed columnar section, XXIII, 1013
 Fields sand, V, 290
 Fifth dimension in the oil industry, XXV, 1283
 Fifth sand, VI, 449; XXV, 806
 Bradford field, Pennsylvania and New York, STR II, 422
 Copley pool, West Virginia, STR I, 450, 455; XI, 590
 gas in, XXV, 1141
 Pennsylvania fields, PROB, 465, 490, 492
 Scenery Hill gas field, Pennsylvania, STR II, 444, 446, 449
 Fiftieth anniversary volume of the Geological Society of America. Geology, 1888-1938, XXV, 2075
 Fifty-Foot sand, PROB, 490; XXV, 805
 Shinnston pool, STRAT, 837-839
 Fifty-Seven zone in Ventura Avenue field, GAS, 164, 165
 Fifty years of petroleum geology, review, XII, 679
 Fig Ridge field, XXV, 1008; XXIX, 789
 Fiji, MSC, 20
 Filaments of algae, RMS, 293
 Filbert, West Virginia (well 429), SBP, 349-379, 410
 Files of the oil geologist, IX, 331
 Filhol, J., XXI, 131
 Filing mechanical analyses of sand, XXI, 1320
 Filisola field, Isthmus of Tehuantepec, GAS, 1008
 Filmore field, Michigan, XXVIII, 763; XXIX, 698
 Film, protective, influence of, on abrasion, RMS, 44
 suitable for photographing fossils, XXIX, 1501
 Film movement, XXVIII, 1514
 Filtration, PROB, 832
 Financial statement. (See American Association of Petroleum Geologists)
 Finch, E. H., XII, 993; XVI, 259
 first geologic work fostered by United States government, XXII, 1250
 memorial of Vachel Harry McNutt, XX, 842
 Yeager clay, south Texas, discussion, XV, 967
 Finch, J. K., XXI, 345
 Finch, John Wellington, GAS, 221; XI, 112
 status of Americans in petroleum developments of Europe and Asia, IX, 1089
- Finding techniques, need for new and improved, XXVII, 969
 Findlay, Alexander, XVII, 1225
 Findlay, W. A., and Bode, F. D., XVII, 732
 Findlay area, PROB, 544
 Findlay field, VI, 381
 Findlay Gas and Light Company, GAS, 897
 Fine to coarse sand ratio, appraisal of, XXIX, 219
 Fine particles, technology of, XXVII, 1163
 Fine sands and silts, RMS, 199, 307, 433, 545
 Finger Lakes region, New York, geology of part of, XVI, 675
 Finisterre-Saruwaged uplift, XXVIII, 1453
 Fink storage pool, porosity lens type, XXVII, 1568
 showing limits of production in Gantz sand, XXVIII, 1570
 Finland, RMS, 51, 298, 532
 Finlay, G. I., MEX, 145; XVII, 127; XXIII, 1162
 Finlay, H. J., and Marwick, J., divisions of Tertiary of New Zealand, review, XXV, 763
 divisions of Upper Cretaceous and Tertiary in New Zealand, review, XXV, 1813
 Finlay Mountains, Permian of, PTNM, 666; XXVI, 686
 Finley, D. D., memorial of, XI, 440
 Finley, J. C., XX, 1087
 Finley, W. L., and Bauer, A. D., XIII, 313
 Finley pool, Gray County, Texas, XXIII, 1000
 columnar section, XXIII, 1002
 Finley sand, XXIII, 851
 Finn, Fenton H., XXVIII, 721
 our experience with underground storage of gas (The Peoples Natural Gas Company), XXIV, 1482
 Finn, Fenton H., Schmidt, J. J., and Corrin, J. B., Jr., problems of underground gas storage in Ohio, West Virginia, and Pennsylvania, XXVIII, 1561
 Finney, E. C., XVIII, 1459
 Finngrunden Banks, RMS, 307, 317
 Fiords, RMS, 357-369
 average conditions in, RMS, 100
 Norwegian, RMS, 444
 organic content of, RMS, 447
 Fir Tree Point anticline, XXII, 260
 First break in Virgil pool, Kansas, STR II, 143
 First Cow Run sand in Ohio, STR I, 129; STRAT, 385; XI, 950
 First Cow Run sandstone in Ohio, GAS, 900
 First day and first thirty days, decline curve prediction from, IV, 209
 First gas sand in Scenery Hill gas field, Pennsylvania, STR II, 444
 First Muddy sand in Rock River field, Wyoming, STR II, 616, 617
 First Preston sand, V, 290
 First Salt sand productive in West Virginia and Ohio, XXV, 798
 First sand in Bradford field, Pennsylvania and New York, STR II, 420
 First sand pools, Venango district, STRAT, 516
 First Street terrace, XXIX, 1710
 First Venango sand, XXVIII, 730

- First Wall Creek sand, PROB, 838, 936; XXIII, 908
- Elk Basin field, Wyoming and Montana, STR II, 579, 580, 584
- Salt Creek field, Wyoming, STR II, 596
- Salt Creek oil field, Wyoming, preliminary report on water conditions in, VIII, 492
- First Wall Creek sandstone, XXV, 1855
- First Wilcox or Seminole sandstone, XXIII, 231
- First Wilcox sand in Seminole district, Oklahoma, STR II, 334
- Firth of Tay, RMS, 334
- Firth Moray, RMS, 334
- Fischer, Bergius Franz, XX, 19
- Fischer, C. A., STRAT, 285, 286, 338
- Fischer, E. L., STRAT, 238, 239
- Fischer, F., and Fuchs, W., PROB, 267, 920; XIV, 147
- Fischer, F., and Patart, XX, 44
- Fischer, Franz, and Scradler, Hans, PROB, 43
- Fischer, H., and Treibs, A., XXVIII, 928
- Fischer, Otto, memorial of, XXVII, 1283
- Fischer, R. P., XXV, 1757
- Fischer-Tropach process, XXV, 1274
- Fischer-Tropach synthesis, XXV, 1273
- Fish, H. N., XXIII, 147
- Fish Creek Mountain, CAL, 237, 309
- Fish fauna, Devonian, in Wind River Mountains, XXV, 130
- Fish fossils, XXV, 2060
- Fish-Hawk snapper, RMS, 659
- Fish remains, MEX, 16, 27, 46, 76, 135
- Fish scales, CAL 211; MSC, Fig. 4 (in pocket)
- Fish teeth and spines in Burlington limestone, XXIV, 794
- Fishel, V. C., XX, 706, 707
- tests of permeability with low hydraulic gradients, XX, 707
- Fisher, SD, 349
- Fisher and Lowrie, XI, 375, 811
- Fisher, A., I, 103
- Fisher, Barney, La Rosa field, Refugio County, Texas, XXV, 300
- Fisher, Cassius Asa, V, 261; VII, 170, 174, 384, 618; X, 125; XI, 388, XIII, 795; XXIX, 1267
- memorial of, XV, 103
- review of petroleum development and technology in 1925, X, 1309
- Fisher, Cassius A., and Lloyd, E. Russell, northern Cordilleran geosyncline and its relation to petroleum accumulation, XI, 19
- Fisher, D. Jerome, XX, 105; XXI, 77; XXII, 1255, 1257, 1258; XXIII, 663, 669, 670, 671; XXVI, 43, 45
- carbon ratios north of the Ouachitas, discussion, XX, 102
- discussion of solution of dip problems, XXIII, 683
- problem of two tilts and the stereographic projection, XXII, 2161; XXIII, 663
- review, XXIII, 256
- some dip problems, XXI, 340
- Fisher, F. P., XVIII, 857, 858
- Fisher, Frank, STRAT, 118
- Fisher, Gordon, XXVII, 83
- Fisher, J., XVI, 1264
- Fisher, Osmond, XVIII, 16
- Fisher County, geologic section from, through Andrews County, Texas, (Fisher)
- to Eddy County, New Mexico, XXIV, 37
- Fisher County, Texas, XXVI, 1044
- Custer formation in, XXI, 467, 468
- Fisher pool, Oklahoma, STR I, 211; PROB, 763
- Fishermen, RMS, 267, 268, 276
- Fishers Reef, gravity of oil at, XXV, 1009
- Fisher's stereographic net solution of problem of two tilts, relation between mathematical solution and, XXIII, 669
- Fishes, XXV, 130
- age of, XXIX, 134
- Miocene, in well cores from Torrance in southern California, XXIV, 2182
- Fisk, Harold N., RMS, 156; XXIII, 250, 1208, 1210, 1222, 1559; XXV, 734; XXVIII, 981; XXIX, 43, 51, 1308
- Jackson Eocene from borings at Greenville, Mississippi, XXIII, 1393
- Fisk, Harold N., and Russell, R. J., XXIX, 69
- Fisk, or Shields, pool, Coleman County, Texas, XIII, 1214
- Fisk formation, XXIV, 41, 95
- Arinskia adkinsi* zone of, XXIV, 96
- Fiske, L. E., relation of production to structure in five oil and gas fields of the Kentucky eastern coal field, STR I, 73; XI, 477
- Fissility of shales, RMS, 4
- Fissure, mutual effect of wells situated on same, MEX, 181, 189
- Fissure planes, oil seepage along, MEX, 154
- Fissure system along Cacalilao anticline, MEX, 189
- Fissured zones, Tennessee, GAS, 867, 868
- Fissures, Florence field, Colorado, accumulation of oil in, STR II, 87
- in shale at Salt Creek field, Wyoming, STR II, 594
- in Pierre shale at Florence-Canon City field, Colorado, production from, XXI, 1246
- of retreat, MEX, 165, 168, 170, 175, 180
- oil accumulation in, PROB, 4, 6
- Fissuring of rock at Cromwell field, Oklahoma, STR II, 305
- Fite limestone, XXV, 1639
- Fitting, R. U., Jr., and Bulnes, A. C., introductory discussion of reservoir performance of limestone formations, review, XXIX, 461
- Fitton, Edith M., and Brooks, Charles F., PROB, 1006
- Fitts, John, XVII, 865, 1406, 1408; XVIII, 999; XIX, 1694; XX, 302, 308, 309
- memorial of, XXVI, 1548
- Fitts pool, Pontotoc County, Oklahoma, XXI, 1008; XXIV, 1012; XXV, 1091
- preliminary report on, XX, 951
- production during 1938, XXIII, 824
- type geologic section across, XX, 954
- South, XXII, 1560
- Fitzgerald, RMS, 658
- Fitzgerald, James, Jr., XXIV, 29, 32
- Fitzgerald, James, Jr., and Fritz, W. C., XXIV, 5, 14, 34; XXVII, 490
- south-north cross section from Pecos County through Ector County, (Fitzgerald)
- Texas, to Roosevelt County, New Mexico, XXIV, 15
- Fitzgerald, P. E., STRAT, 435, XXIV 1353, 1363
- chemical engineering in petroleum exploration and production, XXIV, 1361
- Fitzgerald, P. E., and Love, W. W., importance of geological data in acidizing of wells, XXI, 616
- Fitzgerald, P. E., and Thomas, W. A., PROB, 553, XXI, 617
- occurrence of fluorite in Monroe formation of Vernon Township pool near Mount Pleasant, Michigan, XVI, 91
- Fitzgerald, P. E., James, J. R., and Austin, Ray L., laboratory and field observations of effect of acidizing oil reservoirs composed of sands, XXV, 850
- Fitzgerald sounding machine, RMS, 658
- Fitzsimmons field, XXIII, 866
- Fitzsimmons pool, XXIII, 865
- Five Islands, Louisiana, PROB, 661; SD, 6-8, 10-12, 38, 76, 356; IX, 756, 836
- comparison with the great salt deposits of the world, IX, 794
- problems presented by, IX, 792
- Five Islands dome, effect of character of rim syncline on production at, XX, 1422
- Five-year periods, successive, average annual oil discoveries by, in United States, and in California, Oklahoma, and Texas, XXI, 698
- Fix, G. F., XXIV, 968
- Fixed carbon, PROB, 25, 71, 81
- per cent of, in coals in various parts of West Virginia, XXVII, 1201
- percentage of, in Sewell coal, XXVII, 1212, 1213
- regional change in, of same amount and in same direction in all of coal beds analyzed, XXVII, 1211
- Fixed-carbon content, slight decrease in, southwestward from McDowell County into Virginia, XXVII, 1217
- of coal connected with depth of burial, XXVII, 1204
- of Sewell and No. 3 Pocahontas coals, regional variations in, XXVII, 1211, 1214, 1221
- of Sewell coal bed in southeastern West Virginia not attributable to original or primary differences in organic material, XXVII, 1222
- Fixed-carbon content and percentage of fines, relationship between, XXVII, 1218
- Fixed carbon ratios of coals, PROB, 67
- Fixed carbon theory applied to southwest Virginia, VII, 421
- Flabellamina compressa* zone, XVIII, 1510
- Flag Lake field, Henderson and Navarro counties, Texas, XXII, 730; XXIII, 893; XXIV, 1065; XXV, 1086; XXVI, 1053; XXVII, 786
- Flagellates, chlorophyllaceous, RMS, 145
- Flagstone formation, II, 81
- Flaking of clay minerals, RMS, 475, 477, 478
- Flaky minerals, RMS, 36
- Flaming Gorge formation, XXI, 720
- Flank development in Louisiana in 1940, XXV, 1914

- Flank pools, MEX, 185, 192-194
 Flank production, Anse La Butte, XXV, 1014
 Arbuckle anticlinorium, XIX, 401
 East and West Hackberry, XXV, 1014
 Gulf Coast fields, GC, 6; XXVIII, 505
 Jennings dome, GC, 981, XIX, 1328
 Nemaha Mountains region, Kansas, STR I, 60, XI, 919
 Pierce Junction, GC, 8, XVIII, 507
 Flank reservoirs, PROB, 672
 Flank-sand fields, XV, 63
 Flank sands on known domes and anticlines, XX, 526
 Flat Coulee field, Montana, PROB, 703, 713; XXIX, 1268, 1275, 1597
 Flat Gap dome on Paint Creek uplift, GAS, 927
 Flat Gap member, XXV, 670
 Flat Gap-Win-Ivity gas field, GAS, 944
 Flat Lake, XXVII, 1124
 Flat pebbles, cause of, RMS, 40
 Flat plane interference figures, diagram of, in X-ray studies, RMS, 623
 Flat Top anticline, XXV, 890; XXVIII, 1208
 Flat Top uplift, XXIII, 919
 in northwestern Colorado, STR II, 105
 Flatau, F. M. GAS, 881
 Flathead sandstone, XXIII, 480; XXV, 125
 Flattening of isotherms below a peak, XIV, 1005
 Fleet, J. J., *et al.*, XXVIII, 781
 Fleet, W. F., RMS, 605
 Fleet scale of frequency, RMS, 605
 Fleming, J. A., XXVI, 857
 Fleming, R. H., RMS, 135, 246, 255, 263, 276, 277, 281
 Fleming, R. H., and Revelle, Roger, physical processes in ocean, RMS, 48
 Fleming in Texas Gulf Coast, XXIII, 1620
 lower, XXI, 480
 unconformable on Catahoula, XXIII, 185
 upper, XXI, 480
 Fleming and Lagarto, nomenclatorial difficulties of, XXVIII, 1010
 Fleming beds, thickness of, in Montgomery, Harris, and Brazoria counties, Texas, XXIII, 185
 Fleming calcareous clays, XXVIII, 1360
 Fleming clay, GC, 414; XVII, 644
 Louisiana, GC, 413; IV, 130; VI, 180; XVII, 643
 Texas, I, 36, 52, 73, 74; III, 312; V, 223
 Fleming formation, XXVIII, 1007; XXIX, 1176
 Buckeye field, GC, 743; XIX, 387
 coastal Texas and Louisiana, GC, 439; XIX, 658
 East Texas, XXVIII, 1008
 fossils of, XXIX, 1176
 Hockley dome, reworked Cretaceous Foraminifera in, SD, 587
 Louisiana, *Potamides matsoni* Dall zone near Burkeville, Texas, correlated with, XXVIII, 983
 name applicable to clay beds near Burkeville, Texas, XXVIII, 1009
 type locality of, XXVIII, 1361
 (upper Miocene and lower Pliocene) (T1), SBP, 336, 338-349, 416
 (Fleming)
 Vinton salt dome, Louisiana, XII, 392
 Fleming fossils, Big Hill salt dome, SD, 500
 Fleming group, XXIX, 1721
 in Gulf Coastal Plain, XXIII, 185
 Fleming Miocene, Anse la Butte dome, XXVII, 1135
 Fleming sands, Buckeye field, GC, 744; XIX, 388
 Fletcher and Barrett, SD, 349
 Fletcher and Jones, SD, 349
 Fletcher, Corbin Drummond, GC, 385; RMS, 547; XV, 516; XVII, 47, 616
 memorial of, XV, 859
 structure of Caddo field, Caddo Parish, Louisiana, STR, II, 183
 Fletcher, H. O., XX, 1049, 1050; XXV, 375
 Fletcher, H. O., and Raggatt, H. G., XXV, 374, 380, 382, 384, 397, 398, 402, 406
 Fletcher, O., XXV, 398
 Fletcher anhydrite, lacy texture of top of, XXVI, 76
 Fletcher anhydrite member of Salado, XXVI, 75, 1637
 analysis of, XXVI, 77
 and La Huerta siltstone member of Salado formation, plates showing anhydrite from, XXVI, bet. 64 and 65
 Fletcher member of Salado, XXVIII, 1611
 Fletcher potash core test, basal beds of Salado formation in, near Carlsbad, New Mexico, XXVI, 63
 log of Permian rocks in, XXVI, 66-69
 Fleming of coastal area, GC, 455; XIX, 674
 Flight negatives, contact prints from, XXIX, 1756
 Flint, J. M., MSC, 12; XXV, 1225
 Flint, Richard F., XXIII, 598; XXIV, 769
 Flint, Richard F., and Ball, J. R., XXVI, 4
 Flint, Richard F., Longwell, Chester R., and Knopf, Adolph, outlines of physical geology, review, XVIII, 960
 textbook of geology, Part I, physical geology, review, XVI, 1160
 Flint, Timothy, SD, 395
 Flint, MEX, 29, 31, 45, 100; RMS, 211
 Flint concretions, RMS, 211
 Flint conglomerate of North Sea, RMS, 332
 Flint Hills, V, 421
 Flint River formation, GC, 366; XIX, 1170; XXII, 791; XXVIII, 1316, 1318
 Flints in Dockum conglomerates, XXVII, 628
 Flippen limestone, XXIII, 855
 Floating continents, discussion of, CD, 187
 Floating débris, RMS, 436
 Flocculation, RMS, 183, 536
 in sea, RMS, 274
 Flood diamond-drill hole in Culberson County, Texas, banded anhydrite in, XXIII, 1686
 Flood well, SD, 74
 Flooding oil sands at Bradford field, Pennsylvania and New York, STR II, 409
 with alkaline solutions, effect of, XI, 223
 Flooding oil wells, method, IX, 801
 Floodplain, RMS, 155, 161, 162
 gradients of, RMS, 156
 Floodplain sediments, RMS, 166
 Floods, RMS, 163, 172, 213, 214, 263, 266, 275, 276, 279
 distance they carry detritus seaward, RMS, 276
 rôle of, in sediment transport, RMS, 270
 stages of river, RMS, 173
 tide, RMS, 202, 237
 tide, of southern North Sea, RMS, 344
 waters of streams, RMS, 270
 Flora. (See Fossils)
 Arkansas and Oklahoma, XVIII, 1055-1058
 of Prairie Mountain formation, XXII, 884
 of Pushmataha series, XXII, 859
 of *Sphenopteris* beds in Australian Coal Measure series, XXV, 378
 Refugio field, XXII, 1198
 Flora and fauna, balanced, in environments of origin of black shales, XXIII, 1185
 Monterey shale of California at its type locality with a summary of its, XII, 969
 Floras, Carboniferous and Permian, distribution of, CD, 21
 Middle Eocene, SC, 26; XX, 1572
 of Blaine and Dog Creek formations, XXVIII, 1023
 Florence, Guilherme, XIII, 1215
 Florence and Cañon City fields, Colorado, FOP, 60; XXV, 1492
 gravity of oil, STR II, 89
 production from fissures in Pierre shale at, XXI, 1246
 Florence field, Colorado, PROB, 719, 725; STR II, 75; VI, 90; XXVII, 434, 464
 early history of, STR II, 77
 (well 240), SBP, 194-243, 407
 Florence field, Kansas, STR I, 60; PROB, 317, 319, 410, 770; IV, 255; V, 146, 507
 typical dome, STR II, 677
 Florence flint, I, 113; VI, 427; XXI, 505
 Florence limestone productive of gas in Hugoton field, XXIII, 1061
 Florence oil field, XXI, 1246
 Flores, F., Survey, Texas (well 360), SBP, 292-335, 409
 Floresanto tract, XXIX, 1131
 Floresta beds, XXV, 1789
 Florida, CAL, 130, 135, 299; FOP, 147; MSC, 129, 176, 264; RMS, 3, 207, 209, 210, 212, 213, 283, 435, 450; V, 242; XXV, 1579
 Alabama, and Mississippi, subsurface Tertiary zones of correlation through, XXII, 984
 basement rocks in, XII, 1107
 beaches, RMS, 208
 black shale in, XXIII, 1712
 developments in 1943, XXVIII, 801
 exploration in 1944, XXIX, 819
 foraminifera of Miocene of, MSC, 176
 general geology of, XXII, 812
 geology of Holmes and Washington counties, XXVI, 1424
 Georgia, and Alabama, Lower Eocene in, XXVIII, 1698
 Georgia, and Alabama, map showing Eocene beds of Wilcox age, XXVIII, 1700
 leasing in, during 1942, XXVII, 991

- (Florida)
Lower Cretaceous in, XXVIII, 804, 1721
micropaleontology and stratigraphy of a deep well at Niceville, Okaloosa County, XXV, 263
Miocene in, MSC, 329; XXV, 264
Miocene, chart showing ranges of diagnostic fossils in, XXV, 271
Mississippian in, XXIX, 929
north-south cross section through wells, from Pierce County, Georgia, to Key Vaca, Monroe County, XXVIII, 1734
north-south cross section through wells on east coast of, XXVIII, 1740
oil and gas in Lake County, XXII, 801
oil and gas possibilities in Atlantic Coastal Plain from New Jersey to, XXII, 799
Oligocene, Eocene, and Cretaceous fossils of, plates, XXVIII, bet. 1688 and 1689
Paleozoic beds in, XXIII, 1712, XXVIII, 1723
Pennsylvanian in, XXIII, 1712
Pleistocene in, XXV, 263
Pliocene-Miocene in, XXV, 263
references on oil prospects in, FOP, 148; XXV, 1580
review, VI, 384
scenery of, XXIV, 504
sketch of Gulf coast of, showing bays enclosed by bars similar to Verden sand bar of Oklahoma, XXIII, 578
Straits of, RMS, 108, 115, 117, 227, 293
stratigraphic and paleontologic studies of wells in, XXVI, 1425, 1426
structure and stratigraphy of, with special references to petroleum possibilities, review, XI, 893
subsurface stratigraphy, XXIX, 928
Triassic in, XXIX, 929
Tuscaloosa formation in, section, XXVII, 603
unconformity of Tampa limestone on Byram marl in, GC, 406; XVII, 636
Upper Cretaceous in, XXIII, 1712
Vicksburg group in, GC, 358; XIX, 1162
wells drilled to basement rocks in, XXII, 802
west, Wilcox fauna in clastic facies of Lower Eocene in, XXVIII, 1699
west-east cross section through wells from Cedar Keys, Levy County, to St. Augustine, St. Johns County, XXVIII, 1739
west-east cross section through wells from Escambia County, Alabama, to Nassau County, XXVIII, 1736
wildcat drilling, 1942, XXVII, 994
Florida and Bahama marine calcareous deposits, RMS, 283
references on, RMS, 293
Florida and parts of Georgia and Alabama, major structural features of, XXVIII, 1727
map showing Cretaceous beds of Austin age, XXVIII, 1716
map showing Cretaceous beds of Navarro age, XXVIII, 1710
map showing Cretaceous beds of Taylor age, XXVIII, 1712, 1714
- (Florida)
map showing Cretaceous beds of Tuscaloosa formation, XXVIII, 1720
map showing Eocene Avon Park limestone, XXVIII, 1686
map showing Eocene beds of Cook Mountain age, XXVIII, 1696
map showing Eocene Ocala limestone, XXVIII, 1684
map showing Lower Cretaceous and older rocks, XXVIII, 1724
map showing Oligocene beds, XXVIII, 1682
map showing Paleocene beds of Midway age, XXVIII, 1706
map showing structure on top of beds of Taylor age, XXVIII, 1728
map showing structure on top of early Middle Eocene beds, XXVIII, 1727
map showing structure on top of Ocala limestone, XXVIII, 1726
map showing Tallahassee limestone and equivalent non-fossiliferous limestone, XXVIII, 1690
map showing variations in interval between top of early Middle Eocene beds and top of beds of Taylor age, XXVIII, 1731
map showing variations in interval between top of Ocala limestone and top of early Middle Eocene beds, XXVIII, 1730
map showing variations in interval between top of Upper Cretaceous and base of beds of Austin age, XXVIII, 1732
map showing variations in thickness of Ocala limestone, XXVIII, 1729
Florida and southern Georgia, correlation of subsurface rocks of, XXVIII, 1678
early Middle Eocene in, XXVIII, 1693
late Middle Eocene in, XXVIII, 1686
Oligocene in, XXVIII, 1681
Paleocene in, XXVIII, 1703
regional subsurface stratigraphy and structure of, XXVIII, 1673
Upper Cretaceous in, XXVIII, 1708
Upper Eocene in, XXVIII, 1683
Florida Academy of Sciences, proceedings of, for 1939, XXV, 168
Florida Everglades, deep test in, XXIII, 1713
Florida Keys, RMS, 417
Florida wells, logs from samples from, XXVIII 1742-1753
Florin, Jean, XIV, 566
Flotation, RMS, 60
of continents of sial on an underlying viscous layer of sima, CD, 189
Flotation hypothesis, XXIX, 1635
Flour Bluff field in Coastal zone in Nueces County, Texas, XXI, 1045
Flour Bluff sand, XXIII, 1634
Flow of carbon dioxide and water through sands, XXII, 1241
of homogeneous fluids through porous media, XXII, 1282
through core, factors that affect, XXVII, 74
Flow beans, use of, VIII, 149
Flow layers in salt domes, XX, 51
Flow sheet for preparation of sediment samples for study, RMS, 530, 608
Flow valves, GC, 643
use of, XIX, 1143
Flow zones of Persia and Iraq, STR II, 706
- Flowage of salt, theories on motivating force, GC, 22, XVII, 1027
Flowage experiments on oil shale, IX, 1130
Flower-pot shales, II, 74; XXI, 1558; XXIV, 43, 58
in Kansas, XXIII, 1791
in Oklahoma, XX, 1468
in subsurface, XXIII, 1792
typical, in Oklahoma, XXIII, 1792
Flowers, W. S., XXII, 1307
Flowing pressure, University field, STRAT, 212-213
Flowing wells at Conroe field, GC, 829; XX, 776
at North Cowden field, XXV, 629
Floyd and Nufer, XXV, 1666
Floyd, A., Survey, Texas (well 398), SBP, 292-335, 410
Floyd, F. W., VIII, 323; XXI, 1551
Floyd county, XXVI, 1129
Floyd County field, Kentucky, GAS, 774, 942
Floyd-Knott shale areas in eastern Kentucky, GAS, 927
Floyds Knob member of Edwardsville formation, XXIV, 799
Fluctuations in discharge of river, RMS, 172
in lake level of Lake Bonneville, diagram indicating, XXII, 1308
in sea-level in sea, RMS, 115, 128
in surface level and salinity of Great Salt Lake, XXII, 1316
Flude, John W., XXIX, 214
Fluhman pool, Texas, STR I, 300
Fluid content of core, determination by pressure-extraction method, XXVII, 65
Fluid flow, hypothetical history of the formation of domes by, GC, 97; XVIII, 1193
under gravitational forces, experiments on, GC, 92; XVIII, 1188
Fluid flow and reservoir mechanics, XXVI, 111
Fluid levels in oil fields of Mexia fault zone, Texas, STR I, 371
Fluid mechanics of salt domes, GC, 79; XVIII, 1175; discussion, XVIII, 1712
Fluid movement in reservoir beds, PROB, 274, 278
Fluid withdrawal, diagram illustrating arrangement of apparatus for different modes of, XXIV, 2173
Fluids, associated, maps of, XXIX, 1256
in oil reservoirs, behavior of, XXII, 1237
Fluorine, RMS, 149
in sea water, RMS, 143
Fluorite, RMS, 602; XXVIII, 77
in Monroe formation of Vernon Township pool near Mount Pleasant, Michigan, XVI, 91
in Rundle limestone, XXIX, 1168
Fluorspar district of Illinois and Kentucky, dikes, sills, and plugs in, XXI, 781
intrusions of basic igneous rock in, XXI, 781
Flush-production period in Pánuco field, MEX, 173
Flush-production stages of wells, MEX, 165, 208
Flushing, PROB, 98, 257, 315, 690, 691, 731, 938
Fluvio-glacial beds, RMS, 233, 242
Flynn, XXIV, 1788

- Flysch, CAL, 35, 36
 of Ouachita Mountains, XV, 1034
 Roumania, IX, 1171
- Flysch facies of Scotland formation of
 Barbados, XXIV, 1560
 of Scotland formation, source of
 clastic material in, XXIV, 1564
 of Tamesf formation, MEX, 88, 89,
 99, 103
 Triassic, containing oil, in Ceram,
 XXII, 11
- Flysch formation, Europe, VI, 523
 Flysch geosyncline, SD, 182
 Flysch-Klippen, SD, 127; IX, 1205
 Flysch sandstones, XII, 496
 Flysch series in Ponto-Caspian and
 Mediterranean oil fields, XVIII,
 761
- Flysch zone, IX, 1237; XV, 3; XVIII,
 738
 in Carpathians, SD, 90, 93, 107, 112,
 177, 179; IX, 1168
 in Roumania, XVIII, 877
- Foard County, Texas, XXI, 1019;
 XXVI, 1049
- Focus, importance when photographing
 large megafossils, XXIX, 1496
- Foerst, John P., XIII, 660
- Foerste, August F., GAS, 941; STRAT,
 170; XV, 166; XXIV, 1180, XXV,
 670, 671, 690; XXVI, 4, 5, 9, 13,
 345; XXVII, 584; XXIX, 1256
- Fog caused by upwelling, RMS, 126
- Fohs and Robinson, IX, 873
- Fohs, F. Julius, SD, 215; VII, 26, 226,
 616; X, 703; XI, 1121; XX, 883;
 XXIX, 482
 geology and petroleum and natural
 gas possibilities of Palestine and
 Sinaitic Peninsula, XI, 135
 review, XXI, 531
 stratigraphic distribution of petro-
 leum, XI, 764
- Fohs Oil Company, XXII, 743
- Foix zone, PROB, 226, 405
 at Santa Fe Springs field, GAS, 261
- Fol, J. G., and Sohngen, N. L., XXVII,
 1181
- Fold, asymmetric, in Rock River field,
 Wyoming, STR II, 617
 developed at right angles to Rock
 River anticline in Rock River field,
 Wyoming, STR II, 616
 domal, in Permian Big lime in Yates
 field, Texas, STR II, 494
 domal anticlinal, in Comanche beds
 in Yates field, Texas, STR II, 493
 Duquoin, in Illinois oil-field re-
 gion, STR II, 117
- Folded and faulted sediments, geologic
 map of hypothetical area of,
 XXIX, 440
- Folded bed, calculating true thickness
 of, XXVI, 1827; XXVII, 874
- Folding, PROB, 181, 228
 age of, importance of, STR II, 675
 before and after deposition, GAS, 193
 contemporaneous with deposition,
 GAS, 299, 393, 664, 674, 799, 957
 during Appalachian revolution in
 eastern Kentucky, GAS, 924
 effect of stratigraphic variation on,
 V, 481
 effects on carbon ratios, PROB, 89
 Hercynian, GAS, 548
 in Appalachians, mechanics of, XXV,
 420
 in Honda district, XXVI, 829
 intense, uplift of structure with, in
 Whitehorse and Salado time at
- (Folding)
 North Cowden field, Texas, XXV,
 615
 local, in north-central Texas, XXIV,
 113
 local, vertical component in, I, 107
 major, in east-central United States,
 XXII, 1548
 major, in east-central United States
 at end of Mississippian, XXII,
 XXII, 1548
 major, in Rocky Mountains, outer
 zone of, XXVII, 429
 mechanism of, XXI, 813
 minor, in east-central United States,
 XXII, 1548
 Newport to Beverly line of, PROB,
 748
 of a mountain system, XXIII, 1330
 of Cretaceous and Jurassic rocks in
 Sierra Madre, section, MEX, 160
 of Laramie basin in Cretaceous, con-
 tinuing to Eocene time, XXV, 896
 oil accumulation in relation to
 periods of, VII, 58
 on the mechanism of geological
 undulation phenomena and of, and
 their application to the problem of
 the roots of mountains theory,
 XXI, 813
 or shearing, which? XI, 31
 parallel, at Bradford field, Penn-
 sylvania and New York, STR II,
 419
 periods of, from pre-Cambrian to
 early Pennsylvanian in western
 Nebraska, FOP, 80; XXV, 1512
 periods of, in Michigan, XXIV, 1953
 Plains type of, XIII, 586
 relation to accumulation of oil,
 PROB, 254, 730
 relative age of major and minor, and
 oil accumulation in Wyoming, V,
 49
 reverse, at Salt Creek field, Wyoming,
 STR II, 594
 towards end of Pliocene in East
 Indies, XXII, 50
- Folding and faulting in California fields,
 PROB, 184
 in Keokuk pool in Pennsylvanian
 time, XXIII, 236
- Folding movements between Martinez
 and Eocene epochs, SC, 15; XX,
 1561
- Folding types, MEX, 159, 162
- Folds around mud lumps, RMS, 172
 due to differential settlement, GAS,
 72
- Elk Hills field, California, STR II,
 45, 51
- en echelon, GAS, 585
- experiments relating to factors caus-
 ing localization of, XII, 617
- Glass Mountains, Texas, X, 880
- graphic treatment of, in three dimen-
 sions, XXII, 483
- of Osage County, Oklahoma, inter-
 relations of, IV, 151
- of Osage County, Oklahoma, origin
 of, STR II, 388; XII, 501
- of Osage type, occurrence of, discus-
 sion, XII, 675
- of Tejon Quadrangle, California,
 XXI, 229
- parallel alignment of, PROB, 547
- rejuvenated, PROB, 582
- simple, determination of amount of
 shortening in, XXIX, 438
- Foldani Sæmle, review, XI, 998
- Foley, Frank C., XXVI, 336
- Foley, Lyndon L., PROB, 309, 615, 616;
 XIII, 33, 587, 594, 628, 629, 637,
 1396; XVIII, 243, 248, 1067; XX,
 816; XXIII, 1857
 discussion of *en echelon* faults in Okla-
 homa, XVIII, 248
 discussion of tension fissures, XIII,
 637
 mechanics of Balcones and Mexia
 faulting, X, 1261
 mechanics and geology, XV, 210
 origin of faults in Creek and Osage
 counties, Oklahoma, X, 293
 origin of folding in Oklahoma, dis-
 cussion, XI, 639
 projection of dip angle on profile
 section, XVII, 740
 reviews, XII, 218, 452, 454 XVIII,
 961
 some applications of strain ellipsoid,
 discussion, XIV, 231
 studies in differential compaction,
 discussion, XIII, 1074
 tectonics of Oklahoma City anticline,
 XVIII, 251
- Folger, Anthony, STRAT, 104, 118;
 XII, 180, 197; XIV, 787; XVII
 810, 812; XIX, 1406; XXIII, 102;
 XXIV, 1010
 discussion on Salina basin, XII, 197
 Missouri-Iowa field conference, XII,
 201
- Folger, Anthony, and Hall, Roy H.
 STRAT, 124, 127
- Follett, C. R., XXIX, 255
- Folsom, SC, 11
- Fontaine, William M., CAL, 48, 109
 XXVIII, 509
- Fontaine, William M., and White, I.
 C., XI, 586 XXIV, 313
- Fontennelle, XVI, 1130
- Foord, A. H., XXV, 374, 1217
- Foot, Freeman, XX, 1184
- Foot, Paul D., XVI, 916; XXVII, 63
- Foot Creek syncline in Rock River
 field, Wyoming, STR II, 616
- Foothills in Alberta, structure of, GAS,
 9, 39
- Foothills belt, Canadian, summary of,
 IV, 249
 in Canada, FOP, 18; XXV, 1450
 southwestern Alberta, XVIII, 1389
- Foothills structures in Canada, XXVIII,
 872
 of Alberta, Canada, types of, XIX,
 1427
- Foothills zone succeeding Coast Range
 in central Venezuela, XXII, 1226
- Footitt, F. F., and Washburn, E. W.,
 VIII, 729
- Foraminifer, XXV, 2015
- Foraminifer faunas, biostratigraphic
 units based on, MSC, Fig. 14 (in
 pocket)
- Refugian, MSC, 152
- Foraminifera, CAL, 5, 82, 89, 106, 110,
 122, 123, 129, 130, 135, 141, 151,
 154, 168, 171, 175, 178-182, 186,
 189, 195, 196, 209, 210, 214, 224,
 225, 229-231, 238, 239, 245, 248,
 250, 256, 259, 264, 290, 291; MSC,
 22, 23, 25-27, 33, 68, 71, 73, 106,
 160, 162, 166, 184; Fig. 5 (in pocket);
 RMS, 145, 149, 197, 212, 221, 249,
 287, 288, 405, 413; SD, 241, 242,
 564, 587, 590, 664, 668; SBF, 186,
 187; VII, 184; IX, 1048; X, 567,
 694; XXI, 809; XXII, 901, 908,
 1655; XXIII, 639, 699, 1609, 1619,

(Foraminifera)

- 1621; XXIV, 231, 651, 1554; XXV, 133, 264, 273, 382, 638, 1209, 1222, 1232, 1371; XXVI, 268, 307; XXVII, 1062; XXVIII, 12, 322, 594, 599; XXIX, 900, 921, 991, 1090, 1156. (See Fossils)
- Abrohos Bank, MSC, 11
- abyssal, MSC, 180
- Adelaida Quadrangle, check list of, MSC, 48
- aid to study of, IX, 667
- Alazan formation, MEX, 120
- Altamira shale member in Palos Verdes Hills, California, XX, 133, 136, 141
- American Tertiary formations, VII, 526
- Aragon formation, MEX, 106
- arenaceous, MSC, 16, 128; XXIX, 184
- arenaceous, in Hunton formation in Oklahoma, XX, 1096
- Atlantic coast of South America, MSC, 12
- Atlantic Ocean, MSC, 12
- basal Eocene, MEX, 83
- basal Middle Miocene zone in Central and Southern California, XXI, 553
- below Nanjemoy, XXIX, 81
- benthonic, RMS, 257, 259, 260
- Blakely formation, MSC, 75
- Blakely formation of Washington, check list of, MSC, 77
- British Columbia, MSC, 12
- British Recent, MSC, 11
- Brooks salt dome, Texas, X, 33
- Buckeye field, GC, 742-751; XIX, 386-395
- Butano formation, MSC, 161
- Caddell formation, GC, 477; XVII, 1301
- California, ecology of, XXV, 253
- California Miocene, MSC, 66
- California Miocene, relationships, MSC, 182
- California Miocene, stratigraphic distribution of, MSC, 79
- Carboniferous, of the Samara Bend, XXV, 1943
- Caribbean, Galapagos, MSC, 12
- Cebada member, XXVII, 1357
- Chapapote formation, MEX, 117-119, 123
- characteristic of Lajas formation, XXIV, 1932
- checklist of miscellaneous localities, XXVII, 1381
- Chico Martinez Creek area, check list of, MSC, 40
- Claremont shale, MSC, 66
- classification and economic use, MSC, 12, 16
- coastal bluffs west of Naples, Santa Barbara County, check list of, MSC, 29
- collected by United States Geological Survey along Chico Martinez Creek, MSC, 50
- collected near Hawaiian Islands, MSC, 11
- common to Kreyenhagen, Fresno and King counties, and Tejon formation, Zemorra Creek, Kern County, check list, XXVII, 1382
- Conroe field, GC, 798
- Contra Costa County, check list of, MSC, 62
- cool-water types, RMS, 410
- correlation in California based on,

(Foraminifera)

- CAL, 214
- Cozy Dell, check list of, XXVII, 11
- Cretaceous, at Hockley dome, Texas, IX, 1048
- Delmontian, MSC, 134; Pl. XXII diagnostic, range of, in Bee County, Texas, GC, 428; XIX, 692
- dredged by Challenger, MSC, 11
- Dubose shales, GC, 492, XVII, 1315
- ecologic relations of, MSC, 13
- Edna gas field, XXV, 109
- Eocene, MSC, 78; XXIX, 81
- Eocene, from the type Lodo formation, Fresno County, California, XXVII, 1269
- Eocene, in Mereure formation, XXVIII, 18
- Eocene, Mexico, IX, 298
- Eocene, Texas, VIII, 433
- Eocene orbitoid, MSC, 33
- Eocene orbitoid, from Santa Ynez Range, MSC, 175
- Faroe Islands, MSC, 12
- Fashing clays, GC, 492; XVII, 1316
- Foxen, XXVII, 1354
- Fredericksburg, XXVII, 1073
- Fredericksburg and Washita deposits in north Texas, occurrence chart, XXVII, 1073
- from cores, systematic study of, XXIII, 1608
- from deep well at Charleston, XXV, 1224
- from diatomite quarry east of Del Monte, MSC, Fig. 14 (in pocket)
- from off Juan Fernandez Islands, Recent, MSC, 12
- from off San Pedro, Recent, MSC, 12
- from Standard Oil Company Piedmont well No. 1, check list of, MSC, 51
- Gaviota formation, MSC, 161
- Gatun formation of Panama Canal zone, MSC, 129
- genia Siphogenerina and Pavonina, MSC, 12
- glauconite in, RMS, 506-509
- Gould shale, MSC, 68
- Guayabal, MEX, 112
- Gulf and River St. Lawrence, MSC, 12
- Hercules shale, MSC, 66
- High Island dome, GC, 921; XX, 572
- Huasteca formation, MEX, 126, 128, 130
- in Navarro, Texas, same as in upper Méndez, MEX, 74
- in typical Lulsian, MSC, 123
- in zonal paleontology, XXIV, 2049
- Jackson, GC, 401; IX, 111; XVII, 632
- Jackson, at Hockley dome, Texas, SD, 590; IX, 1051
- Jackson Eocene of Mississippi, XXI, 93
- Jamaica, MSC, 12
- Klamichi and Duck Creek section at Denison Dam, distribution chart, XXVII, 1066
- Kreyenhagen shale, MSC, 78, 102
- Kreyenhagen shale in Fresno County, MSC, 79
- Lagoon of Funafuti, MSC, 11
- larger, in area from Texas to Florida, zones of, XXII, 986
- Lea Park formation, XXIX, 1619
- lists of, MEX, 69, 73, 78, 81, 85, 86, 106, 111, 112, 119, 126, 128, 130, 134

(Foraminifera)

- Lodo formation, XXIV, 1739
- Louisiana, XXV, 739
- lower and middle Lulsian of Reliz Canyon, MSC, Pls. XII, XIII
- lower Mohman, MSC, Pls. XVIII, XIX
- Lower Pliocene, MSC, 79
- lower Refugian, MSC, 152
- lower Saucian, MSC, 113
- lower Zemorrian, MSC, Pl. I, II, III, IV, V
- Lulsian, MSC, 124, Pl. XVII
- Lulsian of Reliz Canyon, MSC, Pl. XIV
- Lulsian species of, MSC, 128
- Maguabes Oriental, MEX, 81
- Malaga mudstone in Palos Verdes Hills, California, XX, 147
- Marvsville Buttes, California, notes on, XXIV, 2051
- McElroy formation, GC, 485; XVII, 1309
- Méndez shales, MEX, 74, 76
- Méndez type locality, MEX, 69
- Mendocino County coast, check list of, MSC, 76
- Meson formation, MEX, 132, 134
- methods of correlation by means of, X, 562
- Middle Miocene, MSC, 170
- Midway, Keechi dome, Texas, X, 40
- miloid, XXVIII, 1681, 1685
- Mint Spring marl, XXVIII, 1326
- Miocene, MSC, 21, 28, 32, 49, 55, 68
- Miocene, ecologic factors, XXV, 252
- Miocene, in California, MSC, 3; STR II, 70; IX, 230
- Miocene in California province, stratigraphic occurrences of, MSC, 137
- Miocene, in Contra Costa County, MSC, 56
- Miocene in Florida, MSC, 176
- Miocene, in Los Sauces Creek, MSC, 113
- Miocene, in Monterey shale, MSC, 16, 18
- Miocene, in Reliz Canyon, MSC, 56
- Miocene, systematic catalogue of, MSC, 182
- Miocene shale, Reliz Canyon, stratigraphic distribution of, MSC, Table I (in pocket)
- Mitchell's Ferry beds, GC, 494; XVII, 1317
- Mohman, MSC, 155, 166, 176, Pl. XX
- Monterey Bay, MSC, 13
- Monterey shale, MSC, 167
- Monterey shale, in California, X, 131
- Monterey shale, molds and casts of, MSC, 10
- Moreno formation, XXVII, 255
- Moreno shale, CAL, 110
- Murray Island, Australia, MSC, 12
- Mutsu Bay, Recent, MSC, 12
- near Cuyama River gorge and Cambria, check list of, MSC, 74
- near Newport and Astoria, Oregon, check list of, MSC, 70
- New Zealand, MSC, 12
- Newport Lagoon, MSC, 13
- north Pacific Ocean, MSC, 11
- number, RMS, 374-376
- of Scottish National Antarctic Expedition, MSC, 13
- of shales near Canoas Station, MEX, 72
- of Siboga Expedition, MSC, 12

(Foraminifera)

- of Zechstein, XXV, 133
 Oligocene, XXVIII, 1365
 Oligocene, Germany, MSC, 176
 Oligocene, Mexico, MSC, 177
 Oligocene, Texas, IX, 102; X, 977
 on ridges, mechanical enrichment of, RMS, 377
 ooze, RMS, 380
 Panama Canal zone, MSC, 115, 129, 178
 Pánuco district, Mexico, X, 684
 Pecan Gap chalk, XVIII, 1511, 1514, 1524, 1529-1532
 Pecan Gap chalk, Arkansas, IX, 1155
 pelagic, RMS, 257, 260, 397
 pelagic, in Lloydminster shale, XXIX, 1617
 Philippine seas, MSC, 12
 Pico groups of, XXI, 628
 Pliocene, Texas and Louisiana, IX, 83
 Porto Rico, MSC, 12
 post-Saucesian, MSC, 154
 Recent, MSC, 12
 Recent, dredged off east coast of Australia, MSC, 13
 Recent, from Bay of Palermo, Sicily, MSC, 13
 Recent, Grecian Archipelago, MSC, 13
 Recent, littoral, Texas and Louisiana, MSC, 13
 Recent, Malay Archipelago, MSC, 13
 Recent species of, MSC, 171
 Reef Ridge shale, MSC, 68; XXIII, 25, 38
 Refugian, MSC, 78
 Refugian, comparison with Vicksburg species, MSC, 177
 relation of, to origin of California petroleum, X, 697
 relationship between distribution and environment, MSC, 80
 relative value of species of smaller, for recognition of stratigraphic zones, VII, 517; VIII, 246
 Reliz Canyon, MSC, 3, 172
 Reliz Canyon, a temperate-zone fauna, MSC, 17
 Reliz Canyon, ecologic chart of, MSC, Fig. 5 (in pocket)
 Reliz Canyon, indications of depth and temperature, MSC, 18
 Reliz Canyon section, biostratigraphic classification of, MSC, 9
 Relizian, MSC, 154
 Relizian, Luisian, and Mohnian, MSC, 166
 Relizian of Reliz Canyon, MSC, Pl. X
 Relizian and Luisian, MSC, 165
 Rodeo shale, MSC, 66
 Samoan, MSC, 12
 San Francisco Bay, MSC, 12, 13
 sand, RMS, 254, 255
 Santa Clara County, California, first well cuttings examined for, XXV, 1219
 Santa Cruz Mountains, check list of, MSC, 52
 Saucesian, MSC, 115, 153, 162, 163, 171
 Saucesian of Reliz Canyon, MSC, Pl. VII
 sediments, RMS, 374
 shallow-water, from Channel Islands of Southern California, MSC, 12
 shallow-water, near Santa Catalina Island, MSC, 11

(Foraminifera)

- shallow-water, of Tortugas region, MSC, 12
 shells, RMS, 247, 376, 388, 412
 short cuts in picking out and sectioning, X, 1173
 significant in correlation in Covington County, Mississippi, GC, 369, 372-381; XIX, 1148, 1151-1160
 small, from late Tertiary of the Netherlands East Indies, XXV, 761
 smaller, relative value of species of, for recognition of stratigraphic zones, VII, 517
 Sobrante anticline, MSC, 163
 South Cornwall, MSC, 12
 Spindletop, XXI, 480
 Spring Hill-Sarepta gas field, VII, 547
 Stratton Ridge salt dome, Texas, IX, 23
 Sugarland field, GC, 716; XVII, 1369
 Sunset Valley district, check list of, MSC, 57
 Tamesí formation, MEX, 85, 86, 91, 104
 Tampico Embayment, Mexico, chart showing range of, XX, 452
 Tampico Embayment area, Mexico, XX, 438
 Tantoyuquita, MEX, 78
 Temblor, MSC, 55
 temperature and depth distribution of, MSC, 81
 Tempoal, MEX, 106, 111, 112
 Tempoal type locality, MEX, 111
 Tertiary, MSC, 21, 84
 Tertiary, of Porto Rico, XXV, 1810
 Tertiary Carapita formation of Venezuela, MSC, 178
 Texas, VIII, 443; IX, 29, 21
 Texas Jackson, X, 154
 their classification and economic use, review, XIII, 239; XXIV, 1498
 Foraminifera, Tice shale, MSC, 66
 Tomales Bay, MSC, 11
 Tumeys sandstone, XIX, 1200
 Tuxpan formation, MEX, 138
 type area of Monterey shale, check list of, MSC, 34
 type locality of Temblor formation, check list of, MSC, 54
 type Monterey, MSC, 38, 168
 type San Lorenzo formation, MSC, 51, 56
 typical of Refugian stage of California Tertiary, XXIV, 1930
 Upper Cretaceous, at McFaddin Beach salt dome, XXIII, 340
 Upper Eocene, in Georgia, XXII, 792
 upper limits of, in relation to shore line oscillations, GC, 431; XIX, 695
 upper Luisian of Reliz Canyon, MSC, Pl. XV
 upper Refugian, MSC, 152
 upper Relizian and lower Luisian of Reliz Canyon, MSC, Pl. XI
 upper Saucesian and lower Relizian of Reliz Canyon, MSC, Pl. VIII
 upper Saucesian and lower and middle Relizian of Reliz Canyon, MSC, Pl. VIII
 uppermost Luisian, lower Mohnian, and lower Delmontian of Reliz Canyon, MSC, Pl. XVI
 use as detailed index fossils, XXV, 1226
 use as indicators of age, XXVII, 941

(Foraminifera)

- use in determining contacts of Tertiary and Cretaceous formations down to Tuscaloosa at Chipley, Florida, XXV, 1227
 use of, in geologic correlation, VIII, 485
 use of Zeiss camera for taking photographs of, XX, 437
 used for correlations in California in the "thirties," XXIV, 1709
 used in determining formations in Conroe field, GC, 796; XX, 744
 Valmonte diatomite, in Palos Verdes Hills, California, XX, 144
 value in correlation, VIII, 539, 546
 variations, X, 483
 Velasco, Mex, 83, 90
 Velasco shale of Tampico Embayment, X, 581
 Vicksburg, at High Island dome, GC, 931; XX, 582
 Vicksburg, of Vicksburg group, check list of, GC, 352
 Vicksburg and Jackson formations, plates, GC, 510-523; XVII, 1334-1347
 Vicksburg formation, GC, 350, 404; XVII, 634; XIX, 1660; XXIII, 250
 Washita, XXVII, 1073
 west coast of America, MSC, 12
 west coast of South America, Recent, MSC, 12
 Whitsett formation, GC, 494; XVII, 1318
 Woods Hole region, MSC, 12
 Wooley's Bluff clays, GC, 481; XVII, 1304
 Zemorra Creek, checklist of, XXVII, 1378
 Zemorrian, MSC, 110, 161, 177
 Zemorrian and Saucesian, MSC, Pl. VI
 Zemorrian-like, MSC, 179
 Foraminifera and ostracoda, bearing of, on Lower Cretaceous Fredericksburg-Washita boundary of north Texas, XXVII, 1060
 from borings at Greenville, Mississippi, check list of, XXIII, 1397-1399
 from upper Midway sediments of Louisiana, check list of, XXV, 740
 in north Texas, references on, XXVII, 1080
 Foraminifera casts, MSC, Fig. 4 (in pocket)
 Foraminifera species in Upper Cretaceous of Great Valley, zonal range of most diagnostic, XXIX, 968
 Foraminifera zone in Mississippian limestone, XXIX, 1162
 in Turner Valley field, XXIX, 1159
 Foraminiferal, echinoid, molluscan correlations, MSC, 166
 Foraminiferal and molluscan assemblages, MSC, 56
 Foraminiferal assemblages, Eocene, from Zemorra Creek, Chico Martinez Creek, and Carneros Creek, XXVII, 1372
 Eocene, in California, distribution of, XXIV, 1924
 of certain zones in California showing affinity for Claiborne group of Gulf Coastal area of United States and Tantoyuca formation of Mexico, XXIV, 1931

- (Foraminiferal) paleogeographic significance of, MSC, 11
- Santa Cruz, MSC, 85
- Foraminiferal associations, Tertiary, MSC, 81
- Foraminiferal cavities, MEX, 51
- Foraminiferal check list from Jackson Eocene of Mississippi, XXI, 82
- Foraminiferal collection localities in Reliz Canyon, MSC, 8
- Foraminiferal content of marine strata of Vicksburg, GC, 337; XIX, 1647 of some zones, lateral variation in, XXIX, 959
- Foraminiferal correlation, tentative, of of Eocene formations in California, XXIV, 1929
- Foraminiferal correlations in Eocene, bibliography on, XXIV, 1936
- in Eocene of San Joaquin valley, California, XXIV, 1923, 2049
- of Upper Cretaceous formations in Sacramento and San Joaquin valleys, California, XXIX, 962
- Foraminiferal data, historical summary of, MSC, 20
- Foraminiferal Delmontian stage, MSC, 127
- Foraminiferal fauna of Antigua chalk, XXIV, 1600
- of Forbes formation, XXVII, 283
- of Grayson marl, XXIX, 175
- Reliz Canyon, MSC, 171
- Reliz Canyon, relation of, to living faunas, MSC, 168
- San Luis Obispo County, MSC, 168
- Tertiary, from Manta, Ecuador, MSC, 177
- Trinidad, XXIV, 2109
- Foraminiferal faunas, Miocene, in Crocker Flat landslide area, XXVI, 1614
- of California, comparison with foraminiferal faunas from other regions, MSC, 176
- of Zemorrian Stage, MSC, 152
- San Joaquin Valley, MSC, 72
- Tembler, on flanks of Moral syncline, XXV, 229
- Tertiary, MSC, 182
- Upper Cretaceous, in Gulf region, XXII, 1635
- Foraminiferal faunule from Santa Lucia Range, XXVIII, 507
- from type San Lorenzo formation, MSC, 72
- Foraminiferal faunules from Oregon Tertiary, MSC, 78, 99
- Foraminiferal formations in Latin America, MSC, 179
- Foraminiferal localities, MSC, 66
- Miocene, MSC, 166
- Foraminiferal marls and clays, XXVIII, 1449
- Foraminiferal material at United States Bureau of Fisheries Laboratory at Woods Hole, XXV, 1225
- Foraminiferal Miocene-Pliocene transition, MSC, 168
- Foraminiferal molds, MSC, 32
- Foraminiferal regions in California, MSC, 2
- Foraminiferal samples from Bakersfield, check list of, MSC, 27
- Foraminiferal section along Adams Canyon, Ventura County, California, XII, 753
- Foraminiferal sections, Saucian, MSC, 154
- (Foraminiferal) Zemorrian, MSC, 153
- Foraminiferal sequence, facies and, MSC, 83
- in California Miocene, summary of, MSC, 136
- Miocene, MSC, 84, 92
- summary of stratigraphic relationship of molluscan, echinoid, and vertebrate faunas to, MSC, 136
- Foraminiferal shales, PROB, 202, 203, 211, 392
- Kein Front field, PROB, 204
- Santa Maria field, PROB, 207
- Foraminiferal siltstone, SC, 36; XX, 1582
- Foraminiferal source beds, PROB, 182, 192
- Foraminiferal species in Amoura shale, XXVI, 1652
- Foraminiferal studies in Georgia, XXII, 795
- Foraminiferal taxonomy, West Coast, MSC, 182
- Foraminiferal zonation, Hackberry, at Starks field, Calcasieu Parish, Louisiana, XXIII, 1835
- tentative, of subsurface Claiborne of Texas and Louisiana, GC, 425; XIX, 689
- Foraminiferal zones at Cantua Creek, XXIV, 1926
- at Clervo Hills, XXIV, 1926
- at Coal Mine canyon west of Coalinga, XXIV, 1927
- at Coalinga Nose field, XXIV, 1927
- at Kettleman Hills field, XXIV, 1927
- at Oil City, Coalinga, XXIV, 1927
- at Reef Ridge south of Big Tar canyon, XXIV, 1927
- at Rio Vista field, XXIV, 1928
- at Standard Oil Company Hooper well No. 1, XXIV, 1928
- at Vaca valley, XXIV, 1928
- east of Tecuya Creek, XXIV, 1928
- in fourteen key sections in California areas, correlation of, XXIV, 1933
- in Rancherias well correlated with Texas section, GC, 618; XIX, 1387
- in Simi valley, XXIV, 1926
- north of Mt. Diablo, XXIV, 1926, 1928
- of California Miocene, SC, 34; XX, 1580
- of Dominguez oil field, MSC, 98
- of Foxen sand in Betteravia area, XXIII, 56
- of Jackson Eocene in Gulf Coast region, XXIII, 1394
- south of Panoche Creek, XXIV, 1926, 1928
- twelve, in Great Valley, California, XXIX, 1005
- Upper Cretaceous, in Great Valley, California, diagrammatic cross sections, XXIX, 997
- Upper Cretaceous, in Great Valley, California, diagrammatic map of areal distribution of, XXIX, 995
- useful in correlating Eocene in Mexico and in Texas, XIX, 1387
- Foraminiferen von Laysan und den Chatham-Inseln*, MSC, 13
- Foraminifers, XXV, 132
- Refugian, MSC, 102
- Foran, E. V., XVI, 863
- interpretation of bottom-hole pressures in East Texas oil field, XVI, 907
- Forbes, Hyde, XXVI, 1798
- Forbes formation, XXVII, 282; XXIX, 963
- in Putah Creek, XXIX, 990
- Forces affecting outer crust of earth, CD, 88
- controlling currents, RMS, 105
- inadequate for displacement of continents, CD, 87
- maintaining the general oceanic circulation, RMS, 63
- of crystallization disrupting rock for mineral studies, RMS, 594
- primary and secondary, balance of, in sea, RMS, 106
- required to move particles on a stream bed, RMS, 9
- tide-producing, RMS, 58
- within crystal lattices, RMS, 478
- Forch, C., RMS, 61
- Forchhammer, RMS, 197
- Ford zone at Wilmington oil field, XXII, 1073
- Fordham, W. A., magnetic resurvey of part of Northamptonshire iron field, review, XII, 1122
- Fordham, W. H., oil finding by geophysical methods, review, X, 200
- Fore-reef province or Delaware basin of Permian of Pecos Valley, XXI, 846
- Fore-reef zone in Pecos Valley, formations of, XXI, 870
- Fore-set beds, RMS, 173
- Foreign faunas, relation to Midway fauna of Texas, XV, 149
- Foreign geology conference at Chicago convention, XXIV, 604
- Foreign literature, recent, on problem of petroleum generation, bibliography of, XX, 1237
- recent, on problem of petroleum generation, summary of, XX, 1237
- Foreign maps, XXVIII, 1545
- War department need for, XXVII, 1560
- Foreign oil developments in 1938, XXIII, 949
- Foreign petroleum resources, bibliography of, VII, 593, 698; VIII, 251, 352, 678, 834; IX, 368, 672, 815, 911
- Foreland arching, XXIV, 101
- Foreland facies in West Texas, XXIX, 1346
- Foreland slope of Appalachian geosyncline, section, XXVII, 1059
- Forelle limestone in Laramie basin, XVIII, 1657
- Foreman, Fred, and Thomsen, Harry L., STRAT, 821
- Foreman formation, CAL, 77
- Foremost, Pakowski, and Milk River formations of southern plains of Alberta, stratigraphy of, ALTA, 53; XV, 1181
- Foremost field, GAS, 23, 28, 1060
- Foremost formation, Alberta, ALTA, 8; XV, 1136
- Border-Red Coulee field, STRAT, 274
- Milk River Ridge region, Alberta, ALTA, 89-91; XV, 1218
- Foremost formation and Pale beds in Lethbridge-Brooks area of southern Alberta, subsurface study of, ALTA, 69; XV, 1197
- Foreshore, RMS, 207, 208, 275
- Forest City and Salina basins, Kansas, Nebraska, Iowa, and Missouri, FOP, 82; XXV, 1514

- Forest City basin, XIV, 1550; XXIV, 1003, 1005; XXV, 1646; XXVIII, 772; XXIX, 706
 gravity of oil in well in, XXVII, 811
 Forest City basin and adjacent areas, north Mid-Continent region, map showing location of important wells drilled in, in 1939, XXIV, 1004
 Forest City-Salina basin region, structure map, FOP, 83; XXV, 1515
 Forest clay, XXVII, 1600
 Forest Hill member, XXVIII, 59
 Forest Hill sand, XXVIII, 1316, 1318, 1319
 Forest Hill sand and Red Bluff clay, stratigraphic relations, GC, 359; XIX, 1163; XXVIII, 1323
 Forest Oil Corporation, XXIX, 675
 Forest sands, Cretaceous oil in Miocene beds of, XXVII, 1617
 four distinct sand members of, XXVII, 1616
 of Bernstein field, Trinidad, B. W. I., crude oils of, XXVII, 1595, 1601
 Toluene oil in, XXVII, 1614
 variations in characteristics of crude oils of, XXVII, 1617
 Forest series, XXIV, 2123
 Foreword, development and use of engineering geology, XXVI, 1795
 exploration methods, XXIV, 1353
 geology of natural gas, GAS, v
 Gulf Coast oil fields, GC, ix
 symposium on geophysics, XV, 1307; XXVIII, 1
 symposium on Mexico, XX, 385
 symposium on occurrence of petroleum in igneous and metamorphic rocks, XVI, 717
 West Texas-New Mexico symposium, Part II, PTNM, 533; XXVI, 533
 Fork field, Michigan, XXVIII, 763; XXIX, 695
 Fork gas field, XXVII, 823
 Fork oil field, XXVII, 828
 Forman, F. G., XX, 1050; XXV, 375, 396
 Formation, XXIII, 1074
 definition, XV, 370; XXIV, 1723; XXV, 1715
 Formation content, interpretation of, by use of electrical diagrams, XXIII, 1306
 Formation name, new, for uppermost beds of Permian of Texas, XXII, 925
 Formation names in Mississippi, guide to, GC, 382; XIX, 1161
 in Texas, Louisiana, and Mississippi, guide to, XXIV, 2089
 Formation pressure, Bryson field, STRAT, 546
 formation samples from gun perforators, XXV, 752
 Formation thicknesses, determination of, IX, 451
 Formation-volume or shrinkage factors, XXV, 1314
 Formational correlations within California Province, MSC, 159
 Formations exposed west of Choctaw fault, XXI, 13
 in Gulf Coast region, special characteristics of, XXIX, 1321
 in Louisiana, GC, 437; XIX, 656
 in salt-dome region of northern Louisiana, section, SD, 279
 in southeast Texas, GC, 437; XIX, 656
 (Formations)
 in southwest Texas, GC, 437; XIX, 656
 in Utah-Colorado area, XI, 115
 investigated, basic data on, SBP, 412
 penetrated by drill in Harris County, Texas, table of, XXIII, 154
 relations of, in east section of Texas Gulf Coast, XXIII, 1631
 relations of, in west section of Texas Gulf Coast, XXIII, 1630
 surface, in southeast Texas, GC, 435; XIX, 654
 Formula for angle of reflection in X-ray studies, RMS, 618
 for components of a gradient, RMS, 76
 for computing convection currents, RMS, 112, 113
 for critical tractive force, RMS, 9
 for defective force of earth's rotation, RMS, 107
 for determining organic content from texture, SBP, 72
 for eddy conductivity or Austausch coefficient, RMS, 21, 80
 for glauconite, RMS, 504
 for ionic concentration, RMS, 65
 for particle size, RMS, 554
 for pressure in sea, RMS, 63, 64
 for properties of sea water, RMS, 69, 73
 for transparency of sea water, RMS, 82
 for velocity of currents as determined from physical properties of water, RMS, 111
 for X-ray interference figures in flat cameras, RMS, 622
 fundamental, for determining dip, XXI, 341
 Formulae used for legibility of lantern slides, XXVI, 1671
 Forna, XXV, 839
 Forney, Maurice E., XXV, 1969
 Forrest, Lesh, MSC, 53, 72, 108, 161; XXIV, 1723; XXVII, 1364
 Forrest, W. R., XXIV, 1550, 1599, 1600
 Forrester, J. D., XXII, 1043
 Forsch, N. N., XXIX, 774
 Forster, XIX, 474
 Fort Adams unit, XXVIII, 62
 Fort Bend County, Texas, Blue Ridge salt dome, SD, 600
 Clodine field, XXV, 2057
 geochemical log, discovery well, Rosenberg field, XXIV, 1419
 geochemical log, temporary producer, XXIV, 1420
 Sugarland oil field, GC, 709
 Fort Collins field, Colorado, PROB, 937, 948; XXIX, 1599
 Muddy sand productive at, XXIV, 1104
 sand in Dakota group productive at, XXIV, 1104
 Fort Hays chalk, Kansas, clastic dike in, XV, 842
 Fort Hays limestone, VI, 550; XXI, 911
 Greasewood field, STRAT, 26, 32
 in Nebraska, structural map of base of, XXVI, 1532
 Fort Lancaster platform, XXV, 77, 87, 103
 Fort Monroe, samples from deep wells at, XXIX, 81
 Fort Norman, MacKenzie District, Canada, V, 86, 524; VIII, 511
 Mackenzie River district, production at, FOP, 20; XXV, 1452
 (Fort Norman)
 northwest Canada, oil field at, XXVIII, 1509
 Fort Payne formation, IV, 306; VI, 25
 eastern Kentucky, GAS, 935
 Hart County field, Kentucky, GAS, 856
 Smithland field, GAS, 861
 Tennessee oil fields, Oklahoma, STR I, 252
 Fort Riley limestone, I, 112; VI, 79, 427, XXIII, 1060
 Morrison field, Oklahoma, STR I, 152
 Fort Scott, post-, formations of Pennsylvanian in eastern Kansas, GAS, 490
 Fort Scott formation, three limestone members of, XXV, 36
 Fort Scott limestone, STRAT, 443; I, 134; II, 119; III, 264, 270; IV, 174; V, 39, 276, 546, 561, 581; XXV, 36
 Depew area, Oklahoma, STR II, 366
 East Tuskegee pool, STRAT, 443
 upper, XXV, 71
 Fort Scott-Wetumka correlation, X, 810
 Fort Sill formation, XXV, 1630
 Fort Sill Reservation shallow sand oil and gas field, XXVIII, 784
 Fort Smith formation, XVIII, 1052
 Fort Smith group in Roland anticline, GAS, 526
 Fort Stockton anticline, PROB, 881
 Fort Stockton arch, XXV, 89
 Fort Stockton high, PROB, 369
 Yates dome possibly a continuation of STR II, 499
 Fort Stockton mountains, XXVI, bet. 224 and 225, 226
 Fort Stockton pool, XXIX, 744
 Fort Tejon, CAL, 18, 20, 33, 121, 140, 309, 317
 Fort Union formation, VI, 144; XXI, 995; XXIII, 1478; XXVI, 356, 1560
 important marker-bed for correlation of Tertiary in Dakota basin, XXVII, 1569
 waters from, XXIV, 1312, 1314
 Fort Wayne chert, XXII, 430
 Fort Worth basin, XXIV, 1031
 cross section from, to western Coleman County, XXIX, 154
 Fort Worth formation, characteristics of ammonites of, XXIV, 1184
 in northern Texas, XIII, 1297
 Fort Worth-Galveston-Sigsbee deep, GC, 194; XVII, 1448
 Fort Worth limestone, II, 62; V, 307; VI, 181; XXIX, 173
 Fort Worth syncline, XXIV, 1045; XXV, 1064, 1065, 1073; XXVI, 1040; XXVII, 771; XXVIII, 835
 in Clay, Montague, eastern Archer, and southeastern Wichita counties, geophysical methods used in, XXIV, 1048
 Fortier, John R., RMS, 11
 Fortier, Leo R., GAS, 459
 Fortier, Leo R., and Bunte, Arnold S., Nikkel pool, McPherson and Harvey counties, Kansas, STRAT, 105
 Fortier, R. G., STRAT, 239
 Fortier, S., RMS, 643, 644
 Forts subdelta, RMS, 159
 41-A and Four Way Ranch sands, electric log, XXVIII, 206
 41-A sand, XXVIII, 207
 Foshag, W. F., RMS, 456; IX, 247, 259, 260

- Fossa-Mancini, Enrico, *Fallas y Petróleo en la Antigua Zona de Reserva Fiscal de Cinco Mil Hectáreas de Comodoro Rivadavia*, review, XVI, 267
- faults in Comodoro Rivadavia oil field, Argentina, XVI, 556
- Fossa-Mancini, Enrique, XXVIII, 1457
- Fossas do Devoniano do Paraná*, review, XX, 987
- Fosshage, E. W., recent deep test in Moore County, Texas, XXIX, 227
- Fossil, characteristic of Guadalupe series, XXV, 101
- most important index, of Western Australia, *Helicoprion davisi*, XXV, 402
- Fossil alga, XXIV, 391
- Fossil algae in salt at Markham dome, Matagorda County, Texas, XXIII, 194
- in sylvite of salt core, GC, 42; XVII, 1047
- Fossil algae and potash salts in Texas salt dome, discovery of, SD, 781; IX, 348
- Fossil assemblage, distinctive, at Anse la Butte dome, XXVII, 1137
- relationship between biocenosis, thanatocenosis, and, XXVI, 1729
- Fossil-bearing beds of marine facies of Providence sand, XXII, 1655
- Fossil bed in Colorado series of Honda district, Colombia, XXVI, 802
- Fossil borings, XXVI, 262
- Fossil cast, inclusion of petroleum in, IX, 667
- Fossil cavities, MEX, 40-42
- Fossil Cliff and Callytharra series, correlation of, XXV, 389
- Fossil Cliff-Callytharra fauna, XXV, 406
- Fossil Cliff limestone, XXV, 377
- Fossil Cliff stage, fauna of, XXV, 377
- Fossil constituents of oil shales, X, 861
- of oil shales, temperature distinctions, X, 875
- Fossil coquina productive in West Texas, XXIV, 1037
- Fossil coral reefs, Ordovician, in Baldwinville field, New York, GAS, 989
- Fossil corals in Onondaga limestone, XXI, 1589
- Fossil Creek section, Colorado, outcrop section p. SBP, 243-255, 411
- Fossil density, XXVI, 1733
- Fossil faecal pellets, RMS, 516, 522, 523
- Fossil fauna and flora of Miocene in Texas, XXVIII, 993
- Fossil faunas associated with Ammonoidea, factors indicated by, XXIV, 1179
- Fossil fish scales, XXVIII, 1204
- Fossil flora in Laramie formation, XXII, 1029
- Fossil footprints near Abilene, Texas, XI, 633
- Fossil fragments in Mississippi lime of Kansas, XXII, 1591
- Fossil horse of Ricardo, SC, 40 XX, 1586
- Fossil leaves, post-Laramie, XX, 1311
- Fossil limestone reefs, XIII, 646
- Fossil localities, Aptian-Albian, Central America and Mexico, XXVIII, 1091
- Campanian-Maestrichtian, in Central American and Mexico, XXVIII, 1104
- Cenomanian-Turonian, in Central
- (Fossil)
- America and Mexico, XXVIII, 1098
- Coniacian-Santonian, in Central America and Mexico, XXVIII, 1101
- in Mexico, Upper Jurassic, XXVII, 1509
- in Palos Verdes Hills, California, XX, 148
- Vicksburg, in Natchitoches Parish, Louisiana, XXIII, 246
- Fossil mammal remains in California, deep-well record of, XIX, 1064
- Fossil mollusks, Paleocene, SC, 107; XX, 1653
- Fossil palm leaves, XXVI, 265
- Fossil plant (*Calamites*) of Union Valley sandstone, XXII, 891, 892
- (*Lepidodendron*) of Prairie Mountain formation, XXII, 883
- Fossil plant evidence from Jackfork and Stanley formations, XXVIII, 986
- Fossil-plant locality in Honda series, XXVI, 819
- near Lamberts Station, Alabama, XXIII, 1553
- Fossil plants, ages of Jackfork and Stanley formations as determined by, XXVIII, 1012
- description of, XIII, 823
- Eocene, in Swauk formation, XXIX, 1393
- found in some "mother rocks" of petroleum from northern Alaska, XIII, 841
- in Kansas, Oklahoma, and north Texas characteristically Permian, XXIV, 315
- in Tuscaloosa formation, XXII, 1652
- of Wolfcamp equivalent, PTNM, 684 XXVI, 684
- Fossil reptile remains in Morrison formation, XXVIII, 1204
- Fossil reptiles, XXIV, 263
- in Jurassic Morrison formation, XXVIII, 1196
- Fossil sink holes in Cretaceous beds of Prowers County, Colorado, XXVIII, 1493
- Fossil ultimate peneplains, XXVI, 777
- Fossil vertebrate teeth of Wind River age in Wasatch beds, XXV, 2040
- Fossil vertebrates and plants of Wichita and Clear Fork groups, PTNM, 697 XXVI, 697
- Fossil wood, XXII, 532
- Fossil zone correlated with upper Colorado La Cira formation, XXVI, 804
- in Selma chalk, XXII, 1653
- in Upper Cretaceous in Georgia, XXII, 1649
- La Cira, XXIX, 1117
- Fossil zones in Alberta shale, XXVIII, 1404
- in Wellington formation, XXIII, 1756
- in Wolfcamp formation, PTNM, 647; XXVI, 647
- marine Miocene, in Gulf Coastal Plain, XXIII, 179
- more useful than lithology in long-distance correlation, GC, 425; XIX, 689
- of Carboniferous rocks in Europe, XIX, 1297
- Fossiliferous beds abundant in Atoka formation, XXI, 1406
- Fossiliferous cherty limestone in west-
- (Fossiliferous)
- ern Hutchinson County, Texas, XXIII, 1021
- Fossiliferous limestone remnants in lower Sundance shales, XXI, 752
- Fossiliferous limestone zones in Coldwater shales, XXV, 723
- Fossiliferous loam, Vicksburg, GC, 339, 340, XIX, 1649
- Fossiliferous localities of Midway group in Louisiana, XXV, 734
- Fossiliferous Miocene outcrops near Burkeville, Texas, map showing location of, XXVIII, 984
- Fossiliferous Mississippian beds in base of Pocono, XXV, 162
- Fossiliferous Oligocene of Mississippi, XXVIII, 1316
- Fossiliferous Paleozoic Quetame phylites, XXV, 1795
- Fossiliferous Paleozoic sediments in Colombia, XXV, 1789
- Fossiliferous reef limestone in Sewell-Eddleman area, XXVI, 212
- Fossiliferous shales in Laredo district, XXI, 1433
- in Midway dome, XXII, 819
- Fossils, XXI, 1346. (See Birds, Bryozoa, Diatoms, Earthworms, Echinoids, Fauna, Fish remains, Flora, Foraminifera, *Heterostegina* zone, *Inoceramus* beds, Insects, Land plants, Mammals, *Margulinella* zone, Marine invertebrates, Microfauna, Microflora, Microorganisms, Micropaleontology, Mollusks, Ostracoda, Paleontology, Pecan gap fossils, Radiolarians, Silicoflagellates, Turritella, Uvigerina, *Valulinaria* beds, Vertebrates)
- abundant in Shetlerville member of Renault formation in southeastern Illinois and western Kentucky, XXIV, 829
- abundant on upper half of Tombigbee sand, XXII, 1653
- Albian, XXVIII, 1146, 1148
- Amnicola-Scalez zone, in Elk Hills field, California, STR II, 49
- Anita shale, check list of, XXVII, 8
- Aptian, XXVIII, 1146
- Aptian-Albian, in Chimana formation, Venezuela, XXVIII, 9
- Argovian, XXVII, 1511
- Avery Island dome, Louisiana, IX, 772
- Baker-Glendive anticline, XXIII, 468
- Belle Isle dome, Louisiana, IX, 790
- Big Hill dome, Texas, IX, 593, 722
- Big Lake field, Texas, X, 370
- Black Knob Ridge, Oklahoma, XXI, 6
- Bradford field, Pennsylvania and New York, STR II, 415
- Brazil and Peru, XXI, 107
- Brooks dome, Texas, X, 31
- Buckeye field, Texas, GC, 749 XIX, 393
- California, CAL, 69, 88, 109, 134, 146, 153, 178, 208, 244, 263, 286, opp. 288, 290, 299; X, 697, 899
- California, for the field geologist, XXIV, 2186
- Callovian, XXIX, 1023
- Cambrian, in Wind River Mountains, XXV, 125
- Carboniferous, significant for intercontinental correlation, XIX, 1301
- Carboniferous and Permian, in

(Fossils)

- Northwest Basin, Australia, XX, 1033
 Carterville-Sarepta and Shongaloo field, XXII, 1477
 Cenozoic, CAL, 286, opp 288
 characteristic of Boyle limestone, XXV, 690
 characteristic of Prairie Bluff chalk, XXI, 808
 characteristic of Pulaski shale, XXII, 94
 characteristic of Sellersburg, XXV, 689
 Chemung, XXIV, 1993
 Chickasawhay, in Tampa limestone of Tarpon Springs, Florida, XXVIII, 1351
 Claiborne, in formation in northern Mexico, XIX, 1373
 Claiborne, in Yegua formation in northern Mexico, GC, 604
 classification, XXV, 1245
 Clodine field, XXV, 2057
 Comanchean, Kansas, II, 79 X, 561
 common in Carwood formation, XXIV, 798
 common to Alazán and Vicksburg, MEX, 121
 Cretaceous, CAL, 109; MEX, 20-22, 25, 27, 32, 37, 38, 41, 44, 53, 54, 57, 59, 61, 69, 73, 74, 77-82, 85-92
 Cretaceous, Coahuila, XXVIII, 1159
 Cretaceous, Colombia, X, 384
 Cretaceous, Hockley dome, Texas, IX, 1048
 Cretaceous, in salt domes of south Texas, SD, 741
 Cretaceous, Mississippi, XXVIII, 39
 Cretaceous, Monroe gas field, Louisiana, GAS, 749, 751, 752
 Cretaceous, New Mexico, IV, 76
 Cretaceous, northern California, XXVII, 250
 Cretaceous, Prothro dome, SD, 300
 Cretaceous, south Texas domes, IX, 559
 Cretaceous, western interior region, XXII, 1636, 1637
 Croton Creek, XXI, 462
 Curtis, in Entrada sandstone, XXIII, 1175
 danger in reporting, far beyond their indicated range and environment, XXIII, 250
 Desert Basin, Western Australia, X, 1128
 Devonian, III, 289
 Devonian, Argentina, X, 856
 Devonian, Bolivia, X, 856
 Devonian, in Black shale, eastern Kentucky, GAS, 937, 938
 Devonian, West Virginia, XXIV, 1985-1988, 1990-1993
 Devonian, Wind River Mountains, XXV, 130
 diagnostic, in Alberta, XI, 249
 diagnostic, in Florida Miocene, chart showing ranges of, XXV, 271
 differences between Mississippian and Pennsylvanian, XXIX, 132
Discorbis, *Heterostegina*, and *Margulinula* zones, in West Columbia field, Texas, STR II, 459
 distribution in California formations, CAL, 287
 distribution, not a proof of continental drift, CD, 80, 86
 Dixon, XXVI, 12
 East Indies, XXII, 19
 Edna gas field, XXV, 109

(Fossile)

- Eocene, CAL, 129, 134; MEX, 83, 101-120; SC, 17; XX, 1563; XXIX, 893. (See Eocene fossils)
 Eocene, Arkansas, IX, 169
 Eocene, California, IX, 992
 Eocene, Colombia, X, 392
 Eocene, Gulf Coast, XXVI, 1188
 Eocene, Hiawatha gas fields, Wyoming and Colorado, GAS, 351
 Eocene, Mexico, IX, 298
 Eocene, Oligocene, and Miocene, of Kreyenhagen shale, XIV, 1331
 Eocene, Panama and Costa Rica, III, 363
 Eocene, Texas, VIII, 443
 Eocene diagnostic, CAL, 136
 extinct at end of Cretaceous, XXV, 640
 fish, XXV, 2060
 Fleming, at Big Hill salt dome, SD, 500
 from Alazán, MEX, 115
 from Cañon de los Panales, MEX, 25
 from Clansay horizon, MEX, 25
 from limestone of Buda age in Denton County, Texas, XXVIII, 1538
 from metamorphic rocks of Coast Range of Venezuela, XXVII, 1632
 from Northern Pacific well No. 1 and Westphal permit well, XXIII, 472
 from type locality of Callytharra limestone in Northwest Basin, Australia, XX, 1041
 from Westphal well No. 1 in Baker-Glendive anticline, XXIII, 474
 Georgia Coastal Plain, XXII, 791
 glauconite in, RMS, 506-509
 Glen Rose, XXII, 1668
 Glen Rose, Bellevue field, Louisiana, STR II, 236
 Grayson, XXIX, 181
 Greta field, GC, 654 XIX, 550
 guide, of Hurricane lentil, XXIV, 1669
 guide, Vaqueros, XXV, 217
 Gulf Coast wells, I, 37, 38, 71
 Hamilton, XXIV, 1991
 Hauterivian, XXVIII, 1152
 Helderbergian, XXV, 670, 671, 673, 675, 676, 677
 High Island dome, GC, 918 XX, 569
 Hoskins Mound, GC, 847 XX, 169
 in black shales, XXIII, 1179
 in Recent material of Colorado delta, XXIX, 1711
 in San Rafael Swell, Kaibab formation, XXIV, 622
 index, of North America, XXVIII, 1220
 index, of Saratoga, Marlbrook, and Annona formations, XXII, 1478
 indicating Oligocene age of Tumeey formation, XIX, 1200
 Indio, along flanks of Aldamas anticline, GC, 599 XIX, 1368
 introduction to study of, review, XVII, 1539
 invertebrate, from Stanley and Jackfork formations, XVII, 988-991
 invertebrate, of Manzanao group, PTNM, XXVI, 688
 Jackson, Hockley dome, Texas, IX, 1051
 Jackson, Texas, IX, 111
 Jefferson Island, Louisiana, GC, 993; IX, 760 XIX, 1612
 Jennings field, Louisiana, X, 83
 Jurassic, CAL, 88; MEX, 12, 13, 15, 16
 Jurassic, from Smackover limestone

(Fossils)

- of Alabama, Arkansas, Louisiana, and East Texas, distribution of, XXVII, 1446
 Jurassic, Wind River Mountains, XXV, 137
 Jurassic marine, XXVIII, 311
 Keechi dome, Texas, SD, 248; X, 39
 Keokuk pool, XXIII, 229, 230, 233
 Kimmendgian, XXVII, 1513
 Knapp sandstone, in Bradford field, Pennsylvania and New York, STR II, 412, 415
 Knoxville, XXVII, 198
 Liassic, of Huasteca region, MEX, 10
 list of writers of papers dealing with practical use of, XXIV, 1771
 Little Hatchet Mountains, XXII, 535
 Lower Cretaceous, in northern Mexico, XXVIII, 1144
 Luling field, Texas, VIII, 779-784; IX, 644
 macroscopic, at Stratton Ridge dome, SD, 668-672
 marine, in Cascade Mountains, XXIX, 1391
 marine, in New Design group, XXIV, 829
 marine, in Oakville formation, XXIX, 1724
 marine, in Tuscaloosa formation, XXVII, 601
 Matilija, check list of, XXVII, 9
 Midway, along Rio Grande in northern Mexico, GC, 595; XIX, 1364
 Miocene, XXIV, 2182; XXV, 1331
 Miocene, Caliente Range, XXV, 220, bet. 256 and 257
 Miocene, California, CAL, 178, 208; SC, 34, 61, 91, 122; IX, 234; X, 132
 Miocene, Crocker Flat landslide area, XXVI, 1617
 Miocene, in South Texas wells, XXV, 1043
 Miocene, Los Angeles Basin, California, X, 757
 Miocene, Louisiana, II, 21; IX, 88
 Miocene, Mexico, MEX, 137-139
 Miocene, Mississippi, XXVIII, 61
 Miocene, Saratoga oil field, SD, 510
 Miocene, southern Louisiana, plate showing, XXIV, 464-475
 Miocene, Tepetate oil field, Louisiana, XXII, 291, 293-296, 300-304
 Miocene, Texas, VI, 278; IX, 85, 97
 Miocene, Texas and Louisiana, IX, 97
 Miocene and Oligocene, Saratoga field, Texas, IX, 272
 Miocene foraminifera, in Long Beach field, California, STR II, 70
 Mississippian, MEX, 7
 Mississippian, Wind River Mountains, XXV, 130
 Moab region, XI, 789
 molluscan, XXVII, 297
 Montana, STRAT, 281
 Naples, XXIV, 1992
 Neocomian, XXV, 1795; XXIX, 1074
 Niobrara, XXI, 911
 Niobrara, in Mancos formation in northwestern Colorado, STR II, 97
 of Anahuac formation, XXVIII, 1356, 1369-1375
 of Arabian Sea bottom, XXI, 1580
 of Artinskian series, XXIV, 259
 of Asuncion in Adelaide, Bradley, Bryson, and Cape San Martin quadrangles, XXVIII, 502
 of Brainbridge formation of Mis-

(Fossils)

- souri, XXIII, 597
 of Barbados, XXIV, 1554-1556, 1558, 1559, 1564, 1570, 1574, 1586, 1590, 1591, 1593
 of Barranquin formation in Venezuela, XXVIII, 5, 7
 of Bartlesville and Burbank sands, XXI, 254
 of Bend formation, III, 42, 62, 71, 226-231, 336, 419
 of Bendian of Ouachita Mountains, XXII, 868, 870, 871, 874, 876, 878-880, 883-885, 889-893, 897, 899-902, 904-909
 of Benton formation, XXVI, 352
 of Berrasian of Mexico and Central America, XXVIII, 1089
 of Bliss sandstone of Van Horn region, XXIV, 154
 of Boggy shale, XX, 1353
 of Bone Spring limestone of Leonard series, PTNM, XXVI, 573
 of Bossier formation, XXVIII, 592
 of Brownstown beds, Arkansas, IX, 1158
 of Buda limestone, XXIX, 175
 of Burlington formation, XVIII, 1146-1153; XXI, 1158-1167
 of Caballero formation, XXV, 2123
 of Callytharra limestone, XXV, 380
 of Cedar Valley limestone, XXVIII, 1524
 of Cerro Topila beds near Tampico, MEX, 134
 of Chester series in Kentucky, XXII, 271-273, 275-279, 282, 284
 of Chupadera formation, New Mexico, X, 838
 of Cisco formation, V, 155, 330
 of Cook Mountain formation, XXVI, 262
 of Cook Mountain formation along Rio Grande, GC, 604; XIX, 1373
 of coral reefs in Oligocene of Texas, X, 977
 of Corsicana marl, XXV, 639
 of Cotton Valley formation, comparison of, XXVII, 1471
 of Crocker Flat landslide area, XXVI, 1614
 of Cudlego series, XXV, 381
 of Dockum conglomerates, XXVII, 626
 of Dona Ana beds, typical Osage forms, XXV, 2138
 of Dunvegan formation, VI, 125
 of El Cantil formation, XXVIII, 8
 of Ellenberger formation, III, 63
 of Ervay tongue of Phosphoria formation along Casper Creek and Poison Spider Creek, XVIII, 1675
 of Ferron Point formation, XXVII, 582
 of Fleming formation, XXIX, 1176
 of Genshaw formation, XXVII, 584
 of Georgetown limestone, XXIX, 1426
 of Glenn formation, VI, 5
 of Green River formation, Wyoming and Colorado, VIII, 664; IX, 249
 of Greensand horizon of Cardabia series in Northwest Basin, Australia, XX, 1057
 of Guadalupe series, PTNM, 597; XXVI, 597
 of Guercule formation, XXVIII, 11
 of Gulf of Oman bottom, XXI, 1580
 of Gulf Coast Tertiary, XXII, 984
 of Gunsight formation, III, 144
 of Hauterivian of Mexico and Central

(Fossils)

- America, XXVIII, 1089
 of Hiawatha member at Powder Wash field, XXII, 1031
 of Hueco limestone, PTNM, 563, XXVI, 563
 of Jackfork sandstone, XVIII, 989
 of Jackson Eocene in Gulf Coast region, XXIII, 1394
 of Jacque Mountain limestone member, XXVI, 1388
 of Kemp clay, XXV, 640
 of Keokuk cherts in northeastern Oklahoma, XXIII, 329
 of La Blanca structure, Texas, XXI, 947
 of Lea Park shale, XXIX, 1618
 of Leonard type in San Andres formation, PTNM, XXVI, 694
 of *Linoproductus* stage, XXV, 383
 of Lloyminster shale, XXIX, 1616
 of Lower Bend shale, III, 139, 229; VI, 152
 of Lyons series, XXV, 380
 of Mancos shale, VI, 220
 of Marble Falls formation, III, 73, 139, 230, 238; VI, 152
 of Marion formation, II, 75
 of Marlbrook formation, VI, 474
 of Marmolejo formation, XXVIII, 469
 of Merecure formation, XXVIII, 18
 of Mesa formation, XXVIII, 25
 of Mesón formation, MEX, 132
 of Middle Jurassic rocks of western United States, XXIX, 1020-1026
 of Midway limestone, VI, 327, 329
 of Missouri Mountain shale, XXI, 9
 of Monterey formation, XXVII, 1346
 of Monterey shale in California, XII, 978
 of Nacatoch sand, XXV, 639
 of Nacatoch sand in Arkansas, VI, 54
 of Napo limestone in Ecuador, XI, 1267
 of Navarro group, XXV, 638
 of Newton Creek limestone, XXVII, 584
 of Neylandville marl, XXV, 639
 of Niobrara formation, VI, 71
 of Ochoa series in Guadalupe Mountains region, PTNM, XXVI, 613
 of Okesa sandstone in Oklahoma, XXIV, 730
 of Osage beds, XXI, 1160
 of Osgood in Tennessee and Missouri, XXVI, 7
 of Paso Robles formation, XXVII, 1359
 of Pecan Gap in Texas, check list of, XVIII, 1529-1532
 of Pecan Gap chalk, XXVIII, 525
 of Pecan Gap chalk in Arkansas, IX, 1155
 of Pecan Gap chalk in Texas, IX, 1159
 of Phosphoria formation, XXIII, 89
 of Pine River formation, VI, 119
 of Pleistocene Lissie formation, XXIII, 189
 of Polk Creek shale of Black Knob Ridge, XXI, 8
 of Reeds Spring formation, XVIII, 1144, 1145
 of Ridgetop shale, XX, 808
 of Rockport Quarry limestone, XXVII, 581
 of Rundle formation, XXVII, 43
 of St. Louis limestone in Kentucky, VI, 26
 of Ste. Genevieve formation in Ken-

(Fossils)

- tucky, VI, 26
 of San Andres group, XXV, 97
 of San Cayetano formation, XXVII, 1517
 of San Miguel formation, XV, 796
 of Santa Lucia Range of Paskenta stage, XXVIII, 459
 of Santa Maria field, XXIII, 56-61, 63-68
 of Schuler formation, XXVIII, 599
 of Simpson formation, VII, 563
 of Simpson group, XXV, 653-656
 of Sisquoc formation, XXVII, 1350
 of Smackover formation, comparison of, XXVII, 1449
 of Smithwick shale, III, 73, 231
 of Squaw Bay limestone, XXVII, 594
 of Stanley shale, XVIII, 988, 989
 of Stump formation, XXI, 753
 of Sundance age from Pryor Mountain, Wyoming, XI, 751
 of Sundance formation, XXI, 749
 of Sundance formation in Wyoming, XXI, 735
 of Supai formation in Arizona, X, 825
 of Tainui limestone, XXVII, 594
 of Tejon formation, bathymetric distribution chart of, XXVII, 1376
 of Tejon formation, thermal analysis chart of, XXVII, 1376
 of Thunder Bay limestone, XXVII, 593
 of Travis Peak, XXIII, 636
 of Trinity formation in Arkansas, XI, 450
 of Trinity group, XII, 1083, 1084
 of Turonian stage, MEX, 43
 of Tuxpan formation, MEX, 139
 of Twin Creek formation in Wyoming, XXI, 724
 of upper Vaqueros time in California, XXV, 199
 of Uvalde gravel, XXIX, 1705
 of Valanginian of Mexico and Central America, XXVIII, 1089
 of Verden sandstone, XXIII, 572, 573
 of Vicksburg group in Mississippi, GC, 364; XIX, 1168
 of Viola limestone in Oklahoma, XXVI, 1414, 1418-1431
 of Waldrup formation in Texas, III, 144
 of Wandagee series, XXV, 382
 of Whitehorse group, PTNM, XXVI, 708
 of Whitewood formation near Deadwood, South Dakota, XX, 1334-1340
 of Woodbine sand in Texas, X, 617
 of Word formation, XXIX, 1766
 of Yegua formation, XXVI, 264
 Oligocene, CAL, 153; SC, 58; MEX, 120-137
 Oligocene, in Costa Rica, XXVI, 1650
 Oligocene, Eocene, and Cretaceous of Florida, plates, XXVIII, bet. 1688 and 1689
 Oligocene, Hockley dome, Texas, SD, 589; IX, 1050
 Oligocene, Gulf Coast, XXVI, 1188
 Oligocene, Panama and Costa Rica, III, 364
 Oligocene, Saratoga oil field, SD, 510
 Oligocene, Stratton Ridge salt dome, Texas, IX, 23
 Oligocene, Texas, IX, 102
 orderly succession of, XXIV, 1753
 Ordovician, from upper part of type section of Deadwood formation,

(Fossils)

- South Dakota, XX, 1329
 Ordovician, Urals, XXI, 1443
 Ordovician, Wind River Mountains, XXV, 129
 Oriskanian, XXV, 672, 674, 676
 Oriskany, XXIV, 1988
 Pánuco district, Mexico, X, 684
 Pennsylvanian, III, 290, VI, 551; XIII, 459
 Pennsylvanian, Ardmore basin, XIII, 899
 Pennsylvanian, distribution of, XXIV, 175
 Pennsylvanian, of lower member of Park City formation, XXIII, 94
 Pennsylvanian, of Stanley shale, XXI, 12
 Pennsylvanian, Wind River Mountains, XXV, 132
 Pennsylvanian and Mississippian in St. George district, Utah, XXIII, 129
 Permian, XXI, 1525
 Permian, Apache Mountains, XIII, 978
 Permian, Arizona, X, 825
 Permian, Delaware Mountains, XIII, 979
 Permian, found below Welch chert in Dickinson County, Kansas, XI, 1118
 Permian, Kansas, X, 148
 Permian, Oklahoma, X, 148
 Permian, Texas, X, 148
 Permian, Utah, XXIII, 85
 Permian, Wind River Mountains, XXV, 132
 Permian, Wyoming, VI, 89
 Permian ammonoid, of Russia correlated with those of North America, XXII, 1016
 Permo-Carboniferous, Western Australia, X, 1142
 plant and vertebrate, in Manzano group, PTNM, 689; XXVI, 689
 Pleistocene, CAL, 263; SC, 125
 Pleistocene, Baldwin Hills, California, X, 508
 Pleistocene, Bryan Heights dome, SD, 684; IX, 619
 Pleistocene, Oklahoma, I, 138
 Pleistocene oyster beds, MEX, 6
 Pliocene, CAL, 230, 232, 235, 239, 244; SC, 48, 64, 125
 Pliocene, Los Angeles Basin, California, X, 761
 Pliocene, Louisiana, II, 21
 Pliocene, Texas, II, 33
 Pliocene, Texas and Louisiana, IX, 83
 Pliocene, Ventura Basin, XXI, 628
 Pliocene, Welsh field, Louisiana, IX, 468
 Pliocene and Pleistocene, Big Hill dome, SD, 702
 Pliocene-Pleistocene, California, GAS, 140; XII, 125
 pre-Mississippian, Kansas, XIII, 442
 Ramsey pool, XXIV, 1997
 Recent, Oklahoma, I, 138
 Refuge field, XXII, 1198
 relative dependableness of, VII, 183
 Ridgeley, XXIV, 1988
 siliceous replacement of, at top of Fernvale limestone, XX, 1101
 so-called Lower Silurian, of Venezuela, discussion, XII, 951
 Spindletop field, XXI, 480
 Starks field, XXIII, 1835
 strata identified by, XXIV, 1754

(Fossils)

- Tampico Embayment region, Mexico, X, 581
 Tertiary, in New Zealand, ranges of, XXV, 766
 Tertiary, North (Russian) Sakhalin, X, 1156
 Texas Gulf Coast, XXIII, 1604, 1609, 1615, 1616, 1618-1621, 1627, 1629, 1630, 1632, 1634
 Texas Jackson, X, 154
 Texas Tertiary section, VIII, 431
 treated in Journal of Paleontology, XXV, 1232
 Triassic, CAL, 69
 Triassic, British Columbia, VI, 117
 Triassic, Wind River Mountains, XXV, 135
 Turney or upper Kreyenhagen, check list of, XXVIII, 964
 Upper Cretaceous, abundant in Gulf and interior regions, XXII, 1635
 Upper Cretaceous, from wells in Mississippi, significance of, XXIX, 1008
 Upper Cretaceous, ranges of identical and analogous species of, in western interior and Gulf regions of United States, XXII, 1637
 Upper Triassic, Malaya, XXII, 8
 Upper Jurassic, Mexico, XXVII, 1494
 use for dating strata, XXVII, 945
 use in correlation, VIII, 543, X, 562
 use in correlation of crude oils, XXV, 567
 use in correlation of strata, XXVIII, 903
 use in determining unconformities, XXVI, 53
 use of horizons of extinction of, XXIV, 1767
 Venezuela, XXI, 238
 vertebrate, XXV, 1683, 1690, 1691, 2042
 Vicksburg, XXVIII, 1365
 Washita, XXIX, 178
 Western Australia, Paleozoic, XXV, 377-385, 387-398, 402-408, 410, 411
 western United States, XXIV, 317
 Wilmington oil field, XXII, 1057
 Woodbine, XXIX, 183
 Fossils and age of Rierdon formation, XXIX, 1279, 1280
 of Sawtooth formation, XXIX, 1276
 of Swift formation, XXIX, 1286
 Fossils and correlations of Moorefield formation, XXVIII, 1629
 of Ruddell shale, XXVIII, 1633
 Fossils and sediments, stratigraphic significance, XXVII, 940
 oster, Alden W., and Johnson, Roswell Hill, barrel costs versus well-day costs, IV, 299
 Foster, John Wells, SD, 396
 Foster, John Wells, and Whitney, J. D., XIX, 1114
 Foster, Margaret D., XXVI, 865; XXIX, 39
 base-exchange and sulphate reduction in salty ground waters along Atlantic and Gulf coasts, XXVI, 838
 Foster, William H., PROB, 765; XI, 148
 Coffeyville oil field, Montgomery County, Kansas, STR I, 49
 Foster and Little (well 317), SBP, 292-335, 408
 Foster gas zone in Goldsmith field,

(Foster)

- XXIII, 1530
 Foster pool, Texas, XXIII, 841; XXIV, 1037
 Foster-Reno-Oil City pool, Venango district, STRAT, 522
 Fostoria field, XXVII, 733
 Foucou, F., PROB, 9
 Fouke field, XXV, 1033
 Foul bottom waters, RMS, 361
 Foundation features affecting Boulder Dam, XXVI, 1807
 Foundation problems of Marshall Ford Dam, XXVI, 1813
 of Shasta Dam, XXVI, 1820
 Fountain, H. C., PTNM, 539, 603, 604; XXIV, 8; XXVI, 539, 603, 604
 Fountain, H. C., and Neely, Joseph, XXVI, 232, 238, 250
 Fountain formation, II, 84
 Four Mile Dam formation, bioherms of, XXVII, 587
 Four Six dome, VII, 239
 Four Way Ranch sand, XXVIII, 203, 208
 Fourbear anticline, PROB, 163
 Fournier, XVI, 1124
 Fourth oil zone in Big Lake field, Texas, STR II, 511, 533
 character of oil from, STR II, 538-541
 Fourth sand, PROB, 490, 492
 in Bradford field, Pennsylvania and New York, STR II, 422
 lenticular, XXV, 806
 Fourth sand field, PROB, 465
 Fowler, A., deep bore in Cleveland Hills, review, XXIX, 1354
 Fowler, F. H., XXIX, 1170
 Fowler, George M., XXII, 1595
 oil and oil structures in Oklahoma-Kansas zinc-lead mining field, XVII, 1436
 Fowler, H. C., developments in the American petroleum industry, 1914-1919, review, XXVI, 136
 Fox, XVII, 504
 Fox, C. S., XVIII, 312; XXV, 406
 Fox, I. William, geology of part of Finger Lakes region, New York, XVI, 675
 Fox, Leo S., CAL, 43; PROB, 745; XVIII, 435, 1561
 some methods employed in obtaining submarine geological data, XIV, 98
 structural features of east side of San Joaquin valley, California, XIII, 101
 Fox, McFaddin-O'Conner, Greta, Refuge, White Point, and Saret fields, Texas, GC, 664; XVIII, 519
 Fox and Rudd pool, XXIII, 855
 Fox and Sholom Alechem pools, folding at, GAS, 586
 Fox Bush field, V, 422
 Fox Bush pool, PROB, 775
 Fox Bush sand, PROB, 774
 Fox dome, XX, 1174
 Fox field, Carter County, Oklahoma, GAS, 576, 599; V, 32, 173, 454, 626; VI, 23, 367; XXI, 1010, 1026
 development of, GC, 668; XVIII, 523
 Fox Hills formation, STRAT, 24; V, 26; VI, 145; XXVI, 1560; XXVII, 1574
 fauna of, in Alberta, XV, 1254
 Greasewood field, STRAT, 24
 northeastern Colorado, XVI, 702
 southern Alberta, ALTA, 123; XV, 1251

- (Fox Hills)
southern Alberta, fauna of, ALTA, 126
Spring Coulee region, Alberta, ALTA, 140; XV, 1268
Fox Hills sandstone, XXVI, 355
Alberta, XV, 1239, 1240
Alberta and Montana, ALTA, 9; XV, 1137
eastern Colorado, XVII, 405
(Kfh) (Cretaceous), SBP, 194, 197, 200-243, 414
Lance Creek field, Wyoming, STR II, 605
Lethbridge area, Alberta, ALTA, 111 112
Rocky Mountain area, XX, 1312; XXI, 910
Foxen Canyon area, stratigraphic relations of Sissuoc formation and Careaga sandstone in, XXVII, 1348
Foxen division-marker species, XXIII, 60
Foxen faunas, ecological significance of, XXIII, 59
Foxen foraminifera, XXVII, 1354
Foxen formation, correlation of, XXIII, 58
Santa Maria Valley field, XXIII, 54
Foxen mudstone, XXVII, 1339, 1353
megafossils of, XXVII, 1355
Foxen mudstone and Careaga sandstone in Purisma Hills, stratigraphic relations of, XXVII, 1353
Foxen sand, CAL, 232
Foxen sections in Santa Maria Valley to show overlap-offlap nature of formation, XXII, 55
Foxen-Sissuoc unconformity, XXIII, 61
Foxen tar sand, XXIII, 58
Foyn, Karlík, Petterson, and Rona, XXIX, 1483
Fraas, O., XXII, 1217
Fractional distillation, PROB, 236, 245
Fractionation, primary, XXVII, 1598
secondary, and naphtha characterization, XXVII, 1598
Fractionational filtration, PROB, 148, 150
Fracture drainage lines of Palangana-Piedras Pintas area, GC, 256; XVII, 1199
Fracture drainage trends in South Texas, GC, 253, 254; XVII, 1196, 1197
Fracture planes, South Texas, dip of, GC, 262; XVII, 1205
Fracture system, South Texas, cause of, GC, 267; XVII, 1210
South Texas, correspondence with fundamental structural trends, GC, 263; XVII, 1206
South Texas, Pliocene or post-Pliocene age of, GC, 261; XVII, 1204
surface, of South Texas, GC, 251; XVII, 1194
Fracture systems in domes, XX, 57
Fracture-type reservoir, XXV, 808
Fracture zones, PROB, 388
Fractured limestones, accumulation of oil in, PROB, 365
Fractured shale, fracturing of, in Santa Maria basin, California, and origin of radiolarites, XXVII, 1622
Fractured zone in shales in Tow Creek anticline, Colorado, STR II, 108
Fractures, in sulphur area, Palangana, GC, 259; XVII, 1202
- (Fractures)
oil occurrence in, in Pánuco field, Mexico, XII, 416
surface, relation to subsurface at Palangana sulphur mine, GC, 257; XVII, 1200
Fractures and joints factors in development of porosity in limestones, XX, 1396
Fracturing, effect on permeability, MEX, 170
of fractured shale in Santa Maria basin, California, and origin of radiolarites, XXVII, 1622
systems or trends of, MEX, 168, 185, 190, 193, 207
Fragmental bar, destruction of, XXVI, 788
Fragmental rocks, examination of, XXIII, 612
Fragmental-textured aggregates, XXVI, 1721
Frailich, Charles E., GAS, 978; SBP, 356
Frailich, Charles E., and Torrey, Paul D., XIV, 503; XVIII, 1176
Fram expedition, RMS, 50
Framework of continents developed in pre-Cambrian time, CD, 84
France, MSC, 90; RMS, 211, 225, 322, 347, 449, 469
bituminous shale in, XXIV, 392
hellum in, GAS, 1061
nitrogen in, GAS, 1061
oil in Limagne area, XVI, 825
oil and gas possibilities of, XVI, 1092
roches sédimentaires de, roches siliceuses, review, XV, 978
southern, oil well, IX, 346
Francis and Bennett, XXI, 1469
Francis, A. W., XV, 614, 619; XX, 291
Francis, C. K., GAS, 1149
Francis formation, STRAT, 458; XXIII, 223
Cromwell field, Oklahoma, STR II, 305
Dora pool, STRAT, 412
Olympic pool, STRAT, 458
Francis sand, Dora pool, STRAT, 422
Franciscan, MSC, 109; SC, 68, 115; XX, 1614, 1661
alteration of, XXVII, 188
basement on which deposited, XXVII, 186
basic and ultrabasic intrusives in, XXVII, 153
block diagram of concept of geosyncline in which deposited, XXVII, 128
diversity of opinions on age and relationships of, XXVII, 122
glauconite schists and related rocks in, XXVII, 159
in Santa Maria field, XXIII, 67
Jurassic age of, XXVII, 190
lithology of, XXVII, 130
lower, XXVII, 215
older than Lower Cretaceous, XXVII 194
orogenic movement at close of, XXIII, 70
problems of, SC, 6; XX, 1552
serpentinized periodotite in, XXVII, 153
thickness of, XXVII, 183
upper, XXVII, 215
upper, and lower Knoxville, XXVII, 215
volcanics in, XXVII, 144
younger than lower Kimmeridgian, XXVII, 195
- Franciscan and Knoxville, gradational contact between, XXVII, 210
in California Coast Ranges, XXVII, 110
map of California showing, XXVII, 123
relation between, XXVII, 208
reports of unconformity between, due to misinterpretation, XXVII, 206
Franciscan area, northern, SC, 52; XX, 1598
Franciscan areas, SC, 2, 12; XX, 1548, 1558
Northern and Central, notably mobile, SC, 142; XX, 1688
uplifts at end of Mesozoic, SC, 14; XX, 1560
Franciscan basement rock, SC, 1, 88, XX, 1547, 1634
Franciscan beds in Coalinga district, nature of, XXV, 6
Franciscan cherts, XXVII, 147, 178
manganese and iron associated with, XXVII, 150
shallow-water deposits, XXVII, 149
Franciscan complex, SC, 55; XX, 1601
of California, Hutton-Tishomingo uplift and Amarillo-Wichita-Red River uplift comparable with, XXV, 7
Franciscan conglomerates, XXVII, 140
Franciscan contact rocks, XXVII, 182
Franciscan debris in Cretaceous, XXVII, 126
Franciscan detritus, land mass west of present coast line source of, XXVII, 187
Franciscan formation, MSC, 133; VI, 305; XXIX, 1396
Franciscan formation (Jf) (Jurassic), SBP, 96, 168-194, 414
Franciscan geosynclines, XXI, 550
Franciscan geosyncline and African geology, CD, 125
Franciscan igneous rocks, XXVII, 145, 1343
in Point Sal area, XXVII, 1338
Franciscan-Knoxville contact, CAL, 87
Franciscan-Knoxville geosyncline, XXVII, 212
Franciscan-Knoxville group, XXVII, 212; XXVIII, 457
depositional history of, XXVII, 214
importance of, in evolution of Coast Ranges, XXVII, 217
Jurassic age of, XXVII, 219
relation of, to Lower Cretaceous Diablan orogeny, XXVII, 216
Franciscan-Knoxville problem, XXVII, 109
Franciscan limestones, XXVII, 143
Franciscan metamorphics, glauconite in, XXVII, 171
minerals of, XXVII, 169
pargasite and zoisite in, XXVII, 181
types of, XXVII, 176
Franciscan outcrops, SC, 3; XX, 1549
Franciscan rocks, actinolite in, XXVII, 180
extent of, XXVII, 125
lower Mesozoic, SC, 55; XX, 1601
plates showing types of, XXVII, bet. 140 and 141
sketches illustrating non-selective and selective types of alteration of, into glauconite schists, XXVII, 165
wide distribution of, in Coast Ranges of California and Oregon, XXVII, 122

- Franciscan sandstones, XXVII, 131
Franciscan sandstone, plant remains in, XXVII, 132
Franciscan sandstones, alteration of, XXVII, 133
analyses of, compared with analyses of average sandstones, XXVII, 136
classification of, XXVII, 137
from California Coast Ranges, mineral analyses of, XXVII, 134
mineral content of, XXVII, 135
Franciscan schists, diverse opinions regarding origin of, XXVII, 160
lawsonite in, XXVII, 173
Franciscan sedimentary and intrusive rock, XXVIII, 453
Franciscan series, Catalina Island, CAL, 171
formation, stage, CAL, 19, 27-29, 31, 35-38, 47, 50, 52, 58, 68, 72-74, 76-86, 91-99, 101, 103-108, 113, 117-119, 125, 128, 142, 151, 160, 164, 166, 168-170, 173, 175, 184, 186, 196, 238, 240, 243, 259, 274-278, 283, 292, 293, 309, SC, 5; XX, 1551
fossils of, CAL, 88, 287, 289
Coast Ranges, CAL, 13, 74, 87, 142
paleogeography of, CAL, 91
San Joaquin Valley, restricted in, CAL, 45
schist at Playa del Rey, CAL, 199
structure of, CAL, 86
Franciscan serpentine, SC, 69; XX, 1615
Franciscan shales, XXVII, 140
Franciscan silica-carbonate rock, XXVII, 182
Francisco field, GAS, 822
Francisco pool, Indiana, STR II, 138; PROB, 562
Francitas field, XXIII, 867
Franconia sea of middle Upper Cambrian, XXII, 1546
Frank, H. K., XVI, 86, 87, 88
Frankfort shale, XXII, 94
Frankfurt am Main, RMS, 203
Franklin, XXII, 1133
Franklin, Louis, XXIV, 1454
preliminary study on recovery of oil by sinking shafts and driving galleries, VI, 342
Franklin County, Tennessee, GAS, 867
Franklin County, Texas, XXVIII, 849
New Hope field, XXIX, 836
Franklin heavy-oil pool, XXVII, 842; XXVIII, 730
Venango First sand in, XXIX, 675
Franklin Mountain uplift, XXVIII, 564
Franklin Mountains, Texas, XXIV, 161
Cambrian in, XXIV, 160
characteristic of Basin-and-Range structural type, XXIV, 159
correlation of sediments between northern end of Oscura Mountains and southern end of, XXIV, 163
Devonian in, XXIV, 164
Magdalena formation in, XXIV, 165
Mississippian in, XXIV, 165
Ordovician in, XXIV, 162
Paleozoic in, XXIV, 160
Pennsylvanian in, XXIV, 165
Permian in, XXIV, 171
pre-Cambrian in, XXIV, 160
Silurian in, XXIV, 162
stratigraphic showing columnar sections in, XXIV, 158
stratigraphy of, XXIV, 160
Franklin Mountains, West Texas
(Franklin)
Paleozoic stratigraphy of, XXIV, 157
Franklin Parish, section from, to Pointe Coupee Parish, Louisiana, showing relation of Wilcox series to younger Claiborne shales and sands Base of Vegua formation used as reference plane, XXIV, 1900
Franks, G. F. and Harrison, J. B., XXIV, 1585, 1590
Franks, Robert, XIII, 1387
Franks conglomerate, III, 264; V, 471, 546; VI, 12; XXV, 1670
Franks graben, XX, 951; XXI, 1008, 1009; XXII, 1569
Frannie, Wyoming (well 201), SBP, 194-243, 406
Frannie anticline, gravity of oil, PROB, 160
Frannie dome, PROB, 939
Frannie field, PROB, 687, 929, 945; XXV, 1151; XXVII, 465; XXVIII, 797
gravity of oil in, XXV, 1151
Frannie oil field, Greybull water in, XXIV, 1255
Tensleep water in, XXIV, 1291
Franson Canyon, XXIII, 83
Fraps, G. S. and Rather, J. B., PROB, 42
Frasch, III, 243
Frasch Herman, SD, 712; IX, 480, 625, 732; XX, 174; XXIV, 1361
Frasch process of mining sulphur, GC, 1016, 1021; XIX, 1635, 1640
at Hoskins Mound, GC, 852; XX, 174
Fraser, Donald M., XIV, 1353
Fraser, H. J., XXII, 1272; XXVI, 1716
Fraser, H. J., and Gratton, L. C., XXII, 1274
systematic packing of spheres—with particular relation to porosity and permeability, review, XX, 324
Frazer, D. McC., XVIII, 791
Frazier Mountain thrust slab, XXIII, 552
Frazier sand, Hardin field, STRAT, 568
Frear and Johnson, XXII, 1326
Frech, Fritz, XIII, 1427; XXIV, 301; XXVI, 790
Fred et al., PROB, 39, 40
Fred and George Creek nose, XXVII, 855
Fred field, XXVI, 985
Frederick area, Tillman County, Oklahoma, XXIV, 1023
Fredericks, George, XXIV, 252, 1131; XXV, 1402
Fredericksburg and Washita beds, STRAT, 781
Fredericksburg formation, V, 7, 16, 19, 307; VI, 181
correlation with Albian, MEX, 27, 33, 38, 39, 95
Fredericksburg group, XXIX, 171
distribution and thickness, XXIX, 1454
(Ke) (Cretaceous), SBP, 295-335, 414; XXV, 1692, 1693; XXVI, 383
of Lower Cretaceous with special reference to north-central Texas, XIX, 1508
stratigraphic and lithologic features, XXIX, 1454
trans-Pecos Texas, XXII, 1430
Walnut Bend pool, STRAT, 781
Fredericksburg-Washita (Edwards-
(Fredericksburg)
Georgetown) contact in Edwards Plateau region of Texas, XVIII, 1698
Fredericksburg-Washita, Lower Cretaceous, boundary of north Texas, bearing of foraminifera and ostracoda on, XXVII, 1060
Fredericksburg, E. A., XXV, 656
Fredonia, Chautauqua County, New York, early discovery of natural gas at, GAS, 950
Fredonia bed, XXIII, 1357
Fredonia formation, VI, 26
Fredonia member of Ste Genevieve formation, XXII, 656; XXIII, 1502; XXIV, 229
Fredric, W. H., XXVII, 1210
Free, E. E., RMS, 496
Free gas caps, thickness of, XXIII, 1538
Free oil, deposition of, by sediments settling in sea water, XXV, 2170
in ammonites, Colombia, South America, XXVIII, 875
Free radical formation in pyrolysis, XXVIII, 940
Freeman, Carlos, XXII, 1102
Freeman, Louise Barton, XXIII, 1845, 1846, 1847, 1848, 1851; XXIV, 1660, XXV, 818, 819
Big Sinking field, Lee County, Kentucky, STRAT, 166
Devonian subsurface strata in western Kentucky, XXV, 668
present status of St. Peter problem in Kentucky, XXIII, 1836
Freeman, Louise Barton, and McFarlan, A. C., XXIII, 1847
Freeman, Louise Barton, McFarlan, A. C., and Nelson, V. E., Corniferous at Irvine, Estill County, Kentucky, XXVIII, 531
Freeman and Jewett silt, faunules from, MSC, Fig. 14 (in pocket)
Freeman-Lincoln field, Clare County, Michigan, XXIV, 984
Freeman pool, XXV, 1129
Freeman silt, MSC, 115, Fig. 14 (in pocket)
Edison field, STRAT, 4
Kern Front field, STRAT, 12
Freeport Sulphur Company, GAS, 711; SD, 645, 646, 651, 652, 655, 673-675, 677; GC, 833, 847, 1035; XIX, 646; XX, 155, 169
Freestone County, Texas (well 374), SBP, 292-335, 409
Freezeout Hills, stratigraphic section of Sundance formation measured near Trabing Brothers Spring, XXI, 743
Sundance formation near Trabing Brothers Spring, XXI, 741
Freezeout Mountain, stratigraphic section of Chugwater formation, Embury group, and Tensleep sandstone south of, XXV, 889
stratigraphic section of Morrison formation, Sundance formation, Jelm formation, and Alcoa limestone northwest of, XXV, 888
stratigraphic section of Mowry shale, Thermopolis shale, and Dakota group southeast of, XXV, 887
Freezeout Mountain anticline, XXV, 884, 890
Freezeout Mountain area, structure, XXV, 890
Freezeout Mountain-Bald Mountain area, Carbon County, Wyoming, bibliography on, XXV, 896

(Freezout)

- drainage of, XXV, 884
geologic map and structure sections of, XXV, 892
geology of, XXV, 883
in drainage basin of Medicine Bow River, XXV, 887
Lower Cretaceous in, XXV, 886
Pennsylvanian in, XXV, 886
Permian in, XXV, 886
pre-Pennsylvanian in, XXV, 886
stratigraphy, XXV, 886, 887
topography of, XXV, 884
Triassic in, XXV, 886
Upper Jurassic in, XXV, 886
Freezeout Pasture area, XXV, 894
Freezeout Pasture syncline, XXV, 895
Freezeout tongue of Chugwater formation, XXVIII, 1201, 1214
Freezing point lowering of water, RMS, 65, 66, 68, 70
Freie, A. J., XV, 1009; XXI, 1535, 1538, 1549, XXIII, 1788
Fremont, John C., XXIII, 1444
Fremont County, Wyoming, XXV, 120
Muskraat anticline in, XXI, 991
Fremont County, Colorado, outcrop section d, SBP, 243-255, 411 (wells 228-230, 240), SBP, 194-243, 407
Fremont Island, XXII, 1309
Fremont's Peak, CAL, 64
French Alps, XVI, 1131
French paleontology, MSC, 90
Frenguelli, XXIV, 1686
Frenley limestone, XXV, 1666
Frequency, determination of, RMS, 604, 606
of grain distribution of samples of bottom sediments of Lake Pontchartrain, XXIII, 14
Frequency curve, RMS, 193, 194, 559
of sediment in mechanical analyses, RMS, 577
Frequency distributions, RMS, 590
of sediments, RMS, 193, 194
of statistical values of sediments, RMS, 193
Frequency scale, RMS, 563
Fresh and salty waters encountered in Coastal Plain of Virginia, North Carolina, and South Carolina, XXVI, 843-845
Fresh water in deep sands in Houston district, XXVII, 1100
isolation of salt water up dip from, due to fault barrier near Natchitoches, XXIX, 34
Fresh-water lakes, sediments of, XXV, 826
Fresno, deep wells near, CAL, 124; SC, 71, XX, 1617
Fresno County, California, CAL, 288; MSC, 79, 102
bibliography on Tumey sandstone, XXVIII, 974
correlations in Eocene north of Coalinga, XXIV, 1724
Eocene foraminifera from the type Lodo formation, XXVII, 1269
outcrop section J, SBP, 167-194, 411
Tumey sandstone, Tertiary, XXVIII, 953 (wells 6-8), SBP, 130-153, 403
Freundlich, H., XVII, 1222, 1225; XXVIII, 547
Frey, A. P., MEX, ix
Frey, Charles N., PROB, 925
Friability of coal, XXVII, 1218
Friant Dam, California, XXVI, 1820

(Friant)

- detail of spillway at, showing structural features of excavated foundation, XXVI, 1825
diorte dikes at site of, XXVI, 1823
effects of earthquakes on, XXVI, 1823
fault system at site of, XXVI, 1823
geology at site of, XXVI, 1823
plan and section showing principal structural features of excavated foundation for, XXVI, 1824
Friar, W., Survey, Texas (well 328), SBP, 292-335, 408
Frick Chemical Laboratory, SBP, 7
Friction, RMS, 18, 107, 109, 135
effect on convection currents, RMS, 116
effect on motion of debris, RMS, 14
effect on tidal currents, RMS, 132
of bottom, RMS, 122, 276
of bottom, effect on currents in sea, RMS, 78
Frictional drag, effect on currents, RMS, 105-108
Frictional force, RMS, 107, 124, 125
effect on water in wells, XXII, 1246
internal, RMS, 119
of wind, RMS, 118
Frictional influence, depth of, RMS, 119
Frictional stress, RMS, 78, 79
Fridley, Harry M., STRAT, 827; XXIV, 493; XXVII, 1223
Fridley, Harry M., and Nolting, John P., Jr., XXVII, 1198
Friedel, G., on existence of a salt dome in Oligocene potassium basin in Upper Rhine, review, XII, 101
Friedl, G., XVI, 1104
Friedl, K., XV, 28, 29, 36
Friendswood, XXII, 741
Friendswood oil field, Harris County, Texas, XXII, 1602; XXV, 1010
geochemical log, edge producer, XXIV, 1423
geochemical log, producing well, XXIV, 1422
Fryole shale at Wheat pool, XX, 785
Frio, MSC, 179; XXI, 949
at Mykawa field, GAS, 727
contact with Vicksburg, XXVIII, 1365
notes on, XXIV, 376
usages of term, XXIV, 380
Frio and Vicksburg, Jackson group of formations in Texas with notes on, GC, 470; XVII, 1293
Frio beds, XXVI, 1006
Greta field, GC, 656; XIX, 552
Manvel dome, GAS, 729
Frio beds and Greta sand, unconformity between, XXV, 313
Frio-Catahoula problem in Gulf Coastal Plain, XXIII, 171
Frio clay, XXIII, 1616; XXVIII, 1359
Mirando and Pettus districts, XV, 761
(Oligocene?) (Tr), SBP, 337-349, 415
Oligocene age of, GC, 504
south Texas, discussion, XVI, 101, 259
Frio flanking sands, Boling field, GAS, 702
Frio formation, GC, 502; PROB, 403; I, 37; V, 625; XXVII, 1325; XXIII, 1652; XXIV, 1815; XXV, 2003
Amelia field, XXIII, 1639, 1644
Buckeye field, GC, 747; XIX, 391
Edna gas field, XXV, 109

(Frio)

- Gulf Coastal Plain, XXIII, 169
Hitchcock field, STRAT, 645
productive in Edna gas field, XXV, 115
productive in La Rosa field XXV, 309
south Texas, XXII, 750
Sugarland field, GC, 715, 724; XVII, 1367, 1377
Texas, GC, 501, XVII, 1325
Frio oil, Iowa field, GAS, 732
Frio production, XXIV, 1071, XXV, 1007
at Hoffman field, XXIV, 2139
Frio sand, XXIII, 880, XXV, 1912, XXVIII, 855
Orchard, GAS, 710
production from, in South China area, XXIV, 1087
productive at Fannett field, Jefferson County, Texas, XXIV, 1089
Frio sand contour maps, South Cotton Lake field, Chambers County, Texas, XXV, 1914, 1916
Frio sand discoveries in Texas in 1941, XXVI, 987
Frio sands, Barbers Hill, GAS, 707
Frio sandstones, Sugarland, GAS, 713
Frio section, XXVIII, 203
south Texas, XXII, 754, 755
Frio time, paleogeographic map for, in Gulf Coastal Plain, XXIII, 172
Frio trend, XXV, 300
Frio type most important Gulf Coast gravity-interval pattern, XXV, 587
Frio-Vicksburg trend, exploratory development in 1944, XXIX, 784
South Texas, XXIII, 866, XXVII, 744; XXVIII, 862
Frio-Vicksburg zone, important production from, in south Texas, 1938-1939, XXIII, 861
Frio zone, XXIII, 1408
Jennings field, XXVII, 1107
productive in coastal area of south Texas, XXIII, 867
south Texas pools, XXIV, 1078
Frisch, M., GAS, 1136
Frisco limestone, XXV, 1644
Frisian Islands, RMS, 195, 201, 204, 334
Fritz, W. C., XXIV, 29, 32; XXVI, 1026
abstract, XXII, 1702
Fritz, W. C., and Fitzgerald, James, Jr., XXIV, 5, 14, 34, XXVII, 490
south-north cross section from Pecos County through Ector County, Texas, to Roosevelt County, New Mexico, XXIV, 15
Fritz, W. C., and Haigh, Berte R., XXIV, 194
Fritz, W. C., Secor, Dana M., and West, W. W., developments in West Texas and southeastern New Mexico during 1939, XXIV, 1033
Frizzell, Don L., MSC, 77
Frizzell, Don L., and Blackwelder, R. E., MSC, 26, 79, 101; XX, 222
Frog Mountain sandstone, XXII, 543
Fromaget, J., XXIV, 270, 280
Fromberg fault zone, XXI, 989
Front Range, Colorado, PROB, 275, 682, 683
pre-Pennsylvanian stratigraphy of, XVII, 375
supposed marine Jurassic (Sundance) in foothills of, XV, 1095
Front Range, northern, Colorado, to

- (Front Range)
 Las Vegas, New Mexico, Jurassic from, XXIII, 1155
 Sierra Madre Oriental, similarity of surface geology in, to subsurface in Mexican South fields, XIV, 73
 Front Range Highland, XXVIII, 301
 persistent during Paleozoic and much of Mesozoic in central Colorado, XVII, 373
 Front Range overthrust, GAS, 14, 40
 Front Range uplift, XXVII, 430
 Front ranges of Rocky Mountains in Canada, FOP, 18, XXV, 1450
 west of Tampico, El Abra reef limestone in, XXVIII, 1132
 Frontal zone of major thrusting in Rocky Mountains, XXVII, 427
 Frontenac axis, FOP, 112, XXV, 1544
 Frontier, Ferron, and Codell sandstones of lowest sandstone tongue of Upper Cretaceous in Rocky Mountain area, map showing, XXI, 906
 Frontier or late Benton time, paleogeography of, in Rocky Mountain region, XXI, 1265
 (Wall Creek) sandstones, PROB, 689
 Frontier formation, GAS, 238, 269, 285, 295, 299, 300, 308, 310, 324, 330; III, 358, IV, 38, V, 200, 264, 409, X, 125, XXI, 991; XXII, 1026; XXIII, 917; XXV, 138, 887, 1152, 2034, 2035; XXVIII, 798, 1205
 areal variation of properties of sediments in, in Rocky Mountain area, SBP, 215
 Elk Basin field, Wyoming and Montana, STR II, 579, 584
 gas-bearing sands of, XXII, 689
 Grass Creek oil field, Wyoming, STR II, opp. 624
 (Kf) (Cretaceous), SBP, 193-195, 198, 200-255, 414
 Lost Soldier district, Wyoming, STR II, 646
 producing gas zone in Billy Creek gas field, XXIV, 1226
 productive of petroleum and natural gas in Wyoming fields, XXII, 1027
 Wyoming, outcrop sections a, b, e, f, g, h, j, SBP, 243, 255, 411
 Frontier formation waters in Wyoming fields, analysis of, XXIV, 1232-1236, 1237
 Frontier-Niobrara contact in Laramie Basin, Wyoming, XX, 1189
 Frontier oil, gravity, PROB, 170
 Frontier sand, Grass Creek dome, Wyoming, STR II, 624
 Little Lost Soldier dome, Wyoming, STR II, 649
 Salt Creek field, Wyoming, STR II, 594
 Tow Creek anticline, Colorado, STR II, 108
 Frontier sands, PROB, 169, 344, 409, 698, 716, 728, 933; XXVIII, 796
 Big Sand Draw field, Wyoming, XII, 1140
 in important producing fields of Wyoming and Montana, PROB, 160, 934
 Rocky Mountain states, PROB, 170
 Frontier sandstone, XXI, 995, 1264; XXV, 1855
 Frontier waters in Alkali Butte field, XXIV, 1240
 in Big Horn basin, XXIV, 1238
 in Poison Spider area, XXIV, 1244
- (Frontier)
 in Powder River basin, XXIV, 1246, 1248
 in Sweetwater basin, XXIV, 1242, 1244
 in Wind River basin, XXIV, 1238
 representative, in Wyoming fields, XXIV, 1238, 1242, 1244, 1246, 1248
 Frost, F. H., CAL, 265
 Frost, J. M., III, geologic aspects of heaving shale in Texas Coastal Plain, XXIII, 212, 607
 Frost, V. L., Ramsey oil pool, Payne County, Oklahoma, XXIV, 1995
 Frosted sands, RMS, 44, 241
 Froude number, XXIX, 1243
 Froun, A., PROB, 41
 Fruitvale field, California, PROB, 204, 205, 965
 E. McKenzie Taylor's genesis of petroleum and coal as applied to, discussion, XV, 709
 Fruitvale sand, Edison field, STRAT, 3
 Kern Front field, STRAT, 11
 Fruitvale shale, MSC, 328
 Fruto syncline, XXVII, 304
 Fry, W. H., RMS, 486, 619
 Fry sand, PROB, 402
 in Smith-Ellis field, Texas, STR II, 559, 564, 566
 Frye, John C., XXIX, 167
 new interpretation of Monongahela-Dunkard contact, Washington County, Ohio, XXII, 103
 physiographic significance of loess near McPherson, Kansas, XXIII, 1232
 Fuchs, W., PROB, 43; XXVII, 1196
 Fuchs, W., and Fischer, F., PROB, 267, 920; XIV, 147
 Fucoids, MEX, 57
 Fucus, RMS, 99, 421
 Fudge, Harold L., and Herold, Stanley C., notes on submarine geological explorations, XVII, 442
 Fuego well, GAS, 28
 Fuel distillates, California, VIII, 567
 Fuels in United States, GAS, 1134, 1137, 1138, 1147, 1148
 Fuennig, Paul, thickness and structural study of major divisions of Cretaceous system in Nebraska, XXVI, 1517
 Fuhrman pool, XXVII, 757
 Fujita, Y., Matuyama, M., and Higashinaka, H., study of structure of Suwa Basin near Kyoto, Japan, by torsion balance, XIX, 58
 Fulcher, C. W., XXIV, 2069, 2089
 Fulda, XXII, 1285
 Fulda, Ernst, GC, 70; XVII, 1076
 rock salt and potash salts, review, XXII, 1284
 Fulda, Frank F., SD, 163
 Fulk, Frank F., and Giesey, Sam C., XXIV, 27, 62; XXVI, 1637; XXVII, 507
 abstract, XXII, 1712
 North Cowden field, Ector County, Texas, XXV, 593
 Fuller, H. C., and Vanderwilt, J. W., XIX, 1670
 Fuller, Myron Leslie, PROB, 72, 73, 89; V, 460, 461; VII, 608; IX, 1296; XI, 291, 293, 456, 460, 978; XII, 797, 799, 810; XV, 837, 838; XVI, 1030; XXVIII, 1077
 contribution to carbon-ratio theory, XI, 978
 explorations in China, III, 99
- (Fuller)
 Pennsylvanian coals in North Texas, VII, 291
 relation of oil to carbon ratios, VIII, 522
 water problems of Bend series, III, 151
 Fuller, Myron Leslie, and Clapp, Frederick G., XXV, 2059
 oil fields of China: acknowledgments and correlations of, X, 449
 oil prospects in northeastern China, X, 1073
 Fuller, M. L., and others, water problems of Bend series, general discussion, III, 151
 Fuller, Richard E., XIX, 218
 Fuller's earth, PROB, 144; XIII, 354, XV, 624; XIX, 1045, XXII, 792; XXVI, 354
 Illinois, VI, 155
 Fuller's earth deposit at Olmstead, Illinois, review, VI, 155
 Fullerton, Donald Alexander, memorial of, XXVII, 240
 Fullerton Clear Fork pay, XXIX, 749
 Fullerton field, XXIX, 748
 Fullerton Oil Company, Gumgrove 1 (well 187), SBP, 87-165, 405
 Fullerton oil fields, VI, 303
 Fullerton pay zone, XXVII, 759, 762
 Fullerton pool, Andrews County, Texas, XXVII, 751, 753; XXVIII, 815, 826, 1541
 Fullmer, Ellis I., PROB, 925; RMS, 422
 Fulton, L. J., XIV, 37, 55
 memorial of Clyde M. Becker, XXII, 1621
 Fulton Petroleum Company, experiments in gas separation, GAS, 375
 Fultz, H. C., SD, 358; IX, 758
 Fulweiler, W. H., GAS, 1143
 Fumaroles, metal mines, and mineral springs, analyses of natural gases from, GAS, 1063
 Fumes, visible, from distillation of oily, tarry, coaly, and bituminous types of organic matter, XXIX, 1471
 Funafuti, Lagoon of, foraminifera from, MSC, 11
 ostracoda from, MSC, 11
 Function of proration, XXIII, 1315
 Fundamental data on subsurface reservoirs, XXVIII, 1754
 Fundamentals of petroleum industry, XXIII, 1106
 Fungi, PROB, 40
 Funicular condition in unconsolidated sand, XV, 193
 Funk, F. O., VII, 133
 Funk, Marion Harbin, memorial of, XXIX, 1216
 Funkhouser, E. M., STRAT, 565
 Funkhouser, H. J., and Cronis, Carey, XXIX, 1151
 Funks beds, XXIX, 990
 Funks formation, XXVII, 284; XXIX, 963
 in Putah Creek section, XXIX, 992
 Furry Louis Bayou oil field, XXVI, 1266
 Fuqua, H. B., PROB, 600, 603; STRAT, 802; XIII, 946; XXI, Pl. A, opp. 1084, Pl. D, opp. 1086; XXIV, 1836
 future of geologist in petroleum industry, XXII, 517
 report of president for 1937, XXII, 591

- Fuqua, H. B., and Thompson, B. E., XIII, 425
relation of production to structure in central Wilbarger County, Texas, STR I, 293
- Furber, MEX, 2, 23, 94, 144
- Furbero field, Mexico, GAS, 1007; XVI, 806
- Furcron, A. S., XXIX, 920, 926
- Furlong, E. L., CAL, 266
- Furlong, E. L., and Stock, Chester, XII, 743
- Furnas County, Nebraska (well 199), SBP, 194-243, 406
- Furnas sandstone in Paraná, XX, 1216
- Furness, Dolly, XXVII, 419
- Furnish, W. M., XXVIII, 579, 1013; XXIX, 178, 1417
- Furnish, W. M., and Miller, A. K., PTNM, 565, 567, 573, 575, 598, 604, 643, 650, 651, 652, 656, 659, 682, 683, 686, 696, 698, 699, 700, 701; XXIV, 1166, 1179, 1180; XXV, 97, 99, 402, 404; XXVI, 565, 567, 573, 575, 598, 604, 643, 650, 651, 652, 656, 659, 682, 683, 686, 696, 698, 699, 700, 701; XXIX, 1148, 1149, 1767
- Furnish, W. M., Barragy, E. J., and Miller, A. K., XXVI, 1566
- Ordovician fossils from upper part of type section of Deadwood formation, South Dakota, XX, 1329
- Fused cores, methods of distinguishing, VII, 193
- Fushun (Manchukuo), oil-shale industry in, XXIV, 392
- Fushun coal field, Manchuria, oil shale from, XIII, 1378
- Fushun oil shale, XVI, 1029
- Fusilines, XXVI, 239
- Fusing oil sands, possibility of, when shot, XII, 87
- Fusion of suma, effect on buoyancy of continental sial floats, CD, 49
- realm of, XXVI, 1768
- Fusion isotherms for granite in South Africa, CD, 32
- Fusion method of determining radium content of rock samples, XXIX, 4
- Fusion formation, XXVI, 350
- Fusion shale, V, 261; XXVI, 1534
- Fusselman limestone, IV, 104, XXIV, 162
- Fusulina* stage, XXIV, 248
- Fusulina* zone, a good key horizon, XXIV, 268
- in America, XXIV, 279
- Fusline, XXV, 94
- Fusline fauna of Moscovian series, XXIV, 243
- Fusline faunal zones, XXIV, 261
- Fusline faunas, XXIII, 1701
- of Wolfcamp, Leonard, and lower Word in Texas, XXIII, 1697
- Fusline genera, XXIV, 340
- Fusline zones, correlation chart of Middle and Upper Carboniferous and Permian formations in U.S.S.R., United States, and South China, based chiefly on, XXIV, 266
- of Glass Mountains and Guadalupe- Delaware Mountains, XXV, 97
- of Permian rocks of trans-Pecos region, XXV, 97
- Fusulines, XXIII, 1697; XXIV, 341
- abundant in Carboniferous and Permian rocks, basis of zonation and correlation in Russia, China, (Fusulines) and southwestern United States, XXIV, 268
- in China, XXIV, 271
- in Ishimbaevo oil field, XXIV, 253
- in Texas and New Mexico, XXIV, 271
- useful in correlation of Permian, XXIII, 1698
- Fusulimid, MEX, 8, XXIV, 41
- Fusulinid fauna of Wolfcamp series in Glass Mountains, PTNM, XXVI, 649
- Fusulimids, PTNM, 574, 599, 654, 696, XXIV, 86, 315, 317; XXV, 40, 1717; XXVI, 574, 599, 654, 696
- abundant in Carlsbad limestone, XXI, 868
- in Bird Spring formation in Nevada, XX, 1206
- in Hueco limestone, PTNM, 565; XXVI, 565
- in La Quinta formation, Venezuela, XXVIII, 1642
- in *Tristictes* zone, age of, XXIX, 1153
- Permian, XXIII, 1675
- Permian, in Delaware basin, XXIII, 1676
- Permian, in Word formation, XXIX, 1772
- Fusulimids and algae, PTNM, 606; XXVI, 606
- Fusus* (see *Dentalium-Fusus* bed)
- Future of field geology, discussion, XXV, 324
- of geologist in petroleum industry, XXII, 517
- of geophysics, XXV, 1256
- of petroleum exploration in United States, XXI, 706
- Future oil provinces, possible, chart showing map and cross-section symbols used in inventory of, FOP, 5; XXV, 1437
- in Alaska, FOP, 8; XV, 1440
- in eastern Canada, FOP, 107; XXV, 1539, 2194
- in eastern United States, FOP, 131; XXV, 1563
- in northern Mid-Continent states, FOP, 76; XXV, 1508
- in Pacific Coast states, FOP, 25; XXV, 1457
- in Rocky Mountain region, FOP, 37; XXV, 1469
- in southeastern United States, FOP, 143; XXV, 1575
- in United States and Canada, FOP, 1; XXV, 1433
- in West Texas, FOP, 95; XXV, 1527
- in western Canada, FOP, 15; XXV, 1447
- references on problems affecting search for, FOP, 7; XXV, 1439
- Future position of petroleum geology in the oil industry, XXIV, 1389
- Future prospecting and production in Gulf Coast, forecast of, GC, xiv
- Future prospects in south Texas district, XXI, 1047
- Fyfe, Douglas, XXIII, 689
- Fyfe, Douglas, and Moran, Robert M., XXI, 99, 103, 104, 1348; XXIX, 518, 540
- Fylemann, Martin Ernest, XI, 224
- Fyris River, RMS, 25, 27, 179
- Fyzabad anticline, XXIV, 2103, 2123; XXVII, 1601
- Fyzabad field, XXIV, 2123
- G
- Gaarder, T., RMS, 99
- Gabb, W. B., XXIX, 957
- Gabb, W. M., XX, 218, 222, XXIV, 1664, XXVI, 1195, 1651, XXVII, 191, 250, 280
- Gabb, W. M., and Whitney, J. D., XXVI, 162; XXVII, 1364
- Gabb, William, CAL, 121
- Gabbro, MEX, 148, 149
- in Tertiary rocks at Southern Amatlán, MEX, 214
- in well at Furbero, MEX, 148
- magnetic properties of, XXI, 580
- Gabbro and anorthosite in Wichita Mountains, XXV, 288
- Gabel, H. J., STRAT, 239
- Gabian field, XVI, 1120
- Gabilan block, XIII, 203
- Gabilan marble, XXVII, 186
- Gabilan Mesa, CAL, 11, 29, 44, 309
- Gabilan Range, CAL, 64, 148, 149, 251
- Gabriel, C. L., and Crawford, F. M., PROB, 925
- Gach-Saran field, XXIII, 960
- Gaddess, Jack, deep sand development in Tioga County, Pennsylvania, XV, 925
- Gaedick, XII, 102
- Gage field, gravity of oil at, XXVIII, 792
- Gage shale, XXIII, 1060
- Gagos, K. A., XVII, 713
- Gahl, R., RMS, 425
- Gahl, Rudolf, and Anderson, Belle, PROB, 267, 915, XIV, 144, 151; XXVI, 848; XXVII, 1182
- Gaines and Yoakum counties, Texas, geology of Wasson field, XXVII, 479
- Gaines County, Texas, extensive potential oil-producing territory in, XXIV, 1038
- Gaines field, PROB, 484
- Gaines pool, V, 358
- Gainesville pool, Knox dolomite productive in, XXV, 1124
- Galapagos foraminifera, MSC, 12
- Galathea squamifera*, faecal pellets of, RMS, 520
- Galaxaura*, RMS, 286
- Galbraith, Thos. J., PROB, 354; XXI, Pl. B, opp. 1085
- Gale, H. G., XXIX, 1631
- Gale, Hoyt Rodney, CAL, 267, 268; XIII, 108
- correlation between later Cenozoic deposits of California and of Europe, XV, 555
- Gale, Hoyt Rodney, and Grant, IV, U. S., XVIII, 493, 495
- Gale, Hoyt S., CAL, vii, 44; GAS, 189; SBP, 92, 99; SC, 49, 126; XIV, 283, 796; XVIII, 435; XX, 868, 1595, 1672; XXI, 721; XXV, 195
- geology of Huntington Beach oil field, California, XVIII, 327
- Gale, Hoyt S., and Gale, H. R., CAL, 176
- Gale, Hoyt S., and Scofield, C. S., Taylor's genesis of petroleum and coal as applied to Fruitvale field, California, discussion, XV, 709
- Gale, L. E., X, 1076, 1090, 1099
- Galcaná-Montemorelos-Linares area of Nuevo León, Lower Cretaceous sequence, XXVIII, 1149
- Galena, PROB, 656
- notes on an occurrence of, at Pierce Junction salt dome, Harris County,

- (Galena)
Texas, XVII, 438
Galena and sphalerite in Fayette at Orchard salt dome, Fort Bend County, Texas, XIII, 384
Galice formation, XXVII, 117, XXIX, 1396
Galice fossils, marine, XXIX, 1396
Gallager, John, I, 24
Gallager, Leo, I, 24
Gallagher, William G., Jr., memorial of, XVII, 345
Gallatin formation, XXIII, 482; XXV, 127, 1739
Gallatin limestone, XXV, 1733
Galley, John E., XXIII, 1053
Carmi pool, Pratt County, Kansas, XXVIII, 125
Gallihier, Edgar Wayne, CAL, 190, 198; MSC, 22, 36-38, 67, 69, 86, 131, 132, 166, 206, 232, 235, 249, 251, 254, 256, 284, 300, 308, 309, 328, Figs. 6, 14 (in pocket); RMS, 245, 251, 258, 259, 278, 281, 507, 522, 523; XIV, 1325; XVIII, 377; XX, 685, 696; XXI, 627; XXIII, 40, 152; XXIV, 1723; XXV, 231
bibliography of, XXIX, 1682
biotite-glaucinite transformation and associated minerals, RMS, 513
colophane from Miocene brown shales of California, XV, 257
geology of glauconite, XIX, 1569
memorial of, XXIX, 1680
review, XXIV, 386
Gallihier, Edgar Wayne, and Cushman, Joseph A., MSC, 68
Gallihier, Edgar Wayne, and Kleinpell R. M., MSC, 34, 36
Gallihier, Edgar Wayne, and Schenck, Hubert G., MSC, 37
Galloway, VII, 628; XXVIII, 1676
Galloway, Jesse J., RMS, 43; X, 482; XI, 909, 1188, 1190, 1194, 1196; XIV, 1071; XV, 701, 742; XXIII, 1068; XXV, 1209, 1217, 1219, 1225, 1233, 1234, 1250
methods of correlation by means of Foraminifera, X, 562
Galloway, Jesse J., and Harlton, B. H., XIII, 467
Galloway, Jesse J., and Hemingway, Caroline E., Tertiary foraminifera of Porto Rico, review, XXV, 1810
Galloway, Jesse J., and Morrey, Margaret, MSC, 177, 203, 218, 226, 338, 354; XIX, 529; XXVI, 1651
Galloway, Jesse J., and Ryniker, Charles, XVIII, 1048
Galloway, Jesse J., and Wissler, Stanley G., CAL, 256; MSC, 25, 223, 235, 260, 343, Fig. 14 (in pocket)
Galloway, John, MSC, 110; SC, 64; XX, 1610; XXIII, 36
Galloway, John, and Barbat, W. F., PROB, 792; XVII, 1170, 1172
San Joaquin clay, California, XVIII, 476
Galloway, John, and Gester, G. C., GAS, 133; MSC, 106; XXIII, 453, 469, 1465; XXIII, 24; XXVII, 1368; XXVIII, 542
geology of Kettleman Hills field, California, XVII, 1161
Galloway, W., PROB, 89; XII, 800, 803
Gallwey, A. Payne, XIII, 1158
Gal'pern, G. D., XXVII, 1596
Galpin, S. L., STRAT, 827; XXVII, 1198, 1223
Galva pool, structure, GAS, 473, 475
Galveston County, Texas, geology and geophysics showing cap rock and salt overhang of High Island dome, GC, 909
Hitchcock field showing stratigraphic accumulation and structure, STRAT, 641
Galveston deep well, marine Miocene fossils in subsurface, discovered in, XXIII, 1604
Gambage, R. H., XI, 84
Gamer, R., XXVI, 1826
Gamma emitters, important terrestrial, XXIX, 4
Gamma-ray and sample logs, combination of, XXV, 1782
Gamma-ray logging, preparing well for, XXV, 1774
Gamma-ray logs, XXV, 1773
interpretation of, XXV, 1775
results of perforating casing on basis of, XXV, 1782
tops of oil-producing formations shown by, XXV, 1776
use of, for correlation, XXV, 1787
uses of, XXV, 1781
Gangamopteris-Glossopteris flora in India, Madagascar, and East Africa, CD, 54
Gans-Roland anticline, GAS, 526
Gantz sand, PROB, 490; VI, 449; XXV, 805
Fink storage pool showing limits of production in, XXVIII, 1570
Scenery Hill gas field, Pennsylvania, STR II, 446
Gaptank formation in trans-Pecos Texas, XIX, 228
Garber, a deltaic phase of lower Ninnescah, XXIII, 1769
deltaic, of Oklahoma, gradation of Ninnescah shale into, XXI, 1557
Garber anticline, Oklahoma, geologic map, STR I, 181
Garber delta, XXI, 1521
Garber field, Oklahoma, STR I, 176; PROB, 319, 339, 340, 410, 411, 770, 815, 992; II, 54; V, 95, 568; VI, 40, XXI, 1014; XXV, 21
a typical dome, STR II, 677
isothermal contours, XIV, 546
Garber formation in Garber field, Oklahoma, STR I, 177, 178, 181
Garber sandstones, Oklahoma, K, 794
Garber uplift in Garber field, Oklahoma, STR I, 186
Garber-Wellington section in Oklahoma, XX, 1463
Garceno sandstone member, XXVI, 261
Garcia, J. A., XIX, 800
Garcia field, FOP, 60; XXV, 1492; XXVII, 744
Garden Island Bay, Louisiana, GAS, 712; RMS, 159, 164, 173
Gardescu, Ionel I., XVIII, 1202; XXV, 2020; XXVI, 1441
discussion of fluid mechanics of salt domes, GC, 106; XXVIII, 1202
geology of natural gas in Roumania, XVIII, 871
Gardescu, Ionel I., and Billings, M. H., use of mechanical sand analyses for correlation purposes, XXI, 1311
Gardescu, Ionel I., and Johnson, Roswell H., effect of stratigraphic variation on folding, V, 481
Gardescu, Ionel I., and Ruedemann, Paul, estimation of reserves of (Gardescu)
natural gas wells by relationship of production to closed-in pressure, VI, 444
Gardiner, J. Stanley, XVII, 85
Gardiner, Thomas Moir, Jr., memorial of, XV, 723
Gardner, XVI, 261; XVII, 828
Gardner, Dion, XIV, 1353
Gardner, Frank J., relationship of unconformities to oil and gas accumulation, XXIV, 2022
Gardner, J. A., V, 224
Gardner, James Henry, PROB, 618, 624; IV, 312, V, 460, VII, 608; XII, 361, 944; XIII, 26, 29, 587; XV, 190, 1448; XIX, 1232; XXI, 26, 53
discussion of oil accumulation in Granite Ridge pools, XV, 1448
discussion of origin of Talihina chert of Black Knob Ridge, XXI, 26
discussion of theory of long-distance migration of petroleum, XV, 922
foreign members, VIII, 690
report of president for 1924, IX, 690
retreat and advance of connate water as theory of oil and gas accumulation, XXI, 951
reviews, XIV, 247, 1236; XVII, 97, 567, XXVII, 1021
rock distortion on local structures in oil fields of Oklahoma, VI, 228
sampler, XI, 867
Talihina chert section at Atoka, Oklahoma, XIX, 1231
tectonics in Arbuckle and Ouachita mountains, discussion, XX, 1127
vertical component in local folding, I, 105
vertical source in oil and gas accumulation, XXIX, 1349
volcanic ash in North Canadian Valley, Oklahoma, VII, 576
Gardner, Julia, GC, 536; SD, 211, 216, 259, 266, 589; VII, 519, 520, 521; IX, 168, 1050; X, 3, 51, 58, 175; XIV, 1425, 1436; XVI, 259; XVII, 534, 1008; XIX, 696; XXIV, 435, 437; XXV, 268, 641; XXVII, 608; XXVIII, 24, 999, 1011, 1358; XXIX, 929
analysis of Midway fauna of western Gulf province, XXV, 644
identification of Vicksburg fossils, GC, 507; XVII, 1328
Kincaid formation, name proposed for lower Midway of Texas, XVII, 744
new Rangia from upper Miocene of western Gulf province, XXIV, 476
relation of certain foreign faunas to Midway fauna of Texas, XV, 149
review, XVII, 748
Gardner, Julia, and Trowbridge, A. C., XXV, 2005
Yeager clay, south Texas, XV, 470
Gardner, Julia, Darton, N. H., and Richardson, G. B., XVII, 491
Gardner, W. A., RMS, 547, 548
Gardner, W. I., XXVI, 1826
Gardner sand, XXVII, 774
Garfias, V. R., MEX, 120, 122; VII, 607, 622; XVI, 726; XIX, 493; XXV, 358; XXVIII, 1498
Garfield anticline, VI, 148
Garfield County, oil production in, XXIII, 832
Gargasian division of Upper Aptian, MEX, 17, 19, 95

- Gariepy, Glen B., GAS, 323, 341; XIV, 1015; XXIX, 956, 957
- Garita area, V, 601
- Garland anticline, XXVII, 460
- gravity of oil, PROB, 160
- Garland City pool, lenticular sands productive in, XXII, 972
- Garland Creek-Shubuta bridge section of the Jackson Eocene of Clarke and Wayne counties, Mississippi, XXI, 80
- Garland dome, PROB, 687, 725
- Frontier formation water in, XXIV, 1239
- Madison water in, XXIV, 1305
- Garland field, GAS, 291, PROB, 165, 350, 928; XXII, 684, XXVI, 327; XXVII, 455, 465
- Garlock fault, CAL, 39-42; SC, 71, XX, 1617
- Garlock rift fault, XXIII, 520
- Garlough and Lee, XI, 919
- Garlough, John L., gas fields of Kansas west of Nemaha Granite ridge, exclusive of Hugoton district, GAS, 459
- review, XXII, 1458
- Garlough, John L., and Taylor, Garvin L., Hugoton gas field, Grant, Haskell, Morton, Stevens, and Seward counties, Kansas, and Texas County, Oklahoma, STRAT, 78
- Garnesia anticline, Colorado, carbon dioxide in, GAS, 1065
- Garnesia field, XXVII, 470
- Garner, XII, 993
- Garner, A. H., XI, 1276
- general oil geology of Colombia, XI, 151
- petroleum technology in 1936, review, XXI, 1500
- Garner, J. B., GAS, 1122
- Garnet, RMS, 38, 212, 498, 499, 602, 610; XVIII, 1574; XXII, 560; XXIV, 642; XXVII, 171; XXVIII, 77
- in southern North Sea, RMS, 344
- Garnett shoestring sands in eastern Kansas, GAS, 492, 497, 498
- Garrard sandstone, Big Sinking field, STRAT, 178
- Garrett, SD, 548
- Garrett, Daniel Loy, stratigraphy and structure of northwestern New Mexico, IV, 73
- Garrett, J. B., XXIII, 1835, 1836; XXVII, 1139
- Garrett, J. B., and Cushman, J. A., XXV, 738
- Garrett, J. B., and Ellis, A. H., Jr., XXVIII, 1357
- Garrett, Julius B., Jr., XXIX, 63
- Garrett, Julius B., Jr., and Howe, Henry V., XXIV, 1893; XXV, 735, 738; XXIX, 53, 62, 64
- Garrett, J. B., Jr., and Mornhinveg, A. R., MSC, 179; XXVIII, 1326
- study of Vicksburg group at Vicksburg, Mississippi, GC, 335; XIX, 1645
- Garrett, Lovic Pierce, SBP, 7; III, 312; IX, 286; XVIII, 121
- memorial of, XXVIII, 1064
- report of president for 1931, XVI, 504
- Garrett, M. M., XIII, 946
- Garrett, Robert E., XXIV, 1022
- memorial of Jean Cleveland Thompson, XIII, 296
- Garrett, S. G., IV, 284
- (Garrett)
- Oriskany gas fields of Pennsylvania and New York, XV, 837
- Garrison, Allen D., XXIII, 1090; XXIV, 2164
- Garrison, Texas (well 351), SBP, 292-335, 409
- Garrison formation, I, 113, II, 74
- Garros, L., RMS, 624
- Garrucho, MEX, 50, 164, 185
- gas and asphalt at, MEX, 152, 155
- Garrucho pool, section, MEX, 186
- Garland sand, V, 368
- Gartner, J. L., XXV, 1769
- Gartner, Jorge, XXIX, 1138
- Garst, Jarvis, XV, 867, 870; XVII, 527
- Garton, E. L., XXII, 414
- Garton, E. L., and Lane, E. C., XXVII, 1306
- Garvin County, Oklahoma, XXVII, 794
- geologic section, XVI, 122
- Garwood, E. J., XIX, 1260
- Garza, Father Jose Francisco Mariano, XXII, 1188
- Garza Creek, MSC, 194, 252
- Garza field, XXVI, 1017; XXVII, 744
- Garzas Creek, CAL, 240
- Garzas sand, XXIX, 979
- Gas, PROB, 304
- a big factor in Texas Panhandle, XII, 165
- Alberta, STRAT, 273
- analysis of, from Dakota sands of Elk Basin field, Wyoming and Montana, STR II, 586
- analysis of, Potter County, Texas, XII, 167
- Anderson and Leon counties, Texas, XVIII, 263
- Artesia field, New Mexico, STR I, 121
- at Carterville, XXII, 1489
- Basin district of Michigan, discovery and development during 1940, XXV, 1128
- Big Hill dome, Texas, SD, 705; IX, 725
- Big Lake field, Texas, STR II, 526, 530
- Bradford field, Pennsylvania and New York, STR II, 433
- Burbank field, Oklahoma, STR I, 229
- Carolina-Texas field, Texas, STR I, 397
- conditioning of, for input in storage pool, XXVIII, 1589
- Cole field, XXI, 1427
- Conroe field, GC, 825; XX, 772
- Copley pool, West Virginia, STR I, 459
- Cretaceous, in California, XXVII, 260
- Crinerville field, Oklahoma, STR I, 207
- Cromwell field, Wyoming, STR II, 301
- definition, CD, 20
- demand for, PROB, 14
- Depew area, Oklahoma, STR II, 377
- discovery of, in Salina salt section in Bay County, Michigan in 1940, XXV, 1125
- Driscoll pool, GC, 628; XVII, 824
- early recognition as fuel, PROB, 15
- Edna gas field, from Oakville to *Textularia warreni*-Vicksburg formations, XXV, 118
- Elk Basin field, Wyoming and Montana, STR II, 586
- (Gas)
- Elk Hills field, California, STR II, 58
- encountered in Fort Riley limestone fossiliferous and oolitic zones, XXIII, 1061
- estimate of, STRAT, 103, 104
- evaporation of water by, STRAT, 825
- evolution of, during compaction, XII, 1050
- explanation of migration of, from an oil pool, through thousands of feet of overlying sediments, XXIV, 1445
- Falfurrias, SD, 762; IX, 580
- Farnham, Utah, VII, 293
- film migration of, XXIV, 1447
- formation of, XXIV, 1876
- free, mechanical methods for excluding, XXII, 1243
- from Burbank sand, XXI, 1008
- from coal, commercial recovery based on modes of release of, XXVII, 535
- from coal seams, XXVI, 28
- from Collingwood-Gloucester and Black River-Trenton beds in Ontario, FOP, 112, XXV, 1544
- from Cromwell sand, XXI, 1009
- from Dakota and Muddy sandstones, XXI, 993
- from Devonian-Mississippian black shale, XXIX, 683
- from Goldsmith field, analysis of, XXIII, 1546
- from Kilpatrick reservoir, analysis of, XXII, 1516
- from Sundance formation, XXI, 995
- from Tertiary sands of Eocene age in Wyoming, XXII, 686
- from Texon zone in Big Lake field, Texas, STR II, 531
- from vegetable source material, PROB, 484
- function of, in producing oil, XII, 174
- Graham district, Oklahoma, IX, 1024
- Haslam area, Shelby County, Texas, XXI, 1072
- held and compressed in the sand, the principal expulsive force in many oil fields, STR II, 679
- helium, from Jurassic at Model dome, FOP, 60; XXV, 1492
- Hiawatha field, Colorado and Wyoming, STR II, 113
- Hosston field, Louisiana, STR II, 174
- Hugoton area, origin and migration of, XXIII, 1065
- Hugoton gas field, Kansas, chemical analysis of, XXIII, 1067
- in Atoka sandstones at Fitts pool, XX, 960
- in Buda limestone, V, 20
- in Cretaceous and Jurassic beds at Cisco, FOP, 67; XXV, 1499
- in Cretaceous beds at Mancos Divide, FOP, 67; XXV, 1499
- in Dakota sandstone, XXI, 989; XXII, 686
- in different horizons at Powder Wash, XXII, 1039
- in Fayette formation in Rancherías well in northern Mexico, GC, 607, XIX, 1376
- in Jurassic beds at Harley dome, FOP, 67; XXV, 1499
- in Lockport dolomite, XXVII, 846
- in lower Glen Rose at Converse field, Louisiana, XXI, 1072
- in Medina sandstone, New York oil-

(Gas)

fields, STR II, 286
 in Morrison sand, Iles domes, Colorado, STR II, 102
 in Oriskany sandstone in eastern Ohio, XXII, 261
 in Pennsylvanian sand, Francisco pool, Indiana, STR II, 138
 in Permian beds at Farnham dome, FOP, 67, XXV, 1499
 in Permian beds at Last Chance and Woodside, FOP, 67; XXV, 1499
 in reservoir rock necessary to gravitational segregation of oil, PROB, 254
 in storage, amount of, and rock pressure, curve showing relationship between, XXIV, 1490
 in storage, well head pressure, and deliverabilities from East End Tioga storage pool, relationship between, XXVIII, 1591
 in Sundance formation, XXI, 989
 in wells, control of, XXII, 1241
 in wells, effect on neighboring producing wells, MEX, 180, 215
 in Yegua formation at Esperson dome, GC, 877; XVIII, 1652
 Jennings field, SD, 411; X, 85
 Kentucky, review, VI, 261
 Kevin-Sunburst field, Montana, STR II, 268
 Lance Creek field, Wyoming, STR II, 610
 limitations of natural, for industrial purposes, GAS, 1133
 Lomo del Pozo, MEX, 197
 Lost Soldier district, Wyoming, STR II, 646
 Luling field, Texas, STR I, 278
 Lytton Springs field, Texas, X, 969
 markets, industrial, GAS, 1133
 Marysville Buttes, Sutter County, California, XVII, 443
 migration of, PROB, 479, 527
 Michigan, sources of, XXII, 173
 Mississippian, in central Michigan area, origin in either Michigan or Coldwater formation, or in both, XXII, 174
 Morrison field, Oklahoma, STR I, 152
 Muskegon, Ottawa, and Kent counties, Michigan, dolomite zone productive of, XXV, 719
 natural, by-products, GAS, 1114, 1136
 natural, compared with petroleum for heating, GAS, 1143
 natural, composition, GAS, 1074
 natural, compounds in, XXVI, 31
 natural, consumption, GAS, 1089, 1127, 1132-1137
 natural, decline of drilling operations for, in Michigan in 1942, XXVII, 822
 natural, development in Michigan during 1941, XXVI, 1102
 natural, developments and possibilities east of the main oil and gas fields of Appalachian region, XIX, 853
 natural, in Africa, GAS, 1091
 natural, in Appalachian province, geochemistry of, XXVI, 19
 natural, in Appalachian province, regional variations in composition of, XXII, 1153
 natural, in Appalachian region, GAS, 1089
 natural, in Australia and New

(Gas)

Guinea, XVIII, 226, 549
 natural, in Brantford area, Ontario, XXV, 1950
 natural, in central interior region, utilization, GAS, 1089
 natural, in Hugoton field, geology pertaining to occurrence of, XXIII, 1058
 natural, in Northern fields, analyses of, MEX, 202
 natural, in Northern fields, inflammability of, MEX, 201, 203
 natural, in oil in Northern fields of Mexico, GAS, 1002
 natural, in Pacific region, GAS, 1090
 natural, in Poland, XVIII, 892, 1218
 natural, in Rocky Mountain region, utilization, GAS, 1089
 natural, in Roumania, geology of XVIII, 871
 natural, in Southern fields, analyses of MEX, 225
 natural, in Southern fields, inflammability of, MEX, 224
 natural, in United States, consumption, GAS, 1127, 1134
 natural, in United States, estimated waste, GAS, 1095
 natural, land valuation, principal factors of, III, 378
 natural, measurement, GAS, 1113
 natural, occurrence, GAS, 1078, 1080
 natural, occurrences in Germany, XVIII, 719
 natural, occurrences in Russia (U.S.S.R.), XVIII, 746
 natural, oil, coals and asphalt, origin of, XXIV, 1868
 natural, origin, migration, and natural storage of, XXVI, 33
 natural, pipe line in United States, GAS, 1110
 natural, price, GAS, 1129, 1131, 1144
 natural, produced in United States, value of, GAS, 1128
 natural, production in New York state, XXII, 87
 natural, production in United States, GAS, 1088
 natural, utilization, GAS, 1087, 1130, 1140
 natural, west of Mississippi River, utilization, GAS, 1089
 natural, with regard to its place in national defense, XXV, 1291
 natural, and oil in India, XVIII, 283
 natural, and oil, regional geologic studies for, XXVII, 1387
 natural, and petroleum in non-marine sediments of Powder Wash field in northwest Colorado, XXII, 1020, 1604
 natural, and petroleum, migration and accumulation of, XXIX, 460
 natural, and petroleum, source material for, XX, 797
 natural coal, composition and quantity of, XXVII, 534
 natural coal, in West Virginia, XXVII, 529
 near Carthage, Texas, XXI, 1072
 near Fort Collins, Colorado, VIII, 79
 Nemaha Mountains region, Kansas, STR I, 70
 non-recoverable, XXV, 1320
 occluded in calcite crystals, MEX, 166
 occurrence, PROB, 16, 75, 79, 163, 467, 477, 478, 507

(Gas)

occurrence in Alberta, GAS, 20, 22, 27
 occurrence in Wyoming and Colorado, PROB, 169
 oil, and water, structure section at Northeast Coalinga field, showing westward pinch-out of Gatchell sand and relationship between, XXIV, 1116
 oils, and wax in lake sediments, XXV, 846
 on crest of fold in Dakota sands in Elk Basin field, Wyoming and Montana, STR II, 585
 or water production, excessive, causes of, XXII, 1240
 origin and migration of, in Hugoton area, XXIII, 1065
 Oriskany, developments in Pennsylvania confined to Tioga and Potter counties, XXV, 1143
 Osage County field, Oklahoma, STR II, 389
 our experience with underground storage of, (The Manufacturers Light and Heat Company, Pittsburgh, Pennsylvania), XXIV, 1478
 our experience with underground storage of, (The Peoples Natural Gas Company), XXIV, 1482
 Owsley County gas field, Kentucky, STR I, 81
Paciencia y Aguacate, MEX, 180
 Palo Pinto County, XXVI, 1045
 Pánuco field, Mexico, XII, 432
 Pennsylvania, V, 357
 Petrolia field, Texas, STR II, 544
 Petrolia field, Texas, vertical migration of, STR II, 553
 Pine Island, Louisiana, IX, 171
 Pine Prairie dome, Louisiana, IX, 753
 place of, in origin of oil, PROB, 238
 Poteau field, IV, 34
 produced along Arkansas-Oklahoma line, FOP, 91; XXV, 1523
 produced from Baker-Glendon anticline, XXIII, 462
 produced in La Barge region, XXV, 1743
 productive horizons, PROB, 698
 Quebracha field, MEX, 197
 Raccoon Bend field, GC, 679; XVII, 1462
 Rangely field, Colorado, STR II, 108
 relation of, to structure in Urania field, Louisiana, STR I, 99
 results of storage of, by Peoples Natural Gas Company and New York State Natural Gas Corporation, XXIV, 1493
 Rock River field, Wyoming, STR II, 619
 Rockingham County, Virginia, discovery of, XXVI, 275
 San Isidro, MEX, 197
 Santa Fe Springs field, California, VIII, 180
 small amounts on salt domes, GAS, 693
 solubility of, STRAT, 749
 South Burbank pool, XXI, 570
 south Texas domes, SD, 757; IX, 575
 southern Brazil, XIX, 1795
 Stephens County, XXVI, 1045
 Sugarland field, GC, 732, XVII, 1385
 taken from Consolidated Natural Gas Company storage, graph showing importance of, as relates to gas

(Gas)

sales and supply, XXVIII, 1582
 tests of observation wells for, in
 Bammel field, XXIX, 268
 Texas Panhandle, X, 733
 Texas Panhandle field, XIX, 1103
 theories for predominance of, GAS, v
 Thornburg field, Colorado, STR II, 104
 Tioga region, Pennsylvania, review, XVI, 425
 underground storage of—Farmington field—Tioga County, Pennsylvania, XXIV, 1493
 underground storage of, in area near Murrysburg, XXIV, 1488
 underground storage of—Salem, Penn. and Hempfield townships, Westmoreland County, Pennsylvania, XXIV, 1485
 Union Church area, Bienville Parish, Louisiana, XXI, 1071
 Upper Montana, GAS, 26
 variations in composition within a reservoir, XXVI, 23
 Ventura Avenue field, California STR II, 33
 Wasson casinghead, analysis of, XXVII, 510
 West Virginia, modes of occurrence of, XXVII, 531
 Westbrook field, Texas, STR I, 290; XI, 474
 Wertz field, Wyoming, STR II, 651
 White River dome, Colorado, STR II, 111
 Winn Parish, Louisiana, XXVIII, 277
 withdrawals of, from storage, XXIV, 1488
 Yakima Valley, XXIX, 1412
 Yates dome, XIII, 1552
 Yates field, Texas, STR II, 499
 Gas and oil, Apache pool, XXVI, 1065
 Bayou Bouillon dome, Louisiana, IX, 1289
 cementing materials in sandstones and their probable influence on migration and accumulation of, XXV, 1839
 coalification theory of origin of, discussion, XVIII, 1547
 Dakota basin, wells drilled for, XXVII, 1586
 deep, at Snow Hill, Arkansas, XXI, 1072
 discovery of, in Mercedes field, Hidalgo County, Texas, XIX, 1226
 distribution of underground salt water and its relation to accumulation of, II, 170
 fields producing, from zones of different ages in Rocky Mountain region, XXVII, 476
 from Pennsylvanian sands in Lost Soldier district, Wyoming, source of, STR II, 665
 from Pennsylvanian sands in Seminole area, Oklahoma, STR II, 321
 geologic occurrence of, in Michigan, XXII, 393
 historical development of structural theory of accumulation of, PROB, 1
 Hockley dome, Texas, IX, 1052
 in lower Glen Rose in Arkansas, Texas, and Louisiana, XXI, 1068
 in Montana, possibility of, IV, 313
 Jamin action—what it is, and how it affects production of, XII, 659

(Gas)

middle Tennessee, map, XXVIII, 278
 Moose Mountain area, XXVII, 50
 near Edna, Jackson County, Texas, X, 905
 new development for, in Oklahoma during the past year, and its geological significance, II, 53
 northwestern New Mexico, XXVII, 464
 Oriskany as source of, in Pennsylvania and adjacent areas, XXII, 241
 produced from Pennsylvanian reservoir rocks in Mid-Continent, XXV, 1676
 produced in United States, amount of, XXIX, 857
 production of, at Crinerville field, Oklahoma, STR I, 210
 Red basin, Szechuan province, XXVIII, 1436
 Rocky Mountain states, structural conditions under which accumulated, XXVII, 466
 Seminole area, Oklahoma, STR II, 321
 source of, in Wall Creek and Dakota sands in Elk Basin field, Wyoming and Montana, STR II, 585
 Spring Hill-Sarepta field, VII, 550
 stratigraphic occurrence of, XI, 692
 Stratton Ridge, Texas, IX, 30
 Sulphur dome, IX, 487
 Sundance formation a prolific source of, STR II, 642
 synclinal occurrences, STR II, 703
 Welsh field, Louisiana, IX, 474
 Gas and oil accumulation at Esperson dome, relation to structure, GC, 875
 due to anticlinal or domal structures in northwestern Colorado, STR II, 114
 relation to structure in Bradford field, Pennsylvania and New York, STR II, 420
 relation to structure in northwestern Colorado, STR II, 106
 relation to structure in Osage County field, Oklahoma, STR II, 395
 relation to structure in Scenery Hill gas field, Pennsylvania, STR II, 447
 seemingly not influenced by structure, at Delaware Extension pool, Oklahoma, STR II, 362
 Gas and oil areas, Tennessee, STR I, 244
 Gas and oil development in Michigan, history of, XXIV, 1950
 in Michigan in 1940, XXV, 1125
 in northern Louisiana, review of, II, 61
 in Oklahoma, IV, 277
 in United States, 1941, XXVII, 555
 in United States, 1943, XXIX, 107
 in West Virginia, IV, 27
 Gas and oil fields, Clinton sand, relation to geology, XXVII, 891
 in California, map, XXVI, 1138
 in California, principal, XXVII, 866
 in central California, map, XXVII, 868
 in Colorado, XXVII, 448, 459, 464
 in Colorado, surface types of, XXVII, 452
 in East Texas, 1940, XXV, 1082
 in East Texas, 1941, XXVI, 1051
 in East Texas, 1942, XXVII, 783

(Gas)

in East Texas, 1943, XXVIII, 842
 in East Texas, 1944, map, XXIX, 767
 in Illinois, map showing old and new, XXIII, 808
 in Lost Soldier district, Wyoming, STR II, 636
 in Mexia and Tehuacana fault zones, Texas, STR I, 304
 in Mid-Continent region, relation of Ouachita belt of Paleozoic rocks to, XVIII, 1059
 in Montana, XXVII, 455, 461
 in Montana, map, XXVI, 1320
 in Montana, surface types of, XXVII, 438
 in north-central Texas and southern Oklahoma, XXI, 1020
 in northeast Texas, XXI, 1064
 in northern New Mexico, XXVII, 449, 461
 in northern New Mexico, surface types of, XXVII, 456
 in parts of Rocky Mountain and High Plains regions, showing areas of important developments during 1938, XXIII, 904-905
 in San Antonio district, XXI, 1044; XXII, 752-753
 in south Arkansas and north Louisiana, XXII, 720
 in South Texas, XXVII, 740
 in south Texas, map, XXIV, 1808; XXIX, 778
 in southern Arkansas and northern Louisiana, map. Structure contours on base of massive anhydrite of Glen Rose formation, XXIII, 900-901
 in Utah, surface types of, XXVII, 457
 in western Kentucky, geology of, XVI, 231
 in Wyoming, XXVII, 459, 461
 in Wyoming, surface types of, XXVII, 440
 Oriskany sand, XXVII, 890
 representative, Rocky Mountain region, columnar sections, XXVII, 468
 Gas and oil fields and main structural features of central and eastern Montana, XXVII, 437
 of Colorado and northern New Mexico, XXVII, 451
 of eastern Utah and northern Arizona, XXVII, 458
 of Wyoming, XXVII, 447
 Gas and oil formations, Caddo field, Louisiana, STR II, 190
 Eastern Interior basin, XXIV, 853
 Gas and oil horizons, Cunningham field, Kansas, XXI, 509
 Eldorado field, Kansas, STR II, 166
 pre-Pennsylvanian, in Kay County, Oklahoma, IV, 173
 West Virginia, XIX, 868
 Gas and oil map, Pennsylvania, 1943, XXVIII, 727
 Gas and oil possibilities in Mississippi, I, 152
 of Virginia, XIX, 874
 structural and commercial, of central valley region, California, XVI, 361
 Gas and oil producing strata in Illinois, XXIII, 812
 Gas and oil production at Bradford field, Pennsylvania and New York, STR II, 436
 at Elk Basin field, Wyoming and

- (Gas)
 Montana, STR II, 587
 in Osage, statistical investigation of effects of structure on, III, 407
 relation of, to major uplifts in eastern coal field, Kentucky, STR I, 87
 Gas and oil prospects of Australia, review of, XI, 55
 of New Zealand, X, 1227
 Gas and oil prospects and Tertiary geology in Dakota basin of North Dakota, XXVII, 1567
 Gas and oil reservoirs in Pine Island field, Louisiana, STR II, 178
 Gas and oil resources of California, conservation of, IV, 17
 of western Kansas, XXII, 1287
 Gas and oil sands in Kevin-Sunburst field, Montana, STR II, 264
 Gas and oil territory of eastern Kentucky, prospective, STR I, 89
 Gas and oil wells developed by wildcat exploration in Oklahoma during 1936, XXI, 1007
 Gas and oil zones in Rocky Mountain region, age of, XXVII, 465
 in Rocky Mountain region, character of, XXVII, 471
 Gas and other primary mineral fuels, relative efficiency of, GAS, 1145
 Gas accumulation, anticlinal theory of, PROB, 14, 16
 in Cole oil sand in Cole field, Texas, caused by sand lensing and folding, STR I, 402
 in Scenery Hill gas field, Pennsylvania, STR II, 450
 relation to structure in Rangely dome, Colorado, STR II, 108
 Gas analyses, STRAT, 308, 315, 377, 856
 Gas analyses and oil gravities, Refugio field, XXII, 1214
 Gas area of western Moore County, Texas, extension in 1944, XXIX, 722
 Gas areas in eastern Kentucky, XXIX, 683
 Gas-bearing horizons in Colorado formation, GAS, 22
 Gas-bearing sands of Frontier formation, XXII, 689
 Gas-bearing sandstones in Atoka formation, XXI, 1404
 Gas-bearing up-folds shortened over crests, GAS, 1079
 Gas cap, Amelia field, XXIII, 1654
 Conroe field, GC, 811; XX, 758 (Conroe sand), Conroe field, map showing areal extent of, GC, 808
 effect on problem of production, XXII, 1243
 North Cowden field, XXV, 623
 Payton pool, XXVI, 1645
 Wasson area, XXVII, 509
 Gas cap and bottom water at Tepetate field, XXII, 305
 Gas cap and water data, North Cowden field, Ector County, Texas, XXV, 624
 Gas City dome, GAS, 245
 Gas City pool, GAS, 254
 Gas-condensate discoveries in Gulf Coast of Texas, XXIX, 787
 Gas content of reservoirs, GAS, 1019, 1102
 Gas developments in southwestern Pennsylvania, XXV, 1140
 shallow-sand, in Pennsylvania, XXVII, 838
 Gas discoveries in California, 1942, XXVII, 870
 in California in 1944, XXIX, 652
 in Ottawa County, Michigan, in 1939, XXIV, 985
 Gas-distillate areas opened in 1941 in Miocene in Louisiana, XXVI, 989
 Gas-distillate discoveries in northeast Texas in 1936, XXI, 1066
 Gas-distillate production in Texas and Louisiana in 1942, XXVII, 730
 Gas drive, Gay-Spencer-Richardson trend, STRAT, 812
 Gas-drive field, North Cowden field, XXV, 625
 Gas energy, PROB, 810
 latent in salt water, MEX, 209
 Gas energy and gas-oil ratios, XXVI, 107
 Gas field, discovery, of Illinois, XXII, 1533
 major, in Schleicher County, West Texas, XXIII, 843
 Monroe, Louisiana, VII, 565
 Scenery Hill, Pennsylvania, STR II, 443
 Spring Hill-Sarepta, Wesbter and Bossier parishes, Louisiana, VII, 546
 Gas fields discovered in California in 1935, XX, 940
 discovered in California in 1936, XXI, 985
 discovered in California in 1943, XXVIII, 743
 discovered in Wyoming in 1937, XXII, 684
 discovered or extended in 1938 in Rocky Mountain region, XXIII, 915
 drilled in 1939 in Michigan, XXIV, 984
 in Jackson County, Missouri, effective porosity of, XXV, 1405
 in Louisiana, VI, 251
 in Michigan, XXIV, 1952; XXVII, 829; XXVIII, 766; XXIX, 699
 in Montana, GAS, 247
 in North Louisiana, XXVI, 1261
 in northeast Texas embayment, GAS, 651
 in northern and central Pennsylvania, shallow-well completions in, 1941, XXVI, 1116
 in northern and central Pennsylvania, shallow-well completions in 1942, XXVII, 842
 in Pennsylvania related to shore lines, PROB, 452
 in San Francisco-Stockton area, map showing new Potrero Hills field and extension of Rio Vista field, XXIII, 944
 in South Arkansas, XXVI, 1254
 in Sweetgrass arch, GAS, 29
 in Utah, XXVII, 450, 461
 in Utah from Coconino sandstone XXI, 1256
 in western Kentucky, GAS, 828
 larger, in Kansas, XXIV, 1779
 natural, of Transylvania, Roumania, notes on, VIII, 202
 new, in California, discovered in 1937, XXII, 710
 new, in California in 1938, XXIII, 943
 of Big Horn Basin structural province, Wyoming and Montana, GAS, 277
 of Burma, XVIII, 315
 (Gas)
 of central western Arkansas in relation to structural trends, GAS, 550
 of Kansas west of Nemaha Granite ridge, exclusive of Hugoton district, GAS, 459
 of Lost Soldier district, Carbon and Sweetwater counties, Wyoming, GAS, 305
 of Ontario, natural, GAS, 59
 on Austin high in Michigan, XXII, 154
 on Broomfield high in Michigan, XXII, 150
 on Greendale high in Michigan, XXII, 138
 Oriskany, in Kanawha County, West Virginia, XXII, 177
 use of geology in development of, GAS, 1077
 Gas fields and natural gas trunk pipelines of Kansas, XXIV, 1784
 Gas flows, GAS, 21, 26
 Gas formation, PROB, 462
 Gas horizon, Dillon in Pine Island field, Louisiana STR II, 178
 Gas horizons in Alberta, GAS, 10
 in Urania field, Louisiana, STR I, 95
 in Yates field, Texas, STR II, 491
 of Medina, XXII, 81
 Gas industry, historical aspects of, XXII, 1092
 Gas lands, classification of, GAS, 1030
 Gas lift, MEX, 184
 Gas mounds on Gulf Coast, I, 41, 63
 Gas-naphtha horizon of Paleozoic of Turner Valley field, GAS, 49
 Gas-naphtha ratio, GAS, 39
 Gas occurrence, relation to isocarbs in Appalachian region, XXII, 427
 significance of, in central Michigan area, XXII, 173
 Gas oil, PROB, 140
 in crude oil from Miocene, PROB, 128
 Gas oil and fuel oil, uses of, in United States, XX, 48
 Gas-oil contact, PROB, 145
 Gas-oil content, PROB, 117
 Gas-oil fraction, PROB, 123
 Gas-oil levels at Amelia field, XXIII, 1653
 in Conroe reservoir, GC, 806; XX, 753
 in North Cowden reservoir, XXV, 621
 in Raccoon Bend field, GC, 693; XVII, 1476
 Gas-oil ratio, XXVI, 1050; XXVII, 785; XXVIII, 230
 Big Creek, GAS, 709
 bottom-hole pressure, number of wells, and accumulated production curves, Goldsmith field, for period of May, 1935, to June, 1938, XXIII, 1549
 Brea-Olinda field, GAS, 213
 Buckeye field, XXIV, 1980
 Buena Vista Hills, GAS, 153
 changes in, use in estimating reserves, GAS, 1027
 Conroe field, GC, 817; XX, 765
 Dominguez field, GAS, 183
 East Coyote field, GAS, 209
 Elk Hills field, GAS, 147
 Elwood field, GAS, 169
 Government Wells field, GC, 643, 645; XIX, 1143, 1145
 Gulf coastal salt-dome area, GAS, 698

(Gas-oil)

- Hankamer dome, GAS, 729
 Humble dome, GAS, 706
 Huntington Beach field, GAS, 191
 Inglewood oil field, GAS, 177
 Kettleman Hills, GAS, 131, 132, XXIV, 1945
 La Rosa field, XXV, 317
 Lisbon field, XXIII, 282
 Lockport field, GAS, 732
 Lompoc field, GAS, 159
 Long Beach field, GAS, 185
 low at Wheat pool, XX, 794
 Montebello field, GAS, 201
 Mount Pleasant field, GAS, 807
 New Hope field, XXIX, 773
 North Belridge field, GAS, 138
 North Cowden field, XXV, 625
 of Jackson oil at Raccoon Bend, GAS, 719
 Orchard, GAS, 710
 production, and per cent gas sand, relation between, diagram showing, XXV, 1317
 Raccoon Bend field, GC, 697, XVII, 1480
 relation to estimation of oil reserves, XXV, 1304
 Richfield field, GAS, 214
 Rosecrans field, GAS, 180
 Santa Fe Springs field, GAS, 204
 Santa Maria oil field, XXIII, 81
 Schuler field, XXVI, 1473, 1500
 Seal Beach field, GAS, 187
 Sweet Lake dome, GAS, 734
 Texas Panhandle fields, GAS, 410
 Thompsons field, GAS, 726
 Torrance field, GAS, 198
 Ventura Avenue field, GAS, 165
 West Columbia field, XXVI, 1453
 West Coyote field, GAS, 206
 Yates field, GAS, 450
 Gas-oil ratio and reservoir pressure versus cumulative oil production, XXVIII, 230
 Gas-oil ratios an index to progress of repressuring work, XXII, 200
 in wells in Big Lake field, GAS, 445, 447
 in wells in Lisbon field, XXIII, 318
 in wells, methods of reducing, XXII, 1243
 low, essential in maintaining pressure by water drive, XXII, 1239
 regulation of, GAS, 1096
 Gas-oil-water contact in Texas Panhandle field, XXIII, 989
 in Texas Panhandle field, diagram showing, XXIII, 991
 Gas pools near Corry and Meadville, and new oil pool at Tidouette, Pennsylvania, review, VII, 304
 occurrence of, PROB, 72
 Gas potential in New Mexico during 1939, XXIV, 1040
 Gas pressure, Austin field, STRAT, 246
 Six Lakes field, STRAT, 259-260
 Vernon field, STRAT, 265
 wastage from decline in, XII, 171
 Gas pressure and oil recovery, VII, 609
 Gas-pressure decline curves for a flowing oil well, IX, 196
 Gas-pressure distribution in Viking field, GAS, 55
 Gas pressures at Rattlesnake Hills field, XVIII, 856, 857
 Gas problem, high-pressure Yates sand, east Wesson field, Yoakum County, West Texas, XXV, 1880, 2070

- Gas-producing area in Sherman and Moore counties, Texas, northwest-southeast cross section showing red clastics west of, XXIII, 1066
 in eastern Kentucky, XXV, 807
 Gas-producing counties in eastern Kentucky, XXVI, 1129
 in Michigan, XXII, 132
 in New York, XXII, 82-89
 Gas-producing counties and formations in New York, XIX, 866
 Gas-producing formations in Silurian in Ontario Peninsula, FOP, 118; XXV, 1550
 Gas-producing sands in Vermilion Creek area, XIV, 1025
 Gas production, GAS, 113, 286, 392, 397, 537, 573, 612, 653, 655, 658. (See Production, gas)
 Blackwell field, Oklahoma, STR I, 171
 Cartersville-Sarepta and Shongaloo Creek area, XIV, 1025
 Crinerville field, Oklahoma, STR I, 210
 eastern Ohio, STR I, 145
 Eocene, XXI, 985
 from Chattanooga shale, XVIII, 1127
 from lenses, PROB, 554
 from Miranda sand, Cole field, Texas, STR I, 402
 from Neva limestone, Blackwell field, Oklahoma, STR I, 167
 from Neva limestone, South Blackwell field, Oklahoma, STR I, 171
 from Spring Hill-Sarepta gas field, Webster and Bossier parishes, Louisiana, VII, 555
 from stray sands of Michigan formation, XXII, 132
 Hugoton and Texas Panhandle fields, present limits of, XXIII, 1055
 in California in 1943, XXVIII, 744
 in Michigan in 1940, XXV, 1128
 in Michigan in 1942, XXVII, 822
 in Michigan in 1943, XXVIII, 765
 Indiana, XXVII, 819
 Jackson field, XXVI, 998
 potential, Page field, XXV, 631
 Sabinsville pool, XXII, 257
 Sibley, Louisiana, XXI, 1071
 spacing programs for, XXV, 1293
 Sugar Creek field, XXII, 1518
 Texas Panhandle, X, 744
 to January 1, 1938, Cartersville-Sarepta and Shongaloo fields, XXII, 1500
 Gas propulsion theory of oil migration, VII, 223
 Gas purchase contracts, GAS, 1013, 1097, 1108
 Gas ratio, high, oil production in Frio sand at Lovell's Lake field, Texas, XXIII, 880
 Gas ratios, high, in coastal Louisiana fields, XXIII, 880
 Gas-recycling operations in South Texas, XXVII, 745
 Gas-recycling projects, rôle in discovery of oil accumulations, XXV, 1042
 Gas reserve in Louisiana, XXII, 727
 Gas-reserve estimates, XXV, 1322
 Gas reserves, GAS, 1098-1102; STRAT, 103, 104. (See Reserves)
 eastern Kansas, XXIV, 1781
 equal pound loss method of estimating, X, 901
 estimation of natural, GAS, 1035; XII, 1095

(Gas)

- Hugoton field, XXIII, 1061
 Kansas, XXIV, 1781
 processed for condensate, occurrence in post-Eocene beds, XXV, 1042
 Roumania, XVIII, 874
 Gas rights acquired by contract, GAS, 1104
 Gas rock, Jackson, Mississippi, XVII, 41
 Monroe field, GAS, 743, 751, 756, 757
 Gas sales contracts, GAS, 1108
 Gas sample, typical, from North Cowden field, analysis of, XXV, 625
 Gas sand, Border-Red Coulee field, STRAT, 290, 291
 Bradford field, Pennsylvania and New York, STR II, 416, 419
 Depew area, Oklahoma, STR II, 377
 Eldorado field, Kansas, STR II, 166
 Hewitt field, Oklahoma, STR II, 293
 lenticular, in Kevin-Sunburst field, Montana, STR II, 265
 per cent, and production gas-oil ratio, relation between, diagram showing, XXV, 1317
 Salt Creek field, Wyoming, STR II, 596
 Gas sands, Big, in Petrolia field, Texas, STR II, 546
 Kansas, XXIV, 1797
 La Rosa field, XXV, 312
 Mississippian of central Michigan area, XXII, 129
 natural, of eastern Kentucky, review, XV, 90
 origin of, STRAT, 238
 Standard gas field, XXVI, 1273
 Viking field, GAS, 53
 Gas seepages, PROB, 470, 648; MEX, 152, 155, 157, Fig. 22 (in pocket)
 in Alabama, IV, 267
 in Mexico, GAS, 999
 in Panama, IV, 267
 in Red basin, XXVIII, 1436
 Gas storage, underground, in Ohio, West Virginia, and Pennsylvania, problems of, XXVIII, 1561
 Gas stored, ratio of deliverability to, XXVIII, 1571
 Gas supply, GAS, 1013, 1093, 1107
 Gas transmission line, Panhandle and Eastern, XXVI, 1105; XXVII, 823
 Gas-transmission lines in Michigan, XXV, 1134
 Gas valuation of properties, III, 378; VI, 444
 Gas variations in Elk-Poca field, XXVI, 23
 Gas wastage, avoidance of, XII, 176
 Gas well, defective, Harris County, Texas, relation of phenomenal rise in water levels to, XXIX, 253
 first, in Kanawha County, XXII, 1093
 in Jim Hogg County, Texas, VIII, 676
 Gas wells, XX, 1491
 deepened in shallow sands in southwestern Pennsylvania in 1943, XXVIII, 728
 in Wapanucka sand, XXII, 1577
 natural, estimation of reserves of, by relationship of production to closed pressure, VI, 444
 oil wells, and dry holes drilled as wildcats in 1937, XXII, 1232
 oil wells, and dry holes drilled as wildcats in 1941, XXVI, 972
 oil wells, and dry holes drilled as wild-

- (Gas)
cats in 1942, number of, XXVII, 720
open-flow gauge and working capacity of, IX, 217
Rodessa-Pettit, XXVI, 1053
Gas withdrawals and pressure decline, relative porosity and permeability of producing formations of Hugoton field as indicated by, XXIV, 1798
Gas zones, Appalachian area, SBP, 351, 357
California, SBP, 91, 92, 99, 100
definition of, SBP, 86
East Texas, SBP, 294-297
Gulf Coast, SBP, 336-339
Mid-Continent, SBP, 261, 262
relation of, to properties of sediments, SBP, 381-392
Rocky Mountains, SBP, 197-200
West Texas, SBP, 286
Gasconade fossils in McKenzie Hill formation, XXV, 1635
Gascoyne series, XXV, 379
in Northwest Basin, Australia, XX, 1039
Gaseous constituents shown by soil analysis, XXIV, 1403
Gases, coal-seam, analyses of, XXVI, 30
composition of, in various processes of fermentation, XVII, 63
constituent products of natural, GAS, 1118
from metal mines, mineral springs, and fumaroles, analyses of natural, GAS, 1063
hydrocarbon, from Oriskany sandstone, composition of, XXII, 264
in Appalachian region, average composition of all, XXII, 1180; XXVI, 20
movement of, through glass, references on, XXIV, 1446
natural, theories of origin of carbon dioxide in, XXI, 1256
near-surface, analyses of, XXVI, 31
of Transylvania, analyses, VIII, 210
rich in helium, nitrogen, carbon dioxide, and hydrogen sulphide, geology of natural, GAS, 1053
solubility of, in water, RMS, 71
types and varieties of natural, GAS, 1075
unusual natural, discussion by Walter B. Lang, X, 1176
Gasoline, PROB, 112, 116, 117, 121, 122, 139, 141, 222
in crude oil from Miocene sands, PROB, 128
natural-gas, GAS, 1118
price of, by years, 1924-35, XXI, 190
world production of natural, GAS, 1122
Gasoline and crude oil price, relationship between, XXIII, 775
Gasoline and engine distillate California, VII, 566
Gasoline distributing system of United States, XXI, 185
Gasoline-gas ratios, GAS, 48
Gasoline plants, GAS, 405, 407, 419, 451, 478, 732, 1007, 1120
in Texas Panhandle, XVII, 898
in United States, natural-gas, GAS, 1120
Gasoline rationing, XXVII, 977
Gasoline statistics for Kansas, GAS, 508
for United States, natural gas, GAS, 1121
Gasoline transportation, XXV, 1270
Gasolines, charcoal process of extracting natural, GAS, 1120
unsaturated, PROB, 237
Gaspé, Quebec, XXIX, 656
Gaspé Bay, MSC, 16
Gaspé limestone, XXII, 543
Gaspé oil field, XXIX, 1739
Gaspé Peninsula, FOP, 123, GAS, 103, XXV, 1555
antichinal occurrence of oil in, XV, 605
unconformity between Ordovician and Silurian on, FOP, 123; XXV, 1555
Gaspé series, GAS, 104
Gasper formation in eastern Kentucky, GAS, 934
Gasper limestone, Kentucky, VI, 25
Gasper oolite, XXII, 273
Gasper River region, disappearance of most of clastic beds of lower Chester in, XXII, 269
Gastroceras n. sp. from Round Prairie formation, XXII, 900
Gastropoda, XXI, 808; XXIII, 23; XXV, 639
of Temblor and Vaqueros in Caliente Range, XXV, 221
Gastropods, MEX, 38, 110; PTNM, 604, 607; RMS, 197, 201, 212, 376; XXII, 291, 740, XXIII, 572, 639; XXIV, 1559, XXV, 132, 138, 387, 644, 656, 834; XXVI, 269, 604, 607; XXVII, 617, 1135, 1449; XXVIII, 277, 525, 1322
Ordovician, XXIV, 154
Gastropods and foraminifera, marine Tuscaloosa, XXIX, 927
Gatchell oil sand productive in Northeast Coalina field, California, XXIV, 1113
Gatchell sand, XXVIII, 745
contours on top, showing relationship of new Eocene fields at Coalina, XXIV, 1115
productive in Coalina pool, XXIV, 1948
structure section at Northeast Coalina field, showing westward pinch-out of, and relationship between gas, oil, and water, XXIV, 1116
Gato Ridge anticline, PROB, 208
Gato Ridge field, XXVII, 1345, 1349
Gatschett, A. S., XXVII, 941
Gatun formation, MSC, 129
similarity of Tuxpan fauna with that of, MEX, 139
Gauldre-Boileau, M., PROB, 5
Gault, H., and Hessel, F. A., XVII, 1256, 1258, 1259
Gautier, XI, 1297
Gavilan limestone, CAL, 64
Gavin, Martin J., X, 873; XIII, 327; XIX, 497
oil shale, an historical, technical, and economic study, review, VIII, 529
Gaviota, MSC, Figs 6 and 14 (in pocket)
Gaviota Canyon, MSC, 33, 108
Gaviota Creek, MSC, 32, 131, 187, 189, 192, 206, 208, 222, 228, 233, 258, 276, 292, 302, 307, 311, 316, 317, 323, 335, 342, 344-346, 352, 353; SC, 86; XX, 1632
Gaviota Creek-Canada de Santa Anita, MSC, Fig. 6 (in pocket)
Gaviota Creek faunule, MSC, Fig. 14 (in pocket)
Gaviota district, MSC, 102
Gaviota formation, MSC, 100-103, 160, 164, XXVII, 13
typical, MSC, 61
Gaviota Pass, MSC, 85, 111, 152, 184, 186, 188-190, 192, 195, 213, 217, 222, 225, 228, 237, 256, 286, 311, 318, 324, 342, 353, 354, SC, 96; XX, 1642
middle Sespe faunule of, MSC, Fig. 14 (in pocket)
Gaviota Pass-Naples, MSC, 2
Gaviotita Canyon, XXVII, 15
Gawilinski, M., XVIII, 894
Gay, John R., SBP, 6, 8, 9, 46, 52; XXV, 1933
Gay Hill deposit, XXIX, 1716
Gay Hill gravel, XXIX, 1703
Gay-Spencer-Richardson oil and gas trend, Jackson, Roane and Calhoun counties, West Virginia, STRAT, 806
accumulation of oil and gas, STRAT, 821, 823, 824, 827
Gaylord, E. G., PROB, 407, SBP, 8; VIII, 613; IX, 994, XXV, 1228
Gaylord, E. G., and Hanna, G. D., X, 130
organic shales in southern end of San Joaquin Valley, California, IX, 228
Gaylord, E. G., and Taff, J. A., geological organization of an oil company, VIII, 651
Gaza-Beersheba district, geology of, XXI, 531
Gazelle expedition, RMS, 50
Gazetteer, CAL, 307, MEX, 249
Gazin, C. Lewis, CAL, 203; SC, ix, 80; XX, 1533, 1626; XXV, 2040
Gazin, C. Lewis, Buwalda, J. P., and Sutherland, J. C., XXIII, 518, 552
Gealy, Wendell B., XVI, 915, 921
use of mercury for determination of volume of rock specimens in Russell porosity apparatus, XIII, 677
Gealy, Wendell B., and Wanenmacher, J. M., XIV, 429
surface and subsurface structure of Tri-County field of southwestern Indiana, XIV, 423
Gealy, Wendell B., Brankstone, H. R., and Smith, W. O., XVI, 863
improved technique for determination of densities and porosities, XVI, 915
Geanticline bordering Centralia-Sandoval area, Illinois, STR, II, 122
in Stephens County, Texas, STR II, 472
of west Sumatra and south Java, XXII, 45
Geanticlines of British New Guinea, XXVIII, 1453
Geanticlines and geosynclines of Central America and Mexico, XXVIII, 1080
Gebel Zeit oil field, Egypt, X, 434
Gebirge, Abbas der, XXI, 1355
Gebirgsumrahmung des Nordamerikanischen Kontinents, review, XX, 829
Gebo dome, Wyoming (well 105), SBP, 194-243, 404
Gebo field, gravity of oil at, XXVIII, 796
production at, XXVIII, 796
Gedroiz, K. K., RMS, 536, 537
Gee, Edson, Survey, Texas (well 356), SBP, 292-335, 409
Gee, Haldane, RMS, 285, 417
Geer, F. E., RMS, 425

- Geer, F. E., and Bastin, E. S., XXVI, 848
- Geiger, H., XXVIII, 948
- Geiger counter, advantages of ionization chamber over, in well logging, XXV, 1780
- bell-type, XXIX, 5
- Geikie, Archibald, SD, 396
- Geinitz, XIII, 383
- Geinitz, H. B., XXIV, 299
- Geis, W. H., GAS, 301; PROB, 728
- origin of light oils in Rocky Mountain region, VII, 488
- Geitel, H., and Elster, J., XVIII, 65
- Gelatin shooting in eastern Kentucky, GAS, 946
- Gelatinization prior to glauconite formation, RMS, 506-512
- Gelatinous muds in Baltic, RMS, 305
- Gella, Norbert, XVI, 1310
- electrical investigations in the oil fields of Texas, review, XI, 1125
- geo-electric investigations of non-conductors—four new examples, XIV, 1165
- Gem Oil Company, XXV, 1898
- Gemshah oil field, Egypt, X, 436
- General discussion of water problems of Bend series, III, 151
- General geology of Mississippi, XXVIII, 29
- of Wichita Mountains XXV, 287
- General outline of geological history of South American cordillera, XXIII, 1420
- General Petroleum Company, SD, 620, 623
- General Petroleum Corporation, XXI, 977, 981, 991; XXII, 683, 709; XXIII, 908, XXIV, 1119
- Berry 1 (well 22), J.A.L.K.-113 (well 160), Kerwin 1 (well 24), Lost Hills 2 (well 21), Patten 1 (well 50), Santa Fe Community 189C, 191, 213 (wells 165, 166, 177), Wallop 1 (well 191), SBP, 87-165, 404-406 of California, XXII, 1052
- General Petroleum Corporation dome, VII, 145
- General Petroleum field, Wyoming STR II, 660
- General Petroleum sand in Wertz dome, Wyoming, STR II, 652
- General Petroleum structure, Wyoming, STR II, 660
- Generation of oil, amount of source beds needed for, SBP, 165-167
- by geologic distillation during mountain-building, XI, 1139
- in rocks by shearing pressures, XIII, 303, 329; XIV, 451
- in rocks by shearing pressures—effects of heat on oil shales, XVII, 1229
- Generation of petroleum relation of micro-organisms to, PROB, 35
- Genesee black shale, XXIII, 1181
- Upper Devonian, outcrop of, across northern New York, XXIX, 286
- Genesee County, New York, Pavilion gas field in, XXII, 83
- Genesee shale, XV, 174
- Genesee pool, Kansas, XXIII, 806
- Genesis, bacterial, of hydrocarbons from fatty acids, XV, 441
- of oil, gas, and other mineral accumulations, geochemical exploration, soil analysis, with some speculation about, XXIV, 859
- (Genesis)
- of petroleum, bearing of base exchange on, review, XIII, 862
- of petroleum, remarks on recent research work on, XIII, 1221
- of Third Bradford sand, petroleum and, XXV, 1413
- Genetic analysis of crinoidal sediment, XXVI, 1073
- of sediments, XXVI, 1703
- Genetic classification of sedimentary rock components, XXVI, 1701
- Genetic controls governing existence of sedimentary components in a deposit, XXVI, 1737
- Geneva, New York (well 410), SBP, 349-379, 410
- Geneva formation, XXVIII, 1521
- Geneva limestone, XXV, 685
- Genoa field, Texas (well 400), SBP, 335-349, 410
- Genshaw fauna, XXVII, 584
- Genshaw formation, XXVII, 576, 582, XXVIII, 183
- tossils of, XXVII, 584
- section, XXVII, 583
- Gentry, H. L., STRAT, 238
- Gentryville pool, XXV, 1122
- Geo-basins and geosynclines, initiation of, XXIII, 207
- Geochemical and fluorographic methods of locating stratigraphic accumulations, XXVI, 1205
- Geochemical agencies, PROB, 338
- Geochemical anomalies, localized near-surface, deep-seated accumulation associated with, XXIV, 1429
- Geochemical anomaly, annular, XXIV, 1427
- Geochemical exploration, bibliography on, XXIV, 880
- field data used in XXIV, 863
- method of, XXIV, 859
- (soil analysis), announcement of Round Table meeting, XXIV, 402
- (soil analysis), discussion of, XXIV, 1434
- (soil analysis) with some speculation about the genesis of oil, gas, and other mineral accumulations, XXIV, 859
- symposium on, XXIV, 1400
- Geochemical log, discovery well, East Bernard field, Wharton County, Texas, XXIV, 1418
- discovery well, Rosenberg field, Fort Bend County, Texas, XXIV, 1419
- dry hole, about 3,500 feet outside present limits of production, Lovell's Lake oil field, Jefferson County, Texas, XXIV, 1424
- dry hole, Harris County, Texas XXIV, 1425
- dry hole, Nueces County, Texas, XXIV, 1426
- edge producer, Friendswood oil field, Harris County, Texas, XXIV, 1423
- producing well, Friendswood oil field, Harris County, Texas, XXIV, 1422
- temporary producer, Fort Bend County, Texas, XXIV, 1420
- Geochemical manifestations, near-deposit, of petroleum accumulation, XXIV, 1415
- near-surface, of petroleum accumulation, XXIV, 1402
- of petroleum accumulation, XXIV, 1402
- Geochemical measurements, XXIV, 1404
- Geochemical processes, effective in development of petroleum, PROB, 179
- Geochemical prospecting by soil analysis, Prue sand production at Stroud credited to, XXIV, 1449
- critical survey of recent developments in, XXIV, 1464
- for petroleum, XXIV, 1400
- for petroleum, future importance of, XXIV, 1430
- likely to be helpful in solving problems of history of accumulation, and origin of petroleum, XXIV, 1430
- limitations of, XXIV, 1469
- megascopic, XXIV, 1401
- microscopic, XXIV, 1401
- microscopic, important contribution made by, in defining limits of already established production, XXIV, 1449
- revolutionizing tactics of exploration for petroleum, XXIV, 1432
- working hypothesis, on, XXIV, 1417
- Geochemical refraction anomalies, XXIV, 1409
- Geochemical shortening of refraction-travel times, XXIV, 1408
- Geochemical subjects, bibliography of geological papers on, XXIV, 1432
- Geochemical well logging, value of, XXIV, 1415
- Geochemistry of a petroleum deposit, XXIV, 1400
- of natural gas in Appalachian province, XXVI, 19
- possibly useful in future as oil-finder, XXVIII, 915
- Geodal middle limestone in Ninnescash shale, XXIII, 1770
- Geodesy and Geophysics, International Union of, Washington, D. C., September, 1939, XXII, 1615
- Geodetic discussion of continental-drift theory inconclusive, CD, 190
- Geodynamics, introduction to theoretical seismology, Part I, XXI, 1206
- Geoelectric anomalies, XXIV, 1412
- Geoelectric halo, Eltran anomaly at Bancroft oil field a type of, XXIV, 1458
- Geo-electric investigation of non-conductors—four new examples, XIV, 1165
- Geo-electric methods in search for oil, XVI, 1337
- Geoffroy, P., and Charrin P., *études géologiques et prospection minières par les méthodes géophysiques*, review, XVII, 444
- Geofisicos de prospeccion, los metodos*, review, XIII, 1489
- Geographic environmental factors, XXVI, 1748
- Geographic features of Malay Archipelago, XXI, 554
- Geographic map, definition, XXIX, 1250
- Geographic names, important, CAL, 307
- most used in American stratigraphy, XXIV, 356
- of Russian Sakhalin, discussion, XI, 307
- Geographic pattern, argument for continental drift based upon, CD, 195
- Geographical Institute, University of Upsala, Sweden, RMS, 5

- Geographical location, seismic velocity a function of, XXV, 1350
- Geography of Marathon region in Ordovician time, XXIX, 1337
- Geography and geology of southern Permian basin, XXI, 837
- of Western Australia, X, 1119, 1137
- Geologia do Brasil, XXIX, 289
- Geologia Zacaminel de Sare, Notum de*, review, XX, 108
- Geologic and economic notes on Venezuelan oil developments, XIII, 1187
- Geologic and technologic work of Soviet Council of petroleum industry, review, VII, 447
- Geologic activities, normal domestic, expansion of, for military application, XXVI, 1837
- Geologic activity in California, 1920 to 1939, XXIV, 1708
- Geologic advice, utilization of, XIX, 500
- Geologic age, increasing, determination of law of change in character of crude oil with, XXI, 926
- of Big Snowy group, XXVII, 1295
- of sediments, effect on seismic velocities, XXV, 1351
- Geologic aspects of heaving shale in Texas Coastal Plain, XXIII, 212, 607
- Geologic calculations, graphic methods for, XXVI, 1155
- Geologic characteristics, as indicated by facies and structure, MSC, 157
- Geologic classification, basis of, XXVI, 218
- Geologic columnar section at Esperson dome oil field, XVIII, 1636
- Geologic conditions during deposition of Shensi series, XXV, 2061
- in western Kentucky, XXV, 2047
- Geologic correlation, use of foraminifera in, VIII, 485
- Geologic correlation chart of Oligocene strata of East White Point field, XXV, 2004
- Geologic cross section from DuBois, Nebraska, to Liberty, Missouri, XXIV, 1006
- of Iowa series from Randolph County Illinois, to Sullivan County, Indiana, XXIV, 226
- through Chester series on base of Pennsylvanian system as datum, XXIV, 212
- Geologic cross sections of Natchitoches area, XXIX, 29-33
- of Ste. Genevieve strata, XXIX, 1657
- through Raccoon Bend faults, GC, 690; XVII, 1473
- Geologic cross sections and gravity anomaly curves of Coastal Plain area in Virginia, XXIX, 75-78
- Geologic data from the war effort, XXVIII, 1050
- Geologic departments in oil companies, XXIV, 1210
- Geologic development of oil-bearing regions of Texas and eastern Mexico, XXVIII, 303
- Geologic distillation, generation of oil by, during mountain building, XI, 1139
- of petroleum, is it possible? XIII, 75
- Geologic distribution of 1943 discoveries in Coastal Louisiana, XXVIII, 856
- (Geologic)
- in Gulf Coast of upper Texas, XXVIII, 855
- Geologic explorations, airplanes for, in inaccessible regions, IX, 947
- Geologic factors in unitized pressure maintenance, Jones sand reservoir, Schuler field, Arkansas, XXVIII, 217
- Geologic features in South Dakota, bearing of, upon oil possibilities, VII, 507
- revealed by new drilling in Illinois in 1941, XXVI, 1089
- Geologic field experience, planned, discussion, XXIII, 1573
- Geologic formations from which Houston district obtains its water supply, XXVII, 1100
- in Bellevue field, XXII, 1664
- in La Barge Ridge area, XXV, 1732
- in Natchitoches area and their water-bearing properties, XXIX, 37
- of part of southern California and their correlation, VII, 411
- of southeastern Utah, XI, 812
- vegetation as an indicator of, XV, 67
- Geologic formations and economic development of oil and gas fields of California, XXVII, 1393
- Geologic functions of military value, XXVI, 1836
- Geologic history at a glance, review, XVIII, 1213
- of Bahama area, RMS, 285
- of Brenham dome, GC, 786; XIX, 1336
- of crystalline rocks of Kansas, II, 98; discussion, II, 112
- Geologic history of Darrow dome, XXII, 1418
- of formations in Rio Grande region, XXI, 497
- of Great Salt Lake, XXII, 1308
- of Gulf Coastal Plain, X, 9; XXIII, 192
- of Jurassic formations of Gulf region, XXVII, 1523
- of North Sea, RMS, 329-334
- of northern Mexico and its bearing on petroleum exploration, XXVIII, 301
- of Oklahoma pools, GAS, 576
- of Panuco River Valley and its relation to origin and accumulation of oil in Mexico, X, 667
- of Payton pool, XXVI, 1639
- of Redding district, CAL, 117
- of Schuler field, XXVI, 1495
- of Sweetgrass arch, XXIX, 1286
- of Trinity group, XXIII, 637
- of Tupungato field, XXVIII, 1476
- of Wind River Mountains, XXV, 146
- trends in, during Tertiary period, MSC, 158
- Geologic interpretations from rotary well cuttings, XVI, 653
- Geologic investigations, early, of Wind River Canyon, XXIII, 1444
- Geologic map, areal, of Chester series below Pennsylvanian system, XXIV, 210
- generalized, of Santa Maria district California, XXVII, 1336
- of Arkansas, review, XIII, 1572
- of Como Bluff anticline, Wyoming, XXVIII, 1206
- of Crocker Flat landslide area, XXVI, 1626
- of Dead Sea area, XX, 882
- (Geologic)
- of Eastern Interior basin, XXIV, 774, 776, 777, 780-783, 786, 787, 790, 791
- of eastern part of Ontario, FOP, 110; XXV, 1542
- of Gore area, XXVI, 1376
- of hypothetical area of folded and faulted sediments, XXIX, 440
- of Kentucky, review, XIV, 247
- of Mexico, XX, 504
- of North Dakota, XXVI, 340
- of northeastern Texas and southeastern Arkansas, IX, opp 1158
- of Ouachita Mountains of Oklahoma and Arkansas, XX, 480
- of part of Puente Hills, XXIV, 652
- of part of Transylvanian basin, IX, 1176
- of southern Brazil, XIX, 1775
- of Tejon Quadrangle, California, XXI, 216
- of Texas and Louisiana, showing location of salt domes, IX, opp 1231
- of the Republic of Austria and neighboring territory, review, XVIII, 1375
- of Trinidad, IX, opp 1000
- of Washington County and parts of Nowata and Osage counties, Oklahoma, XXIV, 717
- of Wilson Creek dome, Rio Blanco and Moffat counties, Colorado, XXVII, 454
- of Wind River Canyon area, XXIII, 1458-1459
- of world, review, XIV, 331
- outline of, with lines of equal displacement, XXIX, 443
- tectonic, of southern California, SC, in pocket
- Geologic map and structure section of southern part of La Barge Ridge, Lincoln County, Wyoming, XXV, 1738
- Geologic map and structure sections of Freezeout Mountain-Bald Mountain area, Carbon County, Wyoming, XXV, 892
- Geologic mapping, detailed, XXIV, 1391
- in Santa Lucia Range, progress of, XXVIII, 455
- latitude and longitude observations for, XVI, 97
- use of airplane photographs in, XIV, 1049
- Geologic maps, cross sections, and electric logs, preparation for lantern-slide reproduction, XXVI, 1662
- small scale, catalog of, review, XVIII, 1208
- subsurface, of Texas Panhandle, XXIII, 988
- Geologic method of discovery in developments in California during 1937, XXII, 702, 704-706, 708, 711
- Geologic methods, advancement in, VII, 610
- dominant, employed in petroleum exploration, chart showing changes in, XXIV, 1357
- most useful in Arkansas and Louisiana, XXII, 727
- of exploration, XXVI, 1219
- Geologic movements, effect on contained fluids and gases, XXIX, 1194
- Geologic names and correlations, XX, 115

(Geologic)
 committee on, XXIV, 338
 Permian sub-committee of the committee on, XXIII, 1430
 Geologic occurrence of oil and gas in Michigan, XXII, 393
 Geologic provinces, CAL, 1
 China, X, 1076
 of Tertiary, SC, 14, XX, 1560
 Geologic reconnaissance of Uinta Mountains, northern Utah, with special reference to phosphate, XXIII, 82
 Geologic relationship of borings at Greenville, Mississippi, XXIII, 1394
 Geologic road log in Tamaulipas and Nuevo Leon, Mexico, XX, 467
 of Pan-American Highway, Laredo to Mexico City, XX, 457
 Geologic rôle and ecology of mangroves in Florida, XXVI, 1427
 Geologic section, Buckeye area, GC, 740; XIX, 384
 Conroe field, GC, 802, 804, XX, 748, 750
 Copley pool, West Virginia, XI, 585
 east-west, from northern Sharkey County to northwest Madison County, Mississippi, XXVIII, 50
 east-west, through central Sharkey County, Mississippi, to Tinsley field, XXVIII, 52
 Esperson dome, GC, 62, 864; XXVIII, 1639
 Fresno County, California, XXIV, 1724-1727
 from Fisher County through Andrews County, Texas, to Eddy County, New Mexico, XXIV, 37
 Greta field, GC, 653; XIX, 549
 Hoffman field, XXIV, 2129
 northwest-southeast, through Holmes County, Mississippi, XXVIII, 46
 of Rio Grande embayment, Texas, and implied history, XIV, 1425
 Paraná basin, XXIX, 555
 Raccoon Bend field, GC, 681, 689; XVII, 1464, 1471
 Rio Atrato Valley, XXIX, 1133
 Sugarland field, GC, 712; XVII, 1365
 Texas-Louisiana Gulf Coast, GC, 2, 889, XVIII, 501; XX, 540
 through Amelia field, XXIII, 1647, 1648
 through Ishumbaevu oil field, Bashkirje Province, U.S.S.R., XXIII, 498
 Geologic sections, constructing, with unequal scales, XI, 755
 in Texas and adjoining states, XXI, 1083
 in Urals, XXI, 1442, 1445-1447, 1454
 structural history of parts of southeastern Utah from interpretation of, XI, 809
 Geologic significance of a geothermal gradient curve, XXI, 1193
 discussion, XXI, 1494
 Geologic significance of economic minerals in Cretaceous of California, XXVII, 257
 Geologic sketch map of area northwest of Van Horn, Texas, showing distribution of older rocks, XXIV, 144
 of Hunter River district, New South Wales, XXIV, 637
 Geologic structure, effects on water table, XVI, 350
 in Mid-Continent region, relation of

(Geologic)
 oil and gas accumulation to, PROB, 571
 in principal oil states, magnetic vector study of regional and local, XVI, 1177
 limitations of ground water as aid in determination of, XVI, 335
 of St. George district, Washington County, Utah, XXIII, 121
 of Salem field, XXIII, 1361
 of southeastern Utah, XIX, 1472
 relation to well spacing, XXVI, 100
 rôle of, in the accumulation of petroleum, STR II, 667
 Geologic structure and geothermal gradient, relations between, XXI, 789
 Geologic structure and ground water of Natchitoches area, Louisiana, XXIX, 23
 Geologic structure map contoured on Conroe sand, Conroe field, GC, 800, XX, 746
 contoured on Gutoskey (basal Whittsett) sand, Raccoon Bend field, GC, 686; XVII, 1469
 contoured on Oakville gas sand, Raccoon Bend field, GC, 685, XVII, 1468
 of Lance Creek oil field, Niobrara County, Wyoming, XXV, 1156
 Geologic structures, model experiments upon, XXIX, 1652
 Geologic structures and producing areas in north Texas petroleum fields, III, 44
 Geologic structures, review, XIII, 1573, XVIII, 1549
 simple, review, XIV, 1479
 Geologic subsurface studies, value for detection of salt overhangs, GC, 148; XVII, 1498
 Geologic system, definition, XXIV, 343
 limits defined by priority or by usage, XXIV, 345
 Geologic systems, criteria for definition of, and for establishment of dividing lines between them, XXIV, 283
 Geologic time, PROB, 314
 divisions of, XXIII, 1087
 measurement of, XXIII, 351
 Geologic tools, XXIX, 860
 Geologic training, better, most essential for future of petroleum geology, XXIV, 1398
 Geologic work, first, fostered by United States government, XXII, 1250
 Geological, paleontological and paleoclimatic arguments for continental drift, circumstantial, CD, 191
 Geological and geophysical data, Minden dome, Webster Parish, Louisiana, XXVII, 60
 Geological and geophysical evidence, combined, wildcats drilled in 1937 on basis of, XXII, 1235
 Geological and geophysical exploration in San Joaquin and Sacramento valleys in 1942, XXVII, 865
 Geological and geophysical partnership, value of, illustrated in discovery of Louisiana salt dome, XXIV, 1208
 Geological and geophysical structure of southeast flank of Jennings dome, GC, 967; XIX, 1314
 Geological and paleontological arguments against continental drift, authors cited, CD, 198
 Geological and wildcat drilling activity

(Geological)
 in California in 1938 compared with discoveries of oil, XXIII, 946
 Geological annual review, XXIII, 345
 Geological calendar, XXIX, 1035
 references on, XXIX, 1042
 Geological climate in the United States, CD, 98
 Geological conditions in central Kansas, II, 70
 discussion, II, 96
 Geological Conference, Trinidad, April, 1939—abstracts, XXIII, 1238
 Geological Congress, announcements of Fourteenth International, X, 201
 Fourteenth International, IX, 707
 International, XIX, 1831
 Sixteenth International, XVII, 1139
 Seventeenth International, Moscow, July-August, 1937, XXII, 119, 362
 Geological continuity on both sides of Atlantic, CD, 54
 Geological correlations in East White Point field, XXV, 2002
 Geological curricula in universities and colleges in United States, survey of, XXIV, 602
 Geological data in acidizing of wells, importance of, XXI, 616
 new, found in western counties of Texas, XXV, 1077
 Geological discoveries in California in 1938, XXIII, 945
 new, in California, in 1937, XXII, 716
 Geological distribution of discoveries in Illinois in 1941, XXVI, 1089
 Geological disunity through multiplication of subfields, XXVI, 1229
 Geological engineering, VI, 377
 Geological events, chart showing restricted sequence of, XXII, 836
 method of study of restricted sequence of, XXII, 835
 Geological exploration between upper Jurua River, Brazil, and middle Ucayali River, Peru, XXI, 97, discussion, XXI, 1347
 Geological exploration east of Andes in Ecuador, XI, 1253
 in Kansas, methods of, XXIII, 798
 in Oklahoma during 1936, XXI, 1014
 of Permian basin, XXI, 836
 Geological extrapolation and pseudabyssal sediments, XXVI, 765
 bibliography on, XXVI, 792
 Geological factors, influence of, on longitudinal seismic velocities, XIX, 1
 limiting knowledge of subsurface reservoir conditions, XXII, 571
 Geological facts favoring continental drift, CD, 54
 Geological features illustrated by models, VIII, 89
 of Malay Archipelago, XXI, 555
 Geological field discovery cost, XXIV, 1716
 Geological formations in Santa Maria Valley, XXIII, 52
 oil-field waters of Wyoming and their relation to, XXIV, 1214
 Geological history of East Indies, XXII, 1
 of South American cordillera, general outline of, XXIII, 1420
 Geological information, public appetite for, XXVI, 1224
 Geological Institute of America, proposed, XXIX, 240

- Geological interpretation of morphology in East Indies, RMS, 349
- Geological items, lack of, in the public print and on the air, XXVI, 1224
- Geological knowledge, developments in Louisiana Gulf Coast contributions to, XXIX, 799
- Geological limitations to oil law, XXII, 565
- Geological notes on Belgian Congo, V, 661
- Geological notes, value of, XI, 1008; XIII, 849
- Geological organization of an oil company, VIII, 651
- Geological periods, estimates of relative and absolute durations of, XXIX, 1038
- successive, maps showing outcrops of, in Rocky Mountain region, XXIII, 1132, 1133, 1135-1137, 1139, 1140, 1142, 1143, 1145, 1147, 1148, 1151
- Geological personnel, organization of committee on, XXVII, 1551
- Geological perspective and artificial horizon, XXVI, 1185
- Geological principles, need for, in search for new reserves, XXVII, 893
- Geological problems, application of seismography to, XV, 1311
- intricate, in Crocker Flat-Recruit Pass area, XXVI, 1610
- some, in recovery of oil and gas in Kentucky, IV, 303
- Geological processes, associated, maps of, XXIX, 1256
- Geological prospecting, early XXI, 709
- Geological record, rhythmic character not in harmony with single event of continental drift postulated by Wegener, CD, 84
- Geological relations between African Cape Mountains and Argentinian Sierras, CD, 122
- between Newfoundland and Ireland, CD, 131
- Geological relationships of stratigraphic units in Honda district, block diagram showing geomorphological sub-provinces of Magdalena Valley and, XXVI, 797
- Geological research on occurrence of petroleum, XXVII, 923
- Geological results of search for oilfields in Great Britain, XXIX, 1353
- Geological sciences, birth and development of, XXIII, 1099
- Geological self-assertion, need for, XXVI, 1226
- Geological Society of America, MSC, 6; RMS, 280
- annual meetings, IX, 183; X, 100, 449, 534; XVI, 223; XXIV, 1703
- Cordilleran Section of, MSC, 1; X, 449
- fiftieth anniversary volume of, geology, 1888-1938, XXV, 2075
- publications of, XXVIII, 880
- Geological Society of America and publicity, XXVI, 1228
- Geological structure of Eastland and Stephens counties, Texas, IV, 159
- Geological structural maps, XXV, 2163
- Geological studies, official, in Colombia, 1917-1933, compilation of, review, XIX, 1560
- responsible for discovery of 50 per cent of major oil fields in United States, XXI, 701
- Geological succession of central Venezuela, XXII, 1224, 1605
- Geological surmise followed by geophysical work, useful method of locating stratigraphic traps, XXV, 1259
- Geological survey, development of, by California State Division of Mines, XIV, 1352
- Geological Survey of Canada, RMS, 645
- Quebec Bureau of Mines, and Newfoundland Geological Survey, possible future oil provinces of eastern Canada, FOP, 107, XXV, 1539, 2194
- Geological Survey of Great Britain, XXIV, 285
- Geological Survey of Newfoundland, Geological Survey of Canada, and Quebec Bureau of Mines, possible future oil provinces of eastern Canada, XXV, 2194
- Geological Survey of United States, Department of the Interior, SBP, 4, 6, 8, 82; XXIX, 414
- Geological surveying, methods in, review, XV, 91
- Geological terminology in classification of oil and gas accumulations, XXIX, 1738
- Geological terms, dictionary of, XXIV, 1499
- Geological time scale, Indiana, IX, 321
- Geological undulation phenomena in general, on the mechanism of, and of folding in particular, and their application to the problem of the roots of mountains theory, XXI, 813
- Geological "Union Now," discussion, XXVII, 1001
- Geological use of aerial photographs, preliminary observations on, XXIX, 1756
- Geological versus mechanical variations in drilling, XXIII, 1821
- Geological work, acts of Congress appropriating funds for, XXII, 1250
- in Carpathians, VI, 523
- in the southwest, I, 20
- Geologie der polnischen Olfelder*, review, XV, 557
- Geologie des Alpes méridionales d'après les levés récents*, XXIII, 1721
- Geologie en Geohydrologie van het Eiland Curaçao*, review, XVI, 106
- Geologie et les mines de la France d'outre-Mer*, review, XVII, 196
- Geologie profonde de la France d'après le nouveau réseau magnétique et les mesures de la penseur*, review, XVII, 1395
- Geologie Sudamerikas*, review, XVII, 1283
- Geologie und Mineralogie von Kolumbien (Süd-America)*, review, XIII, 865
- Geologie von Asien*, XXI, 1214
- Geologische Landesanstalt*, RMS, 396, 408
- Geologische Studien im Westlichen Serbien*, review, XIII, 183
- Geologische Studienreise in Nord-amerikanischen Erdölfeldern*, review, XIX, 125
- Geologische Weltbild-Malleo et Monte, um das*, review, XIX, 1074
- Geologisches Praktikum*, review, XI, 1237
- Geologisches Wörterbuch*, XXI, 1498
- Geologist, field, California fossils for, XXIV, 2186
- first, of the United States government, George William Featherstonhaugh, XXII, 1254
- function of, in geophysical prospecting, XXI, 209
- future of, in petroleum industry, XXII, 517
- instruments for, VI, 50
- opportunities of, IV, 5
- paper on professional ethics, VI, 392
- responsibility of, in sale of oil and gas securities under new Securities Act, XIX, 1038
- review of new handbook for, VI, 260
- role of, in development of California oil fields, VIII, 73
- testimony of, essential in determining value of producing areas, XXII, 1087
- undergraduate preparation for the, XIII, 1317
- what the oil company expects of the, VI, 516
- Geologist and State Defense Guards, XXVI, 282, 1279
- Geologist and well-spacing problem, XXII, 1440
- discussion, XXIII, 1855
- reply to William W. Porter II's discussion of, XXIII, 1858
- Geologists, alibi for, IX, 1295
- American training of, in Latin American republics, XXVI, 1210
- consulted on Permian problems, XXIV, 338
- consulting, XXIV, 1210
- equivocal position of, in war effort, XXVI, 1230
- field photography for, XX, 186
- geographic distribution in United States, XI, 305
- good, make good neighbors, XXVI, 1207
- in relation to military service, XXVI, 1186
- in the Navy, possibilities for, XXVI, 1299
- need for, in locating strategic minerals, XXVI, 1302
- needed in Federal service, XXIX, 239
- photography for, discussion, XX, 827
- professional standards of, XXV, 1299
- prospective, hints to, I, 127
- ratios of, to seismographs in exploration departments, XXVII, 915
- results of graduate record examination significant to, XXVI, 1235, 1238
- scientific and business, V, 332
- significance of resourcefulness of, XXIX, 859
- story of great, XXIX, 1520
- will be deferred from military service, XXVII, 1278
- Geologists and geophysicists, value of cooperation of, XXIV, 1380
- Geologists and landowners, XIII, 246
- Geologists—international petroleum show, VIII, 685
- Geograph, XXIII, 1821
- description of, XXIII, 1831
- first used in Oklahoma City field in December, 1937, XXIII, 1833
- invented by P. B. Nichols, XXIII, 1829
- value of, XXIII, 1833
- working diagram of, XXIII, 1832

Geology, XXI, 503
 a challenge to, XXVIII, 897
 affecting Boulder Dam project, XXVI, 1803
 application of, to principles of war, XXVII, 1035
 applications of geothermics to, XVIII, 13
 applied, controlled imagination in, XXIX, 862
 areal, between Laredo and Rio Grande City, XXVI, 258
 areal, of Cimarron County, Oklahoma, XI, 753
 areal, of Eocene in northeastern Mexico, GC, 588, XIX, 1357
 areal, of Illinois, XXI, 774
 areal, of Midway and Wilcox sediments of Sabine uplift, Louisiana and Texas, XXIX, 48
 areal, of Mount Sylvan dome, GC, 1044; XII, 1362
 areal, of Wind River Mountains, map showing, XXV, 121
 areal, south Sulphur area, Murray County, Oklahoma, XXIX, 189
 at site of Friant Dam, XXVI, 1823
 at site of Grand Coulee Dam, XXVI, 1809
 at site of Marshall Ford Dam, Texas, XXVI, 1812
 at site of Shasta Dam, XXVI, 1816
 Bend arch region of north-central Texas, three layers of, XXVII, 910
 Chinese, references on, XXVIII, 1429
 debt of, to petroleum industry, V, 394
 definitions, XXVIII, 897; XXIX, 470
 description of profession of, XXVIII, 292
 economic aspects of, review, VI, 157
 1888-1938. Fiftieth anniversary volume of the Geological Society of America, XXV, 2075
 elements of, XXIII, 1251
 exploration, petroleum engineering as an aid in, XXIV, 1370
 general, of Michigan basin, PROB, 533
 general, of Mississippi, XXVIII, 29
 general, of Natchitoches area, XXIX, 25
 historical, XXVIII, 1657
 in Ellis County, Kansas, example of directional drilling as applied to, XXVII, 87
 in petroleum industry, XXIV, 1209; XXVIII, 899
 in the earth, layers of, separated by unconformities, XXVII, 907
 in the service of man, XXIX, 230
 in war and peace, XXVI, 1221; discussion, XXVI, 1844
 Geology, introduction to, XXII, 1288
 introduction to, review, XIX, 1240; XX, 1131
 is a way of life, XXIX, 491
 layers of, in northern Louisiana and southern Arkansas, XXVII, 911
 of Africa, CD, 127
 of Alagbas, Brazil, XXI, 301
 of Alaska Highway, progress reports on, XXVIII, 1655
 of Antarctic Continent, XXVIII, 1756
 of Appalachian gas and oil province, XXII, 1154
 of Arkansas Paleozoic area with especial reference to oil and gas possibilities, review, XIV, 1575

(Geology)
 of Atlantic Coastal Plain from New Jersey to Florida, map, XXII, 800,
 of Atlantic Coastal Plain, map, XXIX, 887
 of Barco concession, Colombia—reprints, XXVIII, 1665
 of Basin fields in southeastern Illinois, XXIII, 1493
 of Baxter Basin gas fields, Sweetwater County, Wyoming, GAS, 323
 of Belle Isle dome, GC, 1037; XIX, 648
 of Bellevue oil field, Bossier Parish, Louisiana, XXII, 1658
 of Black Knob Ridge, Oklahoma, XXI, 1
 of Blue Springs gas field, Jackson County, Missouri, review, XVII, 1148
 of British Honduras, review, XII, 956
 of British Somaliland, review, XVIII, 1212
 of Buckeye area, XXIV, 1959
 of California, CAL, iii
 of California: some corrections, XIX, 1819
 of Cameron and Vermilion parishes, reports on, review, XX, 838
 of Canada, PROB, 310
 of Cat Creek oil field, Fergus and Garfield counties, Montana, V, 252
 of Cataboula Parish, Louisiana, XIV, 433
 of Central Kansas uplift, XIX, 1405
 of central Venezuela, discussion, XXIII, 699
 of coast of state of Alagbas, Brazil, XXI, 299
 of coral reefs, review, XIX, 300
 of Cuba, XVI, 533
 of Cuban petroleum deposits, II, 133
 of dam sites, mapping of, XXVI, 1795
 of Del Valle oil field, Los Angeles County, California, XXVI, 188; opp. 190
 of eastern and central Venezuela, XXI, 239
 of eastern Hidalgo and adjacent parts of Vera Cruz, Mexico, XI, 1173
 of Eastern Interior Basin, publications on, in 1943, XXVIII, 759
 of eastern Osage County, contribution to, II, 118
 of Eola oil field, Avoyelles Parish, Louisiana, XXV, 1363, 1597
 of Freezeout Mountain-Bald Mountain area, Carbon County, Wyoming, XXV, 883
 of Gaza-Beersheba district, XXI, 531
 of glauconite, XIX, 1569
 of Glenn pool of Oklahoma, XI, 1055; discussion, XII, 213
 of Government Wells field, GC, 635
 of Gulf Coastal Plain, résumé of, VIII, 21
 of Hiawatha gas fields, southwest Wyoming and northwest Colorado, GAS, 341
 of Holmes and Washington counties, Florida, XXVI, 1424
 of Honda district, Colombia, XXVI, 793; references on, XXVI, 836
 Geology of Hugoton gas field of southwestern Kansas, XXIII, 1054
 of Huntington Beach oil field, California, XVIII, 327

(Geology)
 of Iberia Parish, Louisiana, review, XVI, 425
 of Kentucky, XXVII, 1021
 of Kettleman Hills field, California, XXII, 1161
 of Larremore area, Caldwell County, Texas, XIV, 917
 of Louisiana and Mississippi, STRAT, 605
 of McKittrick oil field and vicinity, Kern County, California, XVII, 1
 of Malaya, review, XV, 976
 of Mexico, synopsis of, XX, 394
 of Moncton map area, review, VII, 302
 of Muskogee-Forum district, Muskogee and McIntosh counties, Oklahoma, XXII, 224
 of Napanima region of Trinidad (British West Indies), review, XII, 1118
 of natural gas in Roumania, XVIII, 871
 of natural gas fields of New York and Pennsylvania, summary of, GAS, 949
 of natural gases rich in helium, nitrogen, carbon dioxide, and hydrogen sulphide, GAS, 1053
 of New Guinea, references on, XXVII, 1267
 of New Mexico an index to probable oil resources, IV, 95
 of North America, XXIV, 1134
 of north-central Texas, XXIV, 65
 of north-central Texas and Panhandle regions, XXI, 1017
 of northeast Mexico, XV, 867, 1104
 of Northwest Basin, Western Australia, XX, 1028
 of northwest Peru, XII, 1
 of oil, oil-shale, and coal, review, XI, 429
 of oil and gas fields of western Kentucky, XVI, 231
 of oil fields in north (Russian) Sakhalin, X, 1150
 of oil fields of Burma, XI, 557
 of oil fields of Polish Carpathian Mountains, XV, 1
 of Okmulgee district, notes on, V, 282
 of Oregon and Washington and its relation to occurrence of oil and gas, XXIX, 1377
 of part of Finger Lakes region, New York, XVI, 675
 of parts of Northern Geosynclinal Basin, SC, 70; XX, 1616
 of petroleum, review, XV, 850
 of petroleum and Gondwana rocks of Southern Brazil, discussion, XX, 819
 of petroleum and natural gas, review, XII, 1173
 of Porter field, XXVIII, 178
 of prospective oil territory in Republic of Turkey, XIV, 687
 of Rhenish-Westfalian coal district, XXIII, 611
 of Saginaw oil field, Michigan, and discussion of Michigan's oil prospects, XI, 959
 of salt domes in Carpathian region of Roumania, SD, 87; IX, 1165
 of San Marcos quadrangle, Texas, XI, 825
 of Siam with reference to petroleum, XI, 407

(Geology)

- of Silurian rocks of northern Indiana, review, XIII, 181
- of south San Joaquin Valley, California, XI, 611
- of South Texas, GC, 551, XVII, 489
- of southern part of La Barge region, Lincoln County, Wyoming, XXV, 1729
- of Southern Peninsula of Michigan, XXI, 1599
- of southern Roumanian oil district, notes on, XXIX, 1355
- of southwest Ecuador, XIV, 263; XXI, 959
- of southwestern Mendoza province, Argentina, XII, 693
- of Spindletop dome, XXI, 478
- of Stonewall County, Texas, XXI, 466
- of sub-Andean belt of Bolivia, XXIV, 1686
- of Tampico region, Mexico, MEX, III; XX, 1495, discussion, XX, 1494
- Geology of Tepehate oil field, Acadia Parish, Louisiana, XXII, 285
- of Tertiary and Quaternary period in northwest part of Peru, review, VII, 443
- of Texas, Panhandle oil and gas field, XIX, 1089
- of Texas, Volume I, stratigraphy, review, XVIII, 554
- of Texas, Volume III, XXI, 1359
- of Texas Panhandle oil and gas field, XXIII, 983
- of Trinidad, XX, 1439; XXI, 630
- of Trinidad, review, XI, 201
- of Trinidad, summary digest of, XX, 1439
- of Two Buttes dome in southeastern Colorado, XVIII, 860; discussion, XVIII, 1544
- of Venezuela and Trinidad, review, XII, 445
- of Venezuelan Andes, XIX, 769
- of Vermilion Creek gas area in southwest Wyoming and northwest Colorado, XIV, 1013
- of Wesson field, Yoakum and Gaines counties, Texas, XXVII, 479
- of West Texas and southeastern New Mexico, references on, XXVII, 751
- of Wind River Canyon, Wyoming, XXIII, 476
- of Wind River Mountains, Wyoming, XXV, 120
- on the air, XXVI, 1227
- or geophysics, greater percentage of producers from holes located on, XXII, 648
- pessimism in, V, 412
- petroleum, XVII, 548
- petroleum, age of, XIV, 607
- petroleum, as applied to oil-field discovery, current and future trends, in, XXIV, 1358
- petroleum, presidential address, 1933, XVII, 548
- possible deferment of students of, XXVIII, 290
- present national standing of, XXVI, 1222
- problems of, use of other sciences for collateral aid, XXVIII, 898
- recommendations for raising position of, in national esteem, XXVI, 1244
- reconnaissance, in state of Anzoategui, Venezuela, South America, XXI, 233

(Geology)

- regional, of Dakota basin, XXVI, 1557
- regional, of Michigan basin, XXIV, 1952
- regional surface, Duval County, Texas, map, GC, 621; XVII, 817
- relation of, to occurrence of ground water in Houston district, Texas, XXVII, 1081
- relations of geophysics to, XVIII, 3
- relationship of, to unit operation of oil and gas fields, involving government lands, XVIII, 1454
- source book in, XXIII, 1579
- story of, review, XII, 955
- structural, in Porter field, XXVIII, 191
- structural, of border province of northeastern Mexico adjacent to Zapata and Starr counties, Texas, XX, 403
- structural, of Natchitoches area on a regional monoclinical flexure, XXIX, 26
- structural, of Raccoon Bend field, GC, 684; XVII, 1467
- Geology, subsurface, majority of 1939 wildcat discoveries located primarily on, XXIV, 1042
- of Clay Creek dome, GC, 765; XX, 76
- of Driscoll pool, GC, 623, 628; XVII, 819, 824
- of Government Wells field, GC, 636; XIX, 1136
- of High Island dome, GC, 927; XX, 577
- of Hoskins Mound dome, GC, 837; XX, 159
- of Mount Sylvan dome, GC, 1045; XIII, 1364
- of Sewall-Eddleman area, Young County, Texas, XXVI, 204
- of southeastern Virginia, outline of, XXIX, 73
- of Spindletop, XXI, 482
- Geology, surface, of area of Clay Creek dome, GC, 764; XX, 75
- of coastal southeast Texas, XIV, 1301
- of Government Wells field, GC, 634, 635; XIX, 1134, 1135
- of part of Gulf Coastal Plain, XXV, 2011
- of Tampico Embayment, MEX, Fig. 12 (in pocket)
- Geology, survey of college students majoring in, XXVIII, 629; XXIX, 571
- Tertiary, of Australia, XXV, 1813
- textbook of, Part I, physical geology, review, XVI, 1160
- textbook of, Part II, historical geology, review, XVII, 1148
- two layers of, southeastern Kansas and northeastern Oklahoma, XXVII, 909
- use in development of gas fields, GAS, 1077
- varied, of Valley of Oaxaca, XX, 1306
- West Texas and southeastern New Mexico underlain by layers of, XXVII, 911
- wildcats drilled in 1937 on basis of, XXII, 1235
- Geology and air photography, XXVIII, 1652
- Geology and biology of San Carlos Mountains, Tamaulipas, Mexico, XXII, 318

- Geology and bitumens of the Dead Sea area, Palestine and Transjordan, XX, 881
- Geology and development of Keokuk pool, Seminole and Pottawatomie counties, Oklahoma, XXIII, 220
- of Oklahoma City field, Oklahoma County, Oklahoma, XVI, 957
- of petroleum fields of Peru, South America, outline of, V, 585
- Geology and economic deposits of Moose River basin, review, XIV, 246
- Geology and Geography, Division of, National Research Council, XXVII, 1554
- of southern Permian basin, XXI, 837
- Geology and geophysics, interrelationship of, XXI, 197, 210
- of southeast flank of Jennings dome, Acadia Parish, Louisiana, with special reference to overhang, GC, 961; XIX, 1308
- partnership between, in prospecting for oil, XXIV, 1204
- showing cap rock and salt overhang of High Island dome, Galveston County, Texas, GC, 909; XX, 560, 818
- Geology and ground water resources of Cimarron County, Oklahoma, XXVIII, 877
- Geology and magnetism of Yoast field, Bastrop County, Texas, XIV, 1191
- Geology and mineral resources of Washington County, Oklahoma, XXIV, 2185
- Geology and mineralogy, establishment of professorship in, in the Military Academy, at West Point, XXII, 1252
- Geology and mining of petroleum in Poland, XVI, 1061
- Geology and natural resources of Colorado, review, XII, 455
- Geology and occurrence of natural gas in Amarillo district, Texas, GAS, 385; XVII, 877
- Geology and oil fields of Archer County, Texas, X, 457
- Geology and oil resources of Bradford field, Pennsylvania and New York, XXI, 1354
- of California, references on, SBP, 92
- of Los Angeles and Ventura counties, MSC, 101
- of Trinidad, British West Indies, IX, 1000
- Geology and petroleum and natural gas possibilities of Palestine and Sinaitic Peninsula, XI, 135
- Geology and petroleum possibilities of Olympic Peninsula, Washington, XI, 1321
- Geology and radio transmission, XX, 1123
- Geology and status of development of Seal Beach and Alamitos areas, California, XI, 870
- Geology and structure of Amarillo region, preliminary notes on, IV, 269
- of portions of Grand and San Juan counties, Utah, VII, 384
- of Saxet field, XXIV, 1817
- Geology and war, XXVI, 1832
- Geology students, XXIV, 1355
- survey of, XXIII, 1280; XXV, 910; XXVI, 968; XXVII, 651
- Geomechanics, XXIII, 349

- Geometric measures, in statistical analyses, RMS, 564-566, 580, 581
- Geomorphological sub-provinces of Magdalena Valley and geological relationships of stratigraphic units in Honda district, block diagram, XXVI, 797
- Geomorphology, XXVII, 225, 1019
an introduction to study of landforms XXVII, 551
- Journal, of, XXII, 502
- of Gulf Coast salt structures and its economic application, XX, 1413
- of Honda district, XXVI, 795
- textbook of, XXIII, 1577
- Geophone tests, XXVII, 1588
- Geophysical, core-drill, and soil-analysis exploration in Mississippi in 1944, XXIX, 833
- Geophysical and experimental evidence, recent, of mechanics of salt-dome formation, XXVII, 51
- Geophysical and geological partnership, value of, illustrated in discovery of Louisiana salt dome, XXIV, 1208
- Geophysical activities in north Louisiana and south Arkansas in 1943, graph, XXIX, 812
- in north Louisiana and south Arkansas in 1944, graph, XXIX, 813
- in southeastern United States in 1941 XXVI, 997
- in southeastern United States, trend of, XXVI, 996
- Geophysical activity in California, XXIV, 1710
- in Gulf Coast exploration, XXIII, 872
- in Indiana during 1940, XXV, 1123
- in Mississippi in 1940, XXV, 1018
- in Oklahoma in 1944, XXIX, 717
- in West Texas and southeastern New Mexico in 1944, XXIX, 755
- Geophysical arguments against continental drift, authors cited, CD, 198
- Geophysical art, state of, as to magnetic, gravitational, electrical, and seismic methods, XXVIII, 915
- Geophysical contour maps, XVIII, 10
- Geophysical cost of seismograph discoveries, XXIV, 1716
- Geophysical costs, XXVI, 1154
- Geophysical crews in Mississippi in 1940, XXV, 1018
- Geophysical data, drilling for, in Yellowstone National Park, XV, 469
- Geophysical discontinuities of Gulf Coast area possibly due to presence of moist strata, XIX, 18
- Geophysical effectiveness dependent on human factor, XXVII, 917
- Geophysical exploration, XXIV, 2186
- along Eocene belt and in Oligocene trend in Texas Gulf Coast, XXVII, 732
- at Conroe oil field, Texas, GC, 792; XX, 739
- effect on discovery rates, XXI, 704
- for deep salt domes, GC, 710; XXVII, 1363
- Gulf Coastal productive areas discovered during 1937, the result of, XXII, 737
- in Gulf Coast, XXIV, 1082, 1084-1089
- in Michigan, XXVI, 1106
- in New Guinea, XXIII, 960
- in northeastern Texas, XIII, 615
- in Pennsylvania in 1941, XXVI, 1123
- in Texas and Louisiana during 1940, (Geophysical)
- XXV, 1015
- in upper Gulf Coast of Texas, XXIX, 790
- in West Texas area, XXV, 1055
- maintaining an adequate level of, XXVII, 948
- of South Cotton Lake field, XXV, 1898
- problem of obtaining supplies for, XXVII, 952
- problem of personnel for, XXVII, 952
- Geophysical exploration methods used in Illinois, XXIII, 1352
- Geophysical explorations in southeastern United States, XXVII, 990
- polices of, XXVII, 949
- Geophysical history of South Houston salt dome and oil field, Harris County, Texas, XXIX, 210
- Geophysical history and discovery of Tepetate oil field, XXII, 287
- Geophysical indication of deeply buried salt mass at Raccoon Bend field, GC, 680, XVII, 1463
- Geophysical instruments, importance in exploration of Amelia field, XXIII, 1638
- use of, XIX, 501
- Geophysical interpretation, XXIV, 372
- Geophysical investigation, influence of stratigraphic change on interpretation of, XXI, 204
- of Orange dome, GC, 888; XX, 539
- Geophysical investigations at Caribou, Colorado, review, XIV, 110
- in Anzoategui geosyncline, XXI, 243
- in Tri-State zinc and lead mining district, XXVII, 86
- of submerged and emerged Atlantic Coastal Plain, XXIX, 950
- Geophysical mapping in Georgia, XXII, 797
- Geophysical measurements, XXIV, 1406
- Geophysical methods, Gulf coast area, proving ground for, XXI, 198
- in gas and oil-field exploration, GAS, 587, 664, 665
- in Gulf Coastal Plain, IX, 669
- in search for oil, XXI, 200
- introduction of use of, in Gulf Coast exploration, GC, x
- new, evaluation of, XXIX, 865
- of exploration in west-central Texas, XXIII, 858
- of prospecting in Union of Soviet Republics, XIV, 93, 325
- of prospecting, principles and recent successes, review, XIII, 1402
- oil fields discovered by, XIV, 1109
- oil finding by, review, X, 200
- or principles, new, not to be expected as result of war, XXVIII, 911
- studies of, 1928 and 1929, review, XVI, 219
- use of, for advance detection of salt overhangs, GC, 147; XVII, 1498
- use of, in locating salt domes, STR II, 683
- used in Fort Worth syncline in Clay, Montague, eastern Archer, and southeastern Wichita counties, XXIV, 1048
- used to locate Coalinga Nose field and East Coalinga field, typical stratigraphic traps, XXV, 1258
- value in relation to structural geology, XXIV, 1395
- (Geophysical)
- value of, in other than salt-dome areas, XIV, 1112
- Geophysical notes, European, XII, 1181
- Geophysical operations, XXVIII, 827
- in New Mexico in 1943, XXVIII, 830
- in Oklahoma during 1939, XXIV, 1013
- in Oklahoma during 1940, XXV, 1092
- in West Texas in 1943, XXVIII, 830
- Geophysical processes affecting evolution of petroleum, PROB, 179, 181, 614
- Geophysical prospecting, RMS, 229
- factors affecting, XXIV, 1206
- for oil, XIV, 201, review, XXIV, 2186, review, XXV, 328
- for petroleum, 1929, XIV, 1105
- function of geologist in, XXI, 209
- in Michigan, XXIV, 988
- in Rocky Mountain region in 1943, XXVIII, 799
- in Rocky Mountain states, XXIX, 1604
- in Ten Section field, XXI, 983
- instrumentation and techniques of existing methods of, XXV, 1261
- methods of, XXIV, 1378
- 1929, review, XIII, 525
- 1932, review, XVI, 427
- 1934, review, XIX, 119
- principles and practice of, review, XV, 1299
- productive areas of 1936 in Texas and Louisiana largely due to, XXI, 1056
- techniques of, XXVII, 933
- with magnetometer, manual on, XXI, 631
- Geophysical prospecting and core drilling in southeastern New Mexico during 1938, XXIII, 840
- Geophysical reconnaissance methods, XXVIII, 805
- Geophysical reconnaissance surveys in Germany, XXII, 494
- Geophysical Research Corporation, XXII, 1413
- determination of velocity of elastic waves in various materials, XIX, 9
- Geophysical Section of International Congress of Mines, Metallurgy, and Applied Geology, Paris, October, 1935, papers presented in, review, XX, 321
- Geophysical Service, Inc., XXV, 1343, 1905
- Geophysical structure of Esperson dome, GC, 865; XXVIII, 1640
- Geophysical survey of Baker-Glendive anticline, XXIII, 463
- of Belle Isle dome, GC, 1033; XIX, 644
- of Buckeye field area, Texas, GC, 739; XIX, 383
- of the Reich as background for prospecting for mineral deposits, XXII, 494
- on Jefferson Island dome, GC, 1010; XIX, 1629
- Geophysical surveys, XXVI, 1800
- as aids to geologist, IX, 165
- as prospecting technique, XXVI, 1219
- broad values of, XXIV, 1380
- in Coastal Plain of Virginia, XXIX, 92
- in California in 1942, XXVII, 865

- (Geophysical)
 in Florida, XXII, 813
 in Ontario fields, GAS, 71
 used in exploration of east Coalinga accumulation, XXIV, 1948
 Geophysical work at Valentine dome, GC, 1040, XVIII, 543
 cooperation of geologist in, XXII, 521
 following geological surmise, useful method of locating stratigraphic traps, XXV, 1259
 in Arkansas and Louisiana during 1939, XXIV, 1093
 in Georgia in 1944, XXIX, 820
 in Rocky Mountain region, XXII, 692
 in United States, cost of, XXIV, 1395
 on coastal waters of Galveston Bay, XXV, 1009
 research work on fundamental problems most valuable for future advances in, XXV, 1262
 Geophysicists, how can they best serve? XXVI, 1200
 importance in search for new oil fields, XXVI, 1202
 Geophysicists and geologists, value of cooperation of, XXIV, 1380
 Geophysics, XXI, 710, 711; XXIV, 1377
 applied in search for minerals, review, XIII, 1571
 applied, methods of, discussion, XII, 863
 applied, papers on, discussion, XVII, 87
 as a factor in search for oil reserves, XXI, 197
 as a prospecting tool, XXI, 709
 at Colorado School of Mines, X, 1305
 Division of, Journal of Society of Petroleum Geophysicists, review, XX, 107
 elements of, as applied to exploration for minerals, oil, and gas, review, XIII, 86
 exploration, XXIV, 2186; XXV, 170
 future of, XXV, 1256
 future progress of, dependent both on technical advances and on advances in use of minds of geophysicists, XXIX, 871
 generally unfavorable to displacement hypothesis, CD, 152
 interpretation of, XXIII, 1272
 introduction to symposium on, XV, 1309
 looks forward, XXVIII, 909
 methods of applied, review, XII, 561
 1940, XXV, 760
 practical petroleum, lecture notes on, XXIV, 1339
 relation of, to salt-dome structures, GC, 170; XIX, 356; discussion, XIX, 1069
 relations to geology, XVIII, 3
 rôle of, STR II, 711
 symposium on, XV, 1307; XVI, 1171; XXVII, 1
 wildcats drilled in 1937 on basis of, XXII, 1235
 Geophysics and geology, interdependence of, XXI, 210
 interrelationship of, XXI, 197
 of southeast flank of Jennings dome, Acadia Parish, Louisiana, with special reference to overhang, GC, 961; XIX, 1308
 partnership between, in prospecting
- (Geophysics)
 for oil, XXIV, 1204
 showing cap rock and salt overhang of High Island dome, Galveston County, Texas, GC, 909; XX, 560, 818
Geophysik, angewandte, für Bergleute und Geologen, review, XVIII, 149;
Zweiter Teil, review, XIX, 126
 review, XV, 93
Geophysik, Handbuch der, review, XVI, 217
 George, H. C., XII, 765
 memorial of R. R. Brandenthaler, XIV, 256
 oil well completion and operation, review, XVI, 105
 George, H. C., and Cloud, W. F., oil sands and production relations, review, XII, 680
 George, Russell D., STRAT, 21, V, 607; VI, 335; XVII, 713; XVIII, 869; XX, 282
 geology and natural resources of Colorado, review, XII, 455
 George, T. N., and Pringle, J., XXIV, 288
 George, T. N., and Smith, B., XXIV, 288
 George, W. A., XII, 44
 George, William O., and Bay, Harry X., XXIV, 2101
 subsurface data on Covington County, Mississippi, GC, 369; XIX, 1148
 Georges Bank, RMS, 236, 237
 Georgetown, correlation with Tamulipas, MEX, 21, 27, 29, 36
 Georgetown district, Urandia field, Louisiana, STR I, 91
 Georgetown-Edwards limestone, III, 301; V, 18; VI, 476
 Georgetown formation in south Texas, XXII, 750
 of central Texas and its northern Texas equivalents, XIII, 1291
 Georgetown limestone, PROB, 355; XXII, 1431; XXIX, 172
 distribution and thickness, XXIX, 1462
 fossils of, XXIX, 1426
 in Luling field, Texas, STR I, 274
 in South Texas, correlation, XXIX, 1466
 in South Texas, sections, 1464, 1465
 section in Burro Mountains of northern Coahuila, XXIX, 1465
 stratigraphic and lithologic features, XXIX, 1463
 upper Albian in age, XXIX, 1466
 Georgia, PROB, 56; RMS, 209
 Cretaceous in, XXII, 809
 developments in 1943, XXVIII, 801
 Eocene in, XXII, 791; XXIX, 921, 924
 leasing in, during 1942, XXVII, 991
 map, XXIX, 921
 Miocene in, XXII, 792
 north-south cross section through wells from Pierce County to Key Vaca, Monroe County, Florida, XXVIII, 1734
 oil and gas in Telfair County, XXII, 801
 oil and gas seepages, VI, 398
 oil prospects in, FOP, 143; XXV, 1575
 organic sediments in, PROB, 30
 Pleistocene in, XXII, 792
 Pliocene in, XXII, 792
- (Georgia)
 references on oil prospects in, FOP, 147; XXV, 1579
 south, recent petroleum activities in Coastal Plain of, XXII, 794
 southern, and Florida, correlation of subsurface rocks of, XXVIII, 1678
 southern, and Florida, early Middle Eocene in, XXVIII, 1693
 southern, and Florida, late Middle Eocene in, XXVIII, 1686
 southern, and Florida, Oligocene in, XXVIII, 1681
 southern, and Florida, Paleocene in, XXVIII, 1703
 southern, and Florida, regional subsurface stratigraphy and structure of, XXVIII, 1673
 southern, and Florida, Upper Cretaceous in, XXVIII, 1708
 southern, and Florida, Upper Eocene in, XXVIII, 1683
 stratigraphy of Coastal Plain of, XXII, 789
 structure section from, through Florida, FOP, 146; XXV, 1578
 subsurface stratigraphy of Atlantic Coastal Plain between New Jersey and, XXIX, 885
 test wells in, XXII, 810
 Tuscaloosa formation in, section, XXVII, 602
 Upper Cretaceous in, XXII, 790; XXIII, 1712
 Vicksburg group in, GC, 358, XIX, 1162
 wells drilled to basement rocks in, XXII, 802
 wildcat wells drilled in 1944, XXIX, 819
 Georgia and Alabama, parts of, and Florida, Lower Eocene in, XXVIII, 1698
 map showing Cretaceous beds of Austin age, XXVIII, 1716
 map showing Cretaceous beds of Navarro age, XXVIII, 1710
 map showing Cretaceous beds of Taylor age, XXVIII, 1712, 1714
 map showing Cretaceous beds of Tuscaloosa formation, XXVIII, 1720
 map showing Eocene Avon Park limestone, XXVIII, 1686
 map showing Eocene beds of Cook Mountain age, XXVIII, 1696
 map showing Eocene beds of Wilcox age, XXVIII, 1700
 map showing Eocene Ocala limestone, XXVIII, 1684
 map showing Eocene Tallahassee limestone and equivalent non-fossiliferous limestone, XXVIII, 1690
 map showing Lower Cretaceous and older rocks, XXVIII, 1724
 map showing Oligocene beds, XXVIII, 1682
 map showing Paleocene beds of Midway age, XXVIII, 1706
 map showing structure on top of beds of Taylor age, XXVIII, 1728
 map showing structure on top of early Middle Eocene beds, XXVIII, 1727
 map showing structure on top of Ocala limestone, XXVIII, 1726
 map showing variations in interval between top of early Middle Eocene beds and top of beds of Taylor age, XXVIII, 1731

(Georgia)

- map showing variations in interval between top of Ocala limestone and top of early Middle Eocene beds, XXVIII, 1730
- map showing variations in interval between top of Upper Cretaceous and base of beds of Austin age, XXVIII, 1732
- map showing variations in thickness of Ocala limestone, XXVIII, 1729
- Georgia Coastal Plain, fossils of, XXII, 791
- Georgia district, Russia, XXII, 758, XXIII, 951
- Georgia Geological Survey report on oil and gas possibilities of Georgia, XXII, 810
- Georgia subsurface stratigraphy, XXIX, 920
- Geosynclinal basins in western part of East Indies, XXII, 41
- Geosynclinal boundary faults, XX, 910
- Geosynclinal depression of Gulf Coastal Plain, origin of, XXIII, 198
- sedimentary-load hypothesis as cause of, XXIII, 199
- Geosynclinal development at end of Moyers time, XXII, 860
- at end of Prairie Mountain time, XXII, 862
- Geosynclinal facies in Arkansas coal field, XXI, 1404
- Geosynclinal folding and marginal elevation, period of, XXII, 837
- Geosynclinal Pennsylvanian rocks in Marathon Mountains, XIX, 1338
- Geosyncline, RMS, 154, 155, 367, 405
- Appalachian, at Bradford field, Pennsylvania and New York, STR II, 419
- Appalachian, bordering New York oil fields, STR II, 283
- Appalachian, in east Texas, STR I, 305
- Appalachian, in West Virginia, STR I, 440
- beginning of rapid evolution of, in Russia, at beginning of Sakmarian time, XXIV, 278
- between Venezuelan Andes and upper Orinoco, XXII, 1224
- coastal, increase of depth of Wilcox sediments to bottom of, XXIV, 1898
- downwarping of, caused by crustal shortening, XXIII, 1330
- eastern Texas, SD, 209
- formation of, XXII, 837
- Gulf Coast, XXIII, 197
- Gulf Coast, cross section of, XXIII, 196
- in Rocky Mountains, Silurian in, XXIII, 1138
- in Urals, migration of, XXI, 1455
- northern Louisiana, SD, 209
- of Llano Estacado, V, 14
- of Timor-East Celebes, XXII, 11
- of Timor-East Celebes, Jurassic strata in, XXII, 15
- Ordovician, in Urals, XXI, 1444
- Ouachita, at Caddo field, Louisiana, STR II, 186
- western Kentucky, XXII, 1683
- Geosynclines, hypotheses concerning processes below earth's surface which lead to formation of, XXIII, 206
- nature of, SC, 7; XX, 1553

(Geosynclines)

- of compressed type, XXV, 19
- Pliocene, in East Indies, XXII, 45
- Tertiary oil-containing, in East Indies, XXII, 39
- Geosynclines and anticlines of Central America and Mexico, XXVIII, 1080
- Geosynclines and geo-basins, initiation of, XXIII, 207
- Geotektonische Forschungen*, XXI, 1357
- Geothermal curves, types of, XXI, 1203
- Geothermal data, value of, PROB, 987
- Geothermal gradient, normal, in United States, XIX, 78; discussion, XIX, 560
- tables for all oil fields, V, 242
- variation with subsurface structure, XXI, 790
- Geothermal gradient and geologic structure, relations between, XXI, 789
- Geothermal gradient curve believed to change with conductivity of successive layers of rock, XXI, 1205
- geologic significance of, XXI, 1193
- discussion, XXI, 1494
- Geothermal gradient curve, subnormal, in Getty pool, XXI, 1205
- Geothermal gradients, XXI, 789
- determination of, in Oklahoma, XIV, 535
- Geothermal surfaces, PROB, 991
- Geothermal surveys, XVIII, 20
- Geothermal syncline, PROB, 990
- Geothermal variations in Coalinga area, Fresno County, California, XV, 829
- in oil fields of Los Angeles basin, California, XIV, 997
- Geothermics, application of, to geology, XVIII, 13
- Gerasimov, N. P., XXII, 773
- Gerasimoff, A. P., XVIII, 605
- Gerassimov, N. P., XXII, 1016; XXIV, 259, 261
- Gerber, R. G., XIV, 1402
- Gerland's Beiträge zur Geophysik*, review, XIV, 1357
- German, north, salt domes, helium in, origin from alpha radiation of polonium, XXIV, 1533
- German and Roumanian salt domes, American salt-dome problems in the light of, SD, 167; IX, 1227
- German Alps and their origin, XXII, 1112
- German Church, MSC, 49
- German Geological Survey, maps showing salt domes, SD, 208; IX, 1268
- German expeditions, RMS, 50, 51, 298
- German imports of petroleum, 1938, XXV, 368
- German oil fields, production of, XII, 476
- German Permian deposits, section, XVIII, 1244
- German potash salt deposits, stratigraphic section of, SD, 756; IX, 574
- German salt anticlines, formation of, SD, 162; IX, 437
- German salt bodies, asymmetric folds with reference to, XVI, 169
- German salt deposits, stratigraphic sections, IX, 1248
- tectonic forms of, IX, 425
- German salt domes, IX, 1247
- Asse type, IX, 1250
- Hannoverian type, IX, 1250
- Leine type, IX, 1250
- oil in, SD, 49
- origin, SD, 743; IX, 561

(German)

- Staassfurt type, IX, 1250
- types, SD, 745; IX, 563
- German salt series, stratigraphic section in, IX, 562
- German Saxonian orogeny, XVI, 172
- German Zechstein salt, SD, 743; IX, 561
- Germanotypen Tektonik*, XXIII, 1419
- Germany, MSC, 90; RMS, 195, 201, 225, 322, 329, 347, 373, 396, 496, 517
- coke ovens in, XXV, 1274
- dust falls in, RMS, 498
- electrical investigation in, XIV, 1166
- foraminifera from Oligocene of, MSC, 176
- geophysical reconnaissance surveys in, XXII, 494
- Hanigsen-Nienhagen field, XII, 475
- helium and nitrogen in, GAS, 1061
- natural gas occurrences of, XVIII, 719
- north, and south Scandinavia, marine Paleocene and Eocene of, XXII, 315
- northern, MSC, 180
- northern, normal temperature gradient of potash mines in, XXI, 1204
- northwest, stratigraphic section in, XII, 468
- oil fields of, XII, 463
- problems of oil supply, XXV, 366
- production during 1938, XXIII, 965
- production of petroleum in, XVI, 1144
- reserve stocks of petroleum in, at start of war, XXV, 1280
- soils of, RMS, 486
- upthrust of salt masses of, SD, 142; IX, 417
- Wietze oil field, X, 413
- Zechstein salt deposits of, XXI, 1273
- Germany's gasoline difficulties involved in all-out air attacks on Britain, XXV, 1280
- Germany's imports of crude oil from Roumania, XXV, 1275
- from Russia, XXV, 1277
- Germany's oil shortage, XXV, 1282
- Germany's supply and demand situation, XXV, 1273
- Germany's synthetic-oil plants, XXV, 1273, 1275
- Gerth, H., XXII, 1102; XXIII, 1723; XXIV, 2118; XXV, 409; XXVIII, 1643; XXIX, 504, 507, 1090
- general outline of geological history of South American cordillera, review, XXIII, 1420
- Geologie Südamerikas*, review, XVII, 1283
- Gesell, G. m. b. H., XVIII, 69
- Gesner, Abe, XXII, 428
- Gesner, Conrad, XXIII, 1102; XXV, 1209, 1210
- Gessner, Herman, RMS, 540, 542, 544, 546, 547, 553
- Gester, XI, 1195
- Gester, Clark, XI, 617
- Gester, G. C., MEX, 114, 115; SBP, 287; VII, 606, 613; VIII, 590; XIII, 223, 435, 927, 1095; XVII, 695; XVIII, 1348, 1492; XX, 950; XXII, 1235; XXVII, 1175
- discussion of geology and unit operation, XVIII, 1491, 1492
- memorial of Jorgen O. Nomland, XXVII, 1030
- observations relating to origin and

- (Gester)
 accumulation of oil in California, X, 892
 report of president for 1927, XII, 578
 world petroleum reserves and petroleum statistics, XXVIII, 1485
- Gester, G. C., and Galloway, John, GAS, 133; MSC, 106; XVIII, 453, 469, 1465, 1560; XXIII, 24; XXVII, 1368; XXVIII, 542
 geology of Kettleman Hills fields, California, XVII, 1161
- Gester, G. C., and Hawley, H. J., GAS, 449; XIII, 1511; XV, 1088
 Yates field, Pecos County, Texas, STR II, 480
- Gester, S. H., X, 711; XVII, 1162; XXIV, 1397
 Huntington Beach oil field, Orange County, California, VIII, 41
- Getaway limestone member, PTNM, 580; XXVI, 580
- Getty-Dooley well, temperature at bottom of, XXI, 1494
- Getty pool, Eddy County, New Mexico, section, XIII, 1037
 temperature tests through Permian rocks of different lithologic character, XXI, 1193
 Tansill formation in, XXV, 1725
- Getzender, A. E., XVI, 385; XIX, 553; XXII, 1185, 1213; XXIV, 1806, 1807, 1818; XXV, 1969
- Getzender, F. M., XII, 1001; XV, 794; XVI, 743, 763; XVII, 481; XVIII, 1248; XIX, 1368; XXIX, 1417, 1427, 1433, 1453, 1464, 1465
 geologic section of Rio Grande embayment, Texas, and implied history, XIV, 1425
- McFaddin-O'Connor, Greta, Fox, Refugio, White Point, and Saxet fields, Texas, GC, 664; XVIII, 519
 problem of pre-Trinity deposits in South Texas, XXVII, 1228
- Geuda salt strata, XXIII, 1759
- Gewinnung von Erdöl, review, XII, 773
- Geyer, X, 667
- Geyer, F. P., IV, 173; V, 120; VIII, 291
- Geyer, R. L., combined surface and seismic exploration party, XXIX, 1781
- Ghyben, Badon, XX, 721
- Gianella, Vincent P., CAL, 150; XII, 1023; XIII, 495, 496, 497
 minerals of Sespe formation, California, and their bearing on its origin, XII, 747
- Gianella, V. R., and Callaghan, Eugene, XVII, 737
- Gibbs, James F., and Bowen, J. P., STRAT, 539, 541, 545
 Bryson field, Jack County, Texas, XVI, 179
- Gibbs, R. E., RMS, 624
- Gibbsite, RMS, 474, 475, 477, 479
- Gibbula magus, faecal pellets of, RMS, 517, 520
- Gibraltair, RMS, 365
- Gibbsland dome, SD, 222
- Gibson, George D., XX, 1086; XXI, 34
- Gibson, Juan B., XXVIII, 1120
- Gibson County, XXVII, 819
- Gibson field, Terrebonne Parish, Louisiana, XXVIII, 1266
 electric-log cross section, XXVIII, 1268
- Gibson Oil Company, XXI, 984
- Giddens, Paul H., STRAT, 538
- Giddings, H. J., XXV, 884; XXVIII, 1196, 1200, 1211
- Gideon oil well No. 3, Luling field, Caldwell County, Texas, XVI, 206
- Gidley, J. W., IX, 168; X, 736; XVII, 516; XXIII, 1228; XXV, 2043
- Gierhart, G., XVII, 1294
- Gierhart, Guy B., and Kane, William G., XXVI, 256, 265
 areal geology of Eocene in north-eastern Mexico, GC, 588; XIX, 1357
- Giesey, Sam C., and Fulk, Frank F., XXIV, 27, 62; XXVI, 1637; XXVII, 507
 abstract, XXII, 1712
 North Cowden field, Ector County, Texas, XXV, 593
- Giesey, Sam C., and Raish, Henry G., developments in West Texas and southeastern New Mexico in 1944, XXIX, 1925
- Gignoux, Maurice, CAL, 223; XVIII, 744
La tectonique des terrains salifères; son rôle dans les Alpes Françaises, review, XV, 1298
- Gignoux, Maurice, and Hoffmann, C., X, 413; XVI, 1097
- Gilbert, VIII, 63; XI, 34, 42
- Gilbert, Charles M., XXVII, 112; XXVIII, 451
 Tertiary sediments northeast of Morgan Hill, California, XXVII, 640
- Gilbert, Chester G., and Pogue, Joseph E., IV, 143; XVIII, 1457
- Gilbert, Grove Karl, CAL, 43; RMS, 12, 17, 27; VI, 222; XI, 791; XIII, 1435; XIV, 899; XVI, 1, 2, 15, 16, 35, 44; XVII, 386, 392, 398, 399; XVIII, 1339; XIX, 111, 1492, 1499, 1507; XX, 686, 1191; XXI, 115; XXII, 1308; XXVI, 197; XXIX, 1309, 1311
- Gilbert, J. Z., and Jordan, D. S., X, 130, 132
- Gilbert, M., XXVII, 262
- Gilbert dome, Franklin Parish, Louisiana, XXIV, 486, 1028
- Gilbert sand, XXVII, 35
- Gilbertown field, gravity of oil at, XXIX, 817
- Gilboe, J. D., and May, A. R., MSC, 49, Fig. 14 (in pocket); XVI, 417
- Gilchrist, L., Mawdsley, J. B., and others, studies in geophysical methods, 1928 and 1929, review, XVI, 219
- Gilcrease and Dutcher waters, Oklahoma, analyses of, PROB, 864
- Gilcrease horizon, PROB, 863
- Gilcrease sand, production from, in Jesse pool, XXII, 1578
- Gilcrease sandstone, XXIII, 227
- Gildemeister, E., XV, 617
- Gile, Richard E., Payton pool, Pecos and Ward counties, Texas, XXVI, 1632
- Giles, Albert W., PROB, 312; XII, 150, 1017; XV, 84; XXI, 69; XXIV, 117; XXVII, 1040
 memorial of Noah Fields Drake, XXIX, 1794
 oil seep in folded Appalachians, XI, 757
- Pennsylvanian climates and paleontology, XIV, 1279
- Giles, Albert W., and Brewster, Eu-
- (Giles)
 gene B., XXIV, 418, 430
 Hale Mountain section in northwest Arkansas, XIV, 121
- Giles, R. B., Jr., XXIX, 15
- Gill, A. C., X, 1037; XV, 166
- Gill, Cecil, XXIV, 435; XXVIII, 1355
- Gill, J. P., XXVII, 9, 26
 Bonita discovery, Montague County, Texas, XXIV, 1838
- Gill Ranch gas field, XXVIII, 743
- Gillan, S. L., algal limestone in southern California, XIII, 1485
- Gillespie, F. A., XIX, 1693
- Gillespie, F. K., II, 135
- Gillespie, J. S., SBP, 357; XXV, 795
- Gillespie, J. S., Stout, W., Lamborn, R. E., Ring, D. T., and Lockett, J. R., natural gas in central and Eastern Ohio, GAS, 897
- Gillespie, R. W., SBP, 6; XXI, 1378; XXV, 1933
- Gillespie, Ruth, and Cole, W. Storrs, XX, 439
- Gillespie anticline, XXVIII, 1208
- Gillespie-Bend field, GAS, 832
- Gillette, Tracy, memorial of, XXVII, 238
- Gilliam anticline at Pine Island field, Louisiana, STR II, 173
- Gilliam limestone, PTNM 655; XXVI, 655
- Gilliland field, V, 137
- Gillis-English Bayou area, Calcasieu Parish, XXIX, 800
- Gillis-English Bayou field, Calcasieu Parish, discovered by reflection seismograph and torsion-balance surveys, XXVIII, 1292
 electric-log cross section, XXVIII, 1294
 faulting at, XXVIII, 1303
- Gilson, J. L., memorial of David H. Graham, XXVIII, 1556
- Gilluly, James, GAS, 1057; SBP, 196; XIV, 1065; XXII, 525; XXVI, 1610; XXIX, 1152, 1383
- Gilluly, James, and Heald, K. C., stratigraphy of El Dorado oil field, Arkansas, review, VII, 198
- Gilluly, James, and Reeside, J. B., Jr., XI, 804; XIII, 1434; XVII, 125
- Gilluly, James, Mather, K. F., and Lusk, R. G., GAS, 368
- Gilmore, XVII, 459
- Gilmore area, GAS, 518
- Gilmore City formation, XXV, 2113
- Gilmore Oil Company, Pierce-Crawford 1 (well 151), SBP, 87-167, 405
- Gilmour, Andrew, review, XVI, 427
- Gilpin, III, 355
- Gilpin, J. E., VII, 608
- Gilpin, J. E., Day, D. T., and Gram, M. P., PROB, 148
- Gilson, G., RMS, 637
- Gilson sampler, RMS, 300, 637
- Gilsonite, PROB, 394, 396, 572
- Gilsonite dikes, PROB, 728
- Giltay, XVII, 54
- Ginsburg-Karagitscheva, T. L., RMS, 424, 425; XX, 254; XXVI, 848
 micro-flora of oil waters and oil-bearing formations and biochemical processes caused by it, XVII, 52
- Ginter, Roy L., PROB, 267, 836, 908; RMS, 425; STRAT, 66; XIV, 1215; XX, 254; XXIV, 491, 1475; XXVI, 284, 848, 865; XXVII, 1182
- causative agents of sulphate reduc-

- (Ginter)
tion in oil-well waters, XIV, 139
exercise on amount of source bed re-
quired to furnish Oklahoma City
oil pool, XXV, 1706
review, XXIV, 506
sulphate reduction in deep subsur-
face waters, PROB, 907
water problems in New Grosny field,
Russia, discussion, XII, 950
Ginter, Roy L., and Dott, Robert H.,
PROB, 277, 917; XVII, 801, 838
isoco map for Ordovician waters,
XIV, 1215
Ginter, R. L., Neumann, L. M., Bass,
N. W., Mauney, S. F., Ryniker,
Charles, and Smith, H. M., relation-
ship of crude oils and stratigra-
phy in parts of Oklahoma and
Kansas, XXV, 1801
Gippsland, Victoria, stratigraphy of
Tertiary marine rocks in, XXVIII,
278
Girard, MSC, 47, 126, 130, 134, 195,
201, 204, 209, 221, 224, 228, 231,
232, 234, 236, 243, 247, 248, 250,
251, 253, 254, 260, 263, 267, 268,
270, 272, 273, 278-282, 292, 295,
297-299, 307, 317, 319-321, 327-
329, 331-334, 336, 342, 343, 344-
347, 350, Fig. 14 (in pocket)
Girard-Mohn Spring, MSC, 2, Fig. 6
(in pocket)
Girard-Mohn Spring section, MSC, 47,
Fig. 14 (in pocket)
Girardot beds, XXVI, 807
Giraud, J., XXIV, 1596
Girkin limestone, XXIV, 828
Girón of Hettner, two different forma-
tions, XXIV, 1618
Girón and Cocuy series, distinction be-
tween, XXV, 1791
Girón beds at contact with Cocuy series
sandstones near La Mesa, Colom-
bia, XXIV, 1616
Girón redbed series in Cordillera Orien-
tal, XXV, 1791
Girón series, XXV, 1789
map of northern Cordillera Oriental,
Republic of Colombia, showing dis-
tribution of, XXV, 1792
of middle Magdalena Valley in Co-
lombia, XXIX, 1074
sills of porphyries in, XXV, 1793
Gironde River, RMS, 225
Girty, George H., CAL 64; MEX, 7;
PTNM, 539, 545, 560, 564, 573,
575, 582, 597, 602, 603, 604, 605,
607, 650, 675, 688; I, 103; III, 235,
419, 420; V, 39, 154, 156, 164, 189,
543, 549; VI, 207, 210, VII, 612;
VIII, 610; X, 825, 835, 836, 838,
840, 987; XI, 786, 792, 797, 1118,
1312, 1315, 1320; XIII, 471, 645,
647, 651, 884, 885, 905, 930, 939,
963, 973, 977, 979, 1435; XIV, 620,
782, 1261; XV, 1145; XVI, 95, 484,
873; XVII, 268, 376, 970, 972;
XVIII, 532, 533, 539, 947, 977,
978, 985, 989, 991, 996, 999, 1007,
1012, 1135, 1136, 1139, 1146, 1147,
1149, 1154, 1155, 1537, 1539, 1662,
1668, 1673, 1690; XIX, 1673, 1675;
XX, 1198, 1201; XXI, 836, 873;
XXIII, 85, 131, 572, 573, 1675;
XXIV, 303, 305, 306, 307, 308,
309, 311, 326, 620, 622; XXV,
1651; XXVI, 539, 545, 560, 564,
573, 575, 582, 597, 602, 603, 604,
605, 607, 650, 675, 688; XXVII,
(Girty)
193, XXVIII, 1626, 1627, 1629,
XXIX, 1149
Bend formation and its correlation,
III, 71
determination of Permian fossils, X,
825, 838
fossils of Moab region, Utah, XI,
789-792
memorial of Paul Vere Roundy, XXI,
1368
Girty, George H., and Lee, W. T.,
PTNM, 674; IV, 74; XIII, 967,
XXVI, 674
Girty, George H., and Moore, R. C.,
age of Bend series, III, 418
Girty, George H., and Paige, S. V., 553
Girty, George H., and Roundy, P. V.,
XI, 1068; XIII, 885, 896, 898;
XXV, 1667
Glenn formation of Oklahoma, notes
on, with consideration of new pale-
ontologic evidence, VII, 331
Girty, George H., Adams, G. I., and
White, D., XXIV, 305
Gish, O. H., use of geoelectric methods
in search for oil, XVI, 1337
Gish, O. H., and Rooney, W. J., XVIII,
40; XIX, 37
Gish, Wesley G., PROB, 411
Gish, Wesley G., and Carr, Raymond
M., PROB, 770, 992; XV, 1441,
1447
Garber field, Garfield County, Okla-
homa, STR I, 176
Gish-Rooney circuit, XVI, 1281
Gish-Rooney earth resistivity appara-
tus, XVIII, 61
Gish-Rooney electrode set-up and re-
sistivity vectors, XIX, 40
Glacial or fluvioglacial deposition, lake
basins due to, XXV, 830
Glacial abrasion, RMS, 44
Glacial advances, RMS, 155
Glacial boulders, RMS, 410
Glacial clay in Baltic, RMS, 306, 307
in Bornholm Island, RMS, 319
in Öland Islands, RMS, 319
Glacial conditions in Baltic, RMS, 303
Glacial-control oscillation of sea-level,
theory of, XXIX, 1315
Glacial débris, RMS, 238, 336, 484
from icebergs, RMS, 396
in Baltic, RMS, 300
Glacial drift in New York oil fields,
STR II, 271
Glacial drift gas in Michigan, GAS, 808
Glacial expression of structural fea-
tures in Michigan: preliminary
study, XIX, 1173
Glacial geology, STRAT, 331
Glacial history of Michigan, XXI, 1598
Glacial Lake Algonquin, XXVII, 575
Glacial Lake Nipissing, XXVII, 575
Glacial marine mud, XXIII, 1669
Glacial marine sediments, RMS, 396,
397, 400, 402, 406
Glacial outwash, RMS, 234
gravels, RMS, 594
Glacial pebbles, RMS, 388
Glacial period, RMS, 229, 405
of Pleistocene in South Texas, GC,
578; XVII, 516
Glacial regions, RMS, 211
Glacial sands, RMS, 211, 598
Glacial sedimentation in Australia,
XXV, 401
Glacial sediments, RMS, 210, 233, 393,
592
Paleozoic, great thickness of, in West
(Glacial)
Kimberly division, XXV, 387
Glacial stages, RMS, 156, 390
of North Sea, RMS, 331
Glacial till, RMS, 209
Glacial time, RMS, 391, 392
dust falls in, RMS, 501
Glaciated areas of Permo-Carboniferous
not in harmony with Wegener's hy-
pothesis, CD, 137
Glaciated coasts, RMS, 220, 223, 227
Glaciated Plains province, GAS, 788
Glaciation, RMS, 95, 233; XXIX, 202
during Carboniferous and Permian,
around south pole, CD, 62
in Baltic, RMS, 299, 310
in early Permian time in Western
Australia, XXV, 404
in Wind River Mountains, XXV, 143
of North Sea, RMS, 333
of Southern Brazil, XIX, 1728
Pleistocene, RMS, 155
Glacier County, Montana, Cut Bank
oil and gas field, STRAT, 327;
XXI, 991
(well 198), SBP, 194-243, 406
Gladwin County, Michigan, Buckeye
oil field, XXIV, 1950, 1954
Gladys Belle pool, VI, 422
Glaessner, M. F., XXVIII, 1132
Glance conglomerate, XXVIII, 1188
Glancing angle in X-ray studies, RMS,
618
Glangaud, Ph., XVI, 1105
Glass, Wilson, XXV, 2158
Glass Mountain formation, II, 74
Glass Mountain section, correlation of,
XIII, 1027
Glass Mountain subdivisions and ter-
minology suitable for related beds
of north-central Texas, XXIV, 80
Glass Mountains, Texas, PTNM, 545;
XXV, 77, 103, XXVI, 545
geologic structure, X, 877
Ochoa series in, PTNM, 662; XXVI,
662
Permian in, PTNM, 644, XXVI, 644
San Andres group in, XXV, 83, 90
tectonic features of, PTNM, 645;
XXVI, 645
Wolfcamp formation unconformable
on Pennsylvanian formations in,
XXIV, 279
Wolfcamp series in, PTNM, 646;
XXVI, 646
Glass Mountains and Delaware Moun-
tains, correlation of Pennsylvanian-
Permian of, XIII, 903
Glass Mountains and Guadalupe-Dela-
ware Mountains, fusuline zones of,
XXV, 97
Glass Mountains Permian section,
XIII, 1016
Glass Mountains section, PTNM, 642,
XXVI, 642
Glass tubing, use of, in core samplers,
RMS, 648, 652
Glasscock, Menefee, and Ward sands,
electric log, XXVIII, 206
Glasscock sand, XXVIII, 203, 205
Glassell and Glassell, XXVII, 1155
Glassell, A. C., XXI, 1072
Glasses, definition, CD, 22
Glasswort, RMS, 204
Glaucowite, GAS, 749; MEX, 15, 33;
PROB, 354; RMS, 4, 174, 247, 249,
257, 290, 350, 383, 385, 503-515,
602, 620, 626; XXVIII, 77
abundant in Bethel sandstone,
XXVIII, 119

- (Glaconite)
 an important green coloring agent, XII, 911
 formation of, from biotite, RMS, 513
 from pellets, RMS, 519-523
 geology of, XIX, 1569
 in East Indies, RMS, 350
 in Frio formation at Buckeye field, GC, 748
 in Oklahoma, XX, 1093
 Glaconite and marine fossils, indications of marine beds, XXIII, 152
 Glaconite zones, XXVI, 42
 Glaconitic beds at base of Neocomian, MEX, 17
 Glaconitic clays in Tempoal beds, MEX, 110
 mottled, in Lower Eocene deposits in Virginia, XXIX, 81
 Glaconitic limestone, PROB, 357
 Glaconitic marls, V, 417
 Glaconitic sands, XXIX, 89
 Glaconitic sandstones, V, 375
 Glaconitic shale at Nashville dome, Tennessee, XX, 1073
 Glaconitization, RMS, 503, 512, 513, 516, 519
 references on, RMS, 512
 synopsis of, RMS, 503
 Glaucophane a constituent of Franciscan sandstone, SC, 7; XX, 1553
 analyses of, XXVII, 172
 in Franciscan metamorphics, XXVII, 171
 Glaucophane schists on borders of basic rocks, XXVII, 167
 sketches illustrating non-selective and selective types of alteration of Franciscan rocks into, XXVII, 165
 Glaucophane schists and related rocks in Franciscan, XXVII, 159
 Gleason, Charles D., memorial of, XX, 382
 Gled Oil Company, XXIV, 1022
 Glen Dean formation, XXIV, 214
 fauna of, XXIV, 835
 Glen Dean limestone, XXIII, 1367; XXIV, 832; XXV, 875, 876; XXVI, 1089
 fossiliferous and oolitic, XXIII, 1498
 in Kentucky, XXII, 278
 Glen formation of Oklahoma, notes on, with consideration of new paleontologic evidence, VII, 331
 Glen Mary field, V, 168, 647
 Glen Park formation, XXV, 1655
 Glen Petroleum Co., SD, 623
 Glen Ridge anticline and Junction City dome, Illinois, STR II, 125
 Glen Rose, lower, units in Lisbon field, thickness and lithologic character of, XXIII, 289
 Glen Rose anhydrite, XV, 516; XXII, 971, 1481
 in Richland field, GAS, 780-782
 Glen Rose anhydrite and upper Glen Rose in Lisbon field, XXIII, 294
 thickness and lithologic character of, XXIII, 292
 Glen Rose anhydrite zone, XXII, 1509
 Glen Rose Comanche from Pine Island field, Louisiana, STR II, 171
 Glen Rose fauna in Cuchillo formation, Coahuila, XXVIII, 1163
 Glen Rose fold of Pine Island area, STR II, 177
 Glen Rose formation, PROB, 419-421; III, 127, 168, 302, 304, V, 7, 309, 380; VI, 196; XXI, 1066; XXII, 535, 721; XXIII, 896, 901; XXIV, (Glen)
 1027; XXVI, 1812, XXVII, 1230; XXVIII, 804
 Bellevue field, Louisiana, STR II, 233
 correlation with Albian and Tamaulipas, MEX, 17, 21, 27, 34, 40, 96, 222
 Cotton Valley field, Louisiana, XIV, 987
 Llano-Burnet area, Texas, XII, 1076
 lower, XXII, 1481, 1510, XXV, 1081; XXVII, 784, XXIX, 766, 1434
 lower, in Arkansas, Texas and Louisiana, oil and gas in, XXI, 1068
 lower, in Bellevue field, XXII, 1667
 lower, in Homer field, Louisiana, STR II, 203
 lower, Rodessa and Pettit zones of, XXVII, 785
 Luling field, Texas, STR I, 274
 most productive in Louisiana, XXII, 725
 Pine Island field, Louisiana, anhydrite in, STR II, 171, 172
 productive in Arkansas and Louisiana, XXIV, 1092
 Richland field, XV, 942, 947
 Rodessa, Louisiana, XXII, 764
 Stephens field, Arkansas, STR II, 4
 thickness in Chitem field, XXVII, 1243
 upper, XXII, 971, 1480, 1509, 1668
 upper, Homer field, Louisiana, STR II, 203
 Uvalde County, Texas, XIV, 1425
 Walnut Bend pool, STRAT, 781
 Glen Rose gas-distillate wells, XXII, 731
 Glen Rose gas fields, XXV, 1036
 Glen Rose gas production in northeast Texas, XIV, 1477
 Glen Rose limestone, XXVI, 383; XXVIII, 1094
 Bellevue field, Louisiana, STR II, 237
 correlation, XXIX, 1453
 distribution and thickness, XXIX, 1449
 (Kg) (Cretaceous), SBP, 295-335, 414
 of lower and middle Albian age, XXIX, 1419
 south Texas and northern Coahuila, sections, XXIX, 1450-1453
 stratigraphic and lithologic features, XXIX, 1449
 Glen Rose Massive anhydrite, XXVIII, 39
 Glen Rose oil, gravity, STR I, 369
 Glen Rose production from oolitic and coquina limestones in Texas, XXI, 1068
 near Garland City oil field, Arkansas, XXI, 1073
 Glen Rose sub-group in Lisbon field, XXIII, 288
 in south Arkansas, XXII, 969
 Glen Rose-Travis Peak contact, XXIII, 635
 Glen Rose Trinity in Richland Parish field, Louisiana, XII, 990
 Glen Rose uplift in Pine Island field, Louisiana, STR II, 175
 Glendenning, G. W., XXV, 263
 Glendon facies, XXVIII, 60
 Glendon formation, Meson beds equivalent to, MEX, 132
 Glendon limestone in Covington County, Mississippi, GC, 373; (Glendon)
 XIX, 1152
 in Mississippi, GC, 364; XIX, 1168
 Glendon limestone member, XXVIII, 1316, 1329
 section, XXVIII, 1331
 Glenmary and Bone Camp oil fields, Tennessee, STR I, 252; XI, 914
 Glenn, Leonidas Chalmers, V, 460; VIII, 630; XIV, 847, 851, 854; XIX, 875; XX, 805, 1071; XXV, 2054
 oil development and prospects in Tennessee, V, 168, abstract, V, 100
 some paleontological evidence on age of oil-bearing horizon at Burk Burnett, Texas, V, 154, 324
 Glenn, Leonidas Chalmers, and Ashley, G. H., XXVIII, 1592
 Glenn County, California, Upper Cretaceous stratigraphy of west side of Sacramento Valley south of Willows, XXVII, 279
 Glenn field, PROB, 278, 323-326, 401, 435, 439
 Glenn formation, V, 37, 103, 175, 556; VI, 5, 368, 400
 Ardmore quadrangle, fauna of, VII, 342
 differentiation and structure of, VI, 5
 differentiation and structure of, review, V, 103
 new paleontologic evidence, VII, 331
 Oklahoma, X, 143
 Glenn pool, Oklahoma, STRAT, 437
 geology of, STR I, 230; V, 120, 131, 152, 290, 401, XI, 1055; discussion, XII, 213
 water conditions in, XVI, 887
 Glenn sand, PROB, 292; III, 264, 266, 273; V, 129, 290, 400; VI, 318
 Glenn syncline, VI, 20
 Glenora syncline, GAS, 978
 Glenrose limestone, Texas, X, 770
 Glenwood formation, XXV, 1120
 Gluck, Nelson, XX, 890
 Glidden pool, Oklahoma, STR I, 211; PROB, 763
 "Glimmerton," RMS, 627
 Globigerina, faunas of Puente shale, MSC, 17
 transition, MSC, 69
 Globigerina marl, XXIV, 1590
 of Sumatra, Java, and Borneo, XXII, 57
 Globigerina ooze, MEX, 83; RMS, 149, 274, 276, 285, 286, 287, 381, 384, 388, 390, 393, 396-414, 497; XXIII, 1666, 1668
 conditions of formation of, RMS, 402
 faecal pellets in, RMS, 520
 from Riuikiu Islands, MSC, 13
 in deep parts of Celebes Sea, RMS, 351
 in deep parts of Sulu Sea, RMS, 351
 in East Indies, RMS, 350
 relation of, to foraminiferal number, RMS, 375
 resting on diatom ooze, RMS, 406
 Globigerina sand, RMS, 387
 Globigerina Zonules, MSC, 123, Table I and Figs. 4 and 14 (in pocket)
 Globigerinidae, MSC, 162, 343
 Globigerininae, MSC, 343
 Globorotalia menardii bed, RMS, 407
 Globorotaliidae, MSC, 162
 Globotruncana, stratigraphic distribution of, XXIV, 1766
 Glocker, G., and Lind, S. C., XXVIII, 939

- Glockzin, Albert R., and Roy, Chalmers J., tentative correlation chart of Gulf Coast, XXV, 742
- Glorieta formation, VI, 224
- Glorieta sand, XXVII, 770
- Glorieta sandstone, XXI, 850; XXV, 83, 93
- unconformable on Yeso formation, XXIV, 23
- Glossary of German terms, RMS, 330
- Glossopiers* flora, CD, 136
- distribution of, CD, 136
- in Salt Range, Kashmir, and New South Wales, XXV, 407
- problems of distribution, CD, 21, 134, 136
- Gloucester shale productive of gas in central Ontario, FOP, 114; XXV, 1546
- Gloyd limestone, XXII, 721, 722
- Gloyd limestone zone, XXII, 971
- Gloyd oolitic limestone, XXI, 1059
- Glucose, PROB, 37
- Glycerides, PROB, 261
- Glycerine, PROB, 36
- Glycymeris* zone, CAL, 236
- Glycymeris neatchis* fauna, XXVI, 183
- Glycymeris pacificus* fauna, XXVI, 181
- Gneiss in Tejon Quadrangle, XXI, 213
- Goat Seep fauna, PTNM, 602; XXVI, 602
- Goat Seep limestone, PTNM, 588, 593; XXVI, 588, 593
- Goat Spring, MSC, 32, 187, 191, 192, 194, 202, 230, 290, 291, 353, Fig. 14 (in pocket)
- Goat Springs fault, SC, 83; XX, 1629
- Gober tongue of Austin chalk, XI, 8
- Gobi Desert in Kansu, China, XXVIII, 1503
- Gobia in Mongolia, XXVIII, 1419
- Goble, W. I., III, 279
- Goblott, H., XV, 2
- Goddard, E. N., XVII, 354
- Godula sandstone, Europe, VI, 526
- Goebel field, XXVIII, 862
- Gots, Axel, MSC, 12
- Goessmann, C. A., SD, 7, 395, 397; IX, 837; XXI, 1270
- Goff, John A., XIV, 1188
- Gohr, Russell, and Voorhees, XX, 43, 48
- Golconda formation, XXV, 876, 878
- generalized section, XXIV, 216
- in Kentucky, XXII, 277
- Golconda limestone, XXIV, 830; XXVI, 1596
- Gold, RMS, 435; XXVII, 257
- in sea water, RMS, 143, 148
- silver, and other elements in salt-dome cap rocks, XXV, 750
- Gold Belt, CAL, 64, 76, 94, 95
- Jurassic in, CAL, 74
- Gold Hill fault, XXII, 1683
- Golden and Dry Creek structures, Carbon County, Montana, revision of stratigraphy of, XXII, 106
- Golden area, Colorado, XVI, 771
- Golden Eagle dome, XXVII, 436
- Golden Eagle field, Wyoming, GAS, 291, 294
- (well 204), SBP, 194-243, 406
- Golden Gate river system, CAL, 267
- Golden Gate series, CAL, 86; XXVII, 116
- Golden Lane, of Mexican South fields, PROB, 377; MEX, 144, 203; XX, 1303; XXVIII, 303
- Golden Lanes, XVIII, 1313
- of Greenwood County, XI, 1151; (Golden)
- XXII, 99
- Golden Meadows field, La Fourche Parish, Louisiana, XXIII, 884
- XXIV, 1090
- Golden structure, XX, 1176
- Golden thrust fault, X, 109
- Goldfield, Nevada, RMS, 456
- Goldfields, Lena, XXI, 141
- Golding and Murchison, XXI, 111
- Goldman, XIII, 492
- Goldman, Marcus I., CAL, 104; GC, 70, 763; PROB, 650; RMS, 101, 285, 286, 511; SD, 44, 332; VI, 334; VII, 607, VIII, 158; IX, 874, 1019; X, 17, 31, 280, 714, 977; XI, 17, XIV, 868, 1330; XV, 176, 510, 523, 810, 1150; XVI, 727, XVII, 638, 1075; XIX, 1593; XX, 52, 74, 171; XXI, 1269, 1272; XXII, 1285, XXIII, 1191; XXIV, 85, 730; XXV, 1862; XXVI, 42, 43, XXVIII, 495, 1321; XXIX, 162
- bearing of cap rock on subsidence on Clay Creek salt dome, Washington County, Texas, and Chestnut dome, Natchitoches Parish, Louisiana, discussion, XV, 1105
- black shale formation in and about Chesapeake Bay, VIII, 195
- discussion of cap-rock petrography, XV, 523
- discussion of theories of origin of salt domes, SD, 44
- lithologic subsurface correlation in the Bend series of North-Central Texas, abstract, V, 99
- origin of anhydrite cap rock of American salt domes, review, XVIII, 269
- petrography of salt-dome cap rock, SD, 50; XX, 42
- reviews, VII, 194 VIII, 682; XI, 427
- use of binocular microscope, IX, 175
- Goldman, Marcus I., and Hewett, D. F., XXVI, 1701
- Goldman, Marcus I., and Merwin, H. E., XIX, 974
- color chart of committee on sedimentation of National Research Council, IX, 1018
- Goldman, Marcus I., and Spencer, Arthur C., correlation of Cross' La Plata sandstone, southwestern Colorado, XXV, 745
- Goldring, W., XIV, 1293
- Goldsboro pool, XXIII, 857
- Goldschmidt, V. M., CD, 10, 16; RMS, 142, 144, 551
- Goldsmith field, Ector County, Texas, XXIII, 841, 1525
- analyses of surface water, Triassic water, and bottom or edge waters encountered in, XXIII, 1547
- analysis of crude oil from, XXIII, 1545
- analysis of gas from, XXIII, 1546
- bottom-hole pressures, XXIII, 1548
- cross section, XXIII, 1539, 1540
- drilling and production practices in, XXIII, 1543
- gas-oil ratio, bottom-hole pressure, number of wells, and accumulated production curves, for period of May, 1935, to June, 1938, XXIII, 1549
- Goldsmith zone main producing zone in, XXIII, 1530
- log of dolomite section, XXIII, 1529
- log of formations in, XXIII, 1528
- oil and gas zones in, XXIII, 1530
- (Goldsmith)
- oolitic zones in White Crystalline dolomite in, XXIII, 1530
- regional relations, XXIII, 1540
- relation of accumulation to stratigraphy and structure in, XXIII, 1537
- stratigraphy, XXIII, 1527
- structural history of, XXIII, 1533
- structure of, contoured on top of Rustler anhydrite XXIII, 1536
- structure of, contoured on top of Sandy Gray dolomite, XXIII, 1532
- waters of, XXIII, 1547
- Yates sand in, XXIII, 1530
- Goldsmith pool, XXVI, 1028; XXVII, 757
- Goldsmith region, maps showing successive crustal movements in, XXIII, 1533-1536
- Goldsmith structure, XXIII, 1533
- Goldsmith zone main producing zone in Goldsmith field, XXIII, 1530
- Goldston *et al.*, XXIII, 894
- Goldston, Walter Leon, Jr., V, 38, 175; VII, 331, 342, 344, 345, 346; XI, 1068; XIII, 884; XVIII, 586, 590, 1085; XXIX, 143
- differentiation and structure of Glenn formation, VI, 5
- review, V, 103
- Goldston, Walter Leon, Jr., and Stevens, George D., Esperson dome, Liberty County, Texas, GC, 857; XVIII, 1632
- Goldstone, F., maintaining an adequate level of geophysical exploration, XXVII, 948
- Goldthwait, J. W., and Huntington, Ellsworth, XXIII, 140
- Goleta anticline, PROB, 189
- Goleta field, PROB, 189, 190; XII, 656
- Goleta Point, MSC, 281, 299
- Goleta Slough, CAL, 8
- Golfes von Mexico, sur Entstehungsgeschichte des*, review, XVII, 99
- Goliad formation, XXIX, 1726
- age and fauna, XXIX, 1728
- in coastal Texas and Louisiana, GC, 440; XIX, 659
- lithology, XXIX, 1728
- stratigraphic and structural relations, XXIX, 1728
- Goliad sandstone in southwest Texas, XVII, 485
- Goliad sandstone and calcareous clay, XXIX, 1730
- Goliad section of clay and sandstone, XXIX, 1731
- Goll, Graves, and Mechling, XXIV, 1957
- Golubiatnikow, D., XVI, 1069, 1070
- Golubiatnikow, D. V., XVIII, 603, 624, 626, 628, 658, 663
- Gondwana, XXVIII, 1419
- in South America, stratigraphic comparative table of, XIX, 1730
- Gondwana land bridge, CD, 138
- Gondwana land mass, XI, 179
- Gondwana Permo-Triassic rocks of Uruguay, XIX, 1205
- Gondwana rocks of Southern Brazil, hydrocarbons in, XIX, 1784
- of Southern Brazil, petroleum geology of, XIX, 1725; discussion, XX, 984
- petroleum occurrences in, XIX, 1778
- Gondwana rocks and geology of petroleum of Southern Brazil, discussion, XX, 819
- Gondwana series in India, Madagascar,

- (Gondwana)
and East Africa, CD, 54
Gondwanaland and Western Australia, XXV, 409
Gondwanica na Republica do Uruguai, sobre a Bacia Sedimentar, review, XIX, 126
Gondwanikas, Rochas, e Geologia do Petroleo do Brasil Meridional, review, XIX, 1701
Goniatisites, XXVIII, 1627
Goniatites kentuckiensis fauna, XXVIII, 1633
Gonot, XIX, 834
Gonzales, Dewitt, and Goliad counties, Texas, section showing Carrizo sands well developed in updip wells XXIV, 1908
Gonzales anticline, XXIX, 1125
González de Juana, Clemente, XXII, 1104; XXIX, 527
Gonzalez, Richard J., wartime changes in petroleum industry, XXVII, 970
Gonzalez, Richard J., et al., economic and statistical aspects of petroleum industry, XXIV, 363
Goobin, V. N., XXVII, 1180
Gooch, D. David, and Rukas, Justin M. exposures of Vicksburg Oligocene fauna in western Louisiana, XXIII, 246
Gooch, G. Gordon, XXV, 375
Gooch crucible, XXV, 855
Gooch filter, SBP, 50
Good geologists make good neighbors, XXVI, 1207
Good Hope field, Louisiana, XXIX, 795
Good Neighbor Policy, XXVI, 1207
Good Pine sand, XXVI, 1271
Goodall, G. P., MSC, 7
Goodchild, J. G., RMS, 42
Goode, W. T., IX, 712
Goodland limestone, II, 62; V, 309; VI, 181; XXIX, 171
Goodman, A. G., XVIII, 1421, 1428
Goodman, A. J., GAS, 41; XV, 402, 1279, 1281; XXIV, 1620, 1623, 1626, 1629, 2111
Alberta syncline, Canada, discussion, XV, 971
limestone reservoir conditions in Turner valley oil field, Alberta, Canada, XXIX, 1156
Goodman, Clark, XXIV, 1539; XXVIII, 924, 946, 948; XXIX, 19, 1481, 1487
Goodman, Clark, and Evans, R. D., XXIX, 15, 16, 1485
Goodman, Clark, Bell, K. G., and Whitehead, W. L., radioactivity of sedimentary rocks and associated petroleum, XXIV, 1529
Goodman, J., XIV, 566
Goodman device for orienting cores, XIV, 566
Goodrich, Calvin, XXVIII, 1011
Goodrich, Harold Beach, GAS, 576; PROB, 309; V, 458; XIII, 154, 1095; XXI, 34, 44
correspondence from (on paper by D. W. Ohern), III, 443
memorial of, XXIX, 1675
petroleum of United States and possessions, discussion, XVI, 704
reviews, VI, 56; XI, 311; XIII, 1081; XX, 1130, XXVI, 136
the past and the future (petroleum geology), V, 445
Goodrich, R. D., GAS, 651
Goodrich, R. H., SD, 398, 496
Goodrich, R. H., and Barton, Donald C., XVII, 647; XIX, 1309, 1310
Jennings oil field, Acadia Parish, Louisiana, SD, 398; X, 72
Goodridge formation, VI, 47, 205, 207, 211, 224, 246
Goode, G. E., XXVII, 630; XXIX, 1383
Goodwell field, Michigan, XXVIII, 763; XXIX, 698, 699
Goodyear, W. A., XXVI, 163
Goose Creek, sulphur waters at, SD, 775
Goose Creek crude oils, PROB, 116, 118
Goose Creek dome, PROB, 418
Goose Creek oil field, Texas, PROB, 115, 117, 119, 123, 146-148, 324, 327, 893; GAS, 729; SD, 546; II, 29; III, 88, 320; V, 333; IX, 36, 41, 286
cause of subsidence of surface in, discussion, XI, 887
chlorine content of water at, SD, 780
Miocene production at, GC, 8; XVIII, 507
Oligocene production at, GC, 11; XVIII, 510
surface subsidence in, XI, 729
Goose Run sandstone in Ohio fields, GAS, 898
Gooseberry anticline in Park County, Wyoming, XXI, 991
Gooseberry structures, XXII, 683
Gooseberry structures, Hot Springs and Park counties, Wyoming, map of, XXII, 685
Goranson, Roy W., XXI, 1200; XXVII, 57
Goranson, Roy W., and Griggs, David, XXVII, 63
Gordon, I., 33, 94
Gordon, C. H., STR II, 545, 546; V, 155; X, 148; XI, 10; XXV, 53, 2109
Gordon, Dugald, GAS, 753; PROB, 780; XVII, 616, 622, 624
Glen Rose gas production in northeast Texas, XIV, 1477
Richland gas field, Richland Parish, Louisiana, GAS, 773; XV, 939
Gordon, Glen, XXIII, 1757
Gordon, Grant, XXVI, 1826
Gordon, Mackenzie, Jr., Moorefield formation and Ruddell shale, Batesville district, Arkansas, XXVIII, 1626
Gordon, T., GAS, 609
Gordon field, Louisiana, XXIX, 794
Gordon formation, III, 138
Gordon sand, PROB, 490, 492; VI, 449
in Bradford field, Pennsylvania and New York, STR II, 414
in Copley pool, West Virginia, STR I, 450, 455; XI, 590
Gordon sand field, PROB, 465
Gordon Stray and Gordon lenticular sands, XXV, 806
Gordon Stray sand, PROB, 490, 492
in Copley pool, XI, 590
Gore, F. D., oil shale in Santa Barbara County, California, VIII, 459
Gore, R. E., PROB, 544
Gore area, Colorado, columnar sections of late Paleozoic rocks in, XXVI, 1378
fence diagram, XXVI, 1394
geologic map of, XXVI, 1376
late Paleozoic stratigraphy of, XXVI, 1375
pre-Pennsylvanian in, XXVI, 1377
references on late Paleozoic stratigraphy of, XXVI, 1397
stratigraphy of, XXVI, 1377
structure-contour map. Contours drawn on top of Jacques Mountain limestone, XXVI, 1390
Gore fault, XXVI, 1377
Gorgora shale member, XXVI, 268
Gorham oil district, Kansas, J. S. Irwin, discoverer of, discussion, XII, 443
Gorham pool, Kansas, PROB, 776, 777, XXII, 675
Gorman, E. J., XIII, 1095
Gorsky, I. I., XXII, 772, 773; XXIV, 276, 277, 280, 297
Gorter, N. E., and Van der Vlerk, J. M., XXIV, 1593
Gorton, Kenneth A., XXII, 1307; XXII, 133
Gose pay sand, migration of oil into, XXIV, 113
Gose pool, V, 418
Gose sand, PROB, 402
Gosford field, California, XXIX, 651
Gosline, J. E., and Dodson, C. R., XXV 1314
Gosnell shale zone in Ventura Avenue field, XII, 729
Gosport and Cockfield formations, correlation of, eastern Mississippi and western Alabama, XXII, 309
Gossard structure, PROB, 946
Gotebo field, III, 257; V, 568; VI, 422
Gothan, W., XIV, 564; XXV, 407
Gothan, W., and Jongmans, W. J., XIX, 1301, XXV, 411
Gothan, W., and Seitz, O., *Palaeontologisches Praktikum*, review, XIII 1494
Gothan stratameter, XIV, 565
Gothe, V. E., II, 136
Gotland, RMS, 305
Gottingen, Germany, RMS, 373
Goubkin, Ivan Mikhailovitch, XVIII, 762
memorial of, XXIII, 1283
tectonics of southeastern Caucasus, and its relation to the productive oil fields, XVIII, 603
Goudkoff, Paul P., CAL, 168, 173, 219, 220, 229; GAS, 119, 133, 139; MSC, 38, 51, 68, 69, 101, 192, 202, 204, 206, 230, 232, 248, 251, 256, 261, 275, 276, 281, 290, 309, 310, 312-314, 316, 323, 330, 334, 344, 345, 347, Fig. 14 (in pocket); PROB, 746; SC, 61, 63; STRAT, I; X, 753; XII, 113; XV, 382, 742; XVI, 135, 417; XVII, 1011; XVIII, 1561; XX, 145, 1607, 1609; XXIII, 25, 36, 518, 540, 1230; XXV, 194, 217
age of producing horizon at Kettleman Hills, California, XV, 839
microlithology and micropaleontology of oil-bearing formations in Sunset-Midway and Kern River oil fields, X, 482
stratigraphic relations of Upper Cretaceous in Great Valley, California, XXIX, 956
subsurface stratigraphy of Kettleman Hills oil field, California, XVIII, 435
Goudkoff, Paul P., and Cushman, Joseph A., MSC, 78
Goudkoff, Paul P., and Hughes, Donald D., MSC, 50, 243, 247, 248, 253, 261, 264, 267, 270, 273, 276,

- (Goudkoff)
279, 282, 298, 307, 318, 320, 328, 342, 344, 350; XVII, 460
- Goudkoff, Paul P., and Porter, William W., II, *Amoura shale*, Costa Rica, XXVI, 1647
- Goudkoff, Paul P., Laiming, Boris, and Hughes, Donald D., MSC, 39; XVIII, 460
- Goudkoff, Paul P., Rankin, Wilbur D., and Hughes, Donald D., MSC, 247, 250, 254, 267, 270, 272, 273, 320, Fig. 14 (in pocket)
- Goudy, C. L., XXVIII, 490
- Gouge zone at High Island dome, GC, 931; XX, 582
- Goun, Frank, XIV, 782; XV, 1026; XXI, 1536, 1549
- Gould, Charles Newton, GAS, 386; STRAT, 443, 458; I, 102, 103, 134, 136, II, 71, 76, 78, 86, 114, VII, 237, 620, VIII, 312, 319; IX, 626, 631, 982; XI, 1109, XII, 165, 201, 709, 930; XIII, 154, 594, 800, 950, 954; XIV, 166, 536, 771, 1071; XV, 409, 420, 422, 624, 825, XVI, 200; XXI, 428, 430, 432, 447, 450, 466, 1513, 1527, 1528, 1551, 1559, 1569, 1571, 1572; XXII, 925, 926; XXIII, 562, 1068, 1754, 1787, 1794, 1802; XXV, 1685, 1691; XXVII, 622
- a new classification of Permian red-beds of southwestern Oklahoma, VIII, 322
- classification of Permian rocks, XXI, 428
- correlation of Permian of Kansas, Oklahoma, and northern Texas, X, 144
- deep-well temperatures in Oklahoma, XII, 765
- discovery of petroleum in Texas panhandle, VII, 237
- fossil footprints near Abilene, Texas, XI, 633
- geological work in the southwest, I, 20
- honorary member, XXVIII, 440
- John Ray not John Wray, discussion, XIII, 1077
- Oklahoma Geological Survey, seventh field conference, 1926, X, 1306
- Oklahoma Geological Survey, eighth field conference, XI, 90
- preliminary notes on geology and structure of Amarillo region, IV, 269
- review, X, 1311
- Gould, Charles N., and Lewis, Frank E., XXI, 1549
- Gould, Charles N., and Willis, R., XIII, 924; XVII, 123, 146, 148
- Gould, Charles N., Aurin, F. L., and Officer, H. G., STR I, 177, 178; XVI, 120; XVII, 241, 247, 248, 251, 253; XXI, 1520
- subdivision of the Enid formation, X, 786
- Gould, Don B., XIX, 1339; XXVI, 1377
- stratigraphy and structure of Pennsylvanian and Permian rocks in Salt Creek area, Mosquito Range, Colorado, XIX, 971
- Gould, L. M., XIX, 1506
- Gould, M. David, GAS, 1102
- Gould beds, MSC, 92, 104, Fig. 14 (in pocket)
- Gould Hills, MSC, 68, 206, 266, 309, 310, 330, 339, 347, Fig. 14 (in pocket)
- Gould shale, CAL, 220; MSC, 50, 56, 69, 71, 85, 121, 165, 197, 202, 206-208, 221, 231, 251, 252, 258, 264-266, 272, 274, 276, 285, 309-312, 315, 319, 325, 330, 332, 339, 347, 352; SC, 36, 122, XX, 1582, 1668, XXVII, 1370
- at Kettleman Hills, XVIII, 467
- foraminifera from, MSC, 68
- type, MSC, Fig. 14 (in pocket)
- type, fauna of, MSC, Fig. 14 (in pocket)
- Gould shale faunule of Gould Hills, MSC, Fig. 14 (in pocket)
- Gould shale foraminiferal faunule, MSC, 73
- Gould shale member, MSC, Fig. 6 (in pocket)
- Gould-Tejon shale sequence, MSC, Fig. 6 (in pocket)
- Government lands, relationship of geology to unit operation of oil and gas fields, involving, XVIII, 1454
- where oil discovery is made, decrease of royalty on, XXVII, 863
- Government Wells member, XXIII, 1629
- Government Wells oil field, Duval County, Texas, GC, 631; XIX, 1131
- sections, GC, 640, 641; XIX, 1140, 1141
- Government Wells sand, GC, 633; XIX, 1133; XXI, 1427
- in Driscoll pool, GC, 626, 630; XVII, 822, 826
- in Government Wells field, GC, 638; XIX, 1138
- production from, Hoffman field, Duval County, Texas, XXIV, 2135, 2136
- Government Wells sands, XXIII, 1410
- Government Wells structures, Duval County, Texas, stages in development of, XXI, 1437
- Governor's Island, GAS, 108
- Gow, Kenneth, MSC, 38, 86, 131, 132
- Goyot, James I., 29
- Grab buckets, RMS, 658-662
- Grabau, Amadeus W., GAS, 79; SD, 756; STRAT, 172; VII, 55; XII, 909, 918, 921, 934, 935, 1081; XIII, 646, 647; XV, 166, 176, 503; XVIII, 1232, 1247, 1299; XX, 443; XXI, 53; XXIII, 1183, 1190, 1713; XXIV, 253, 275, 282, 289, 298, 350, 1131, 1964; XXV, 1402, 2126, 2127; XXVI, 39, 40, 45, 50, 57; XXVII, 573, 587, 593, 594; XXIX, 13
- Paleozoic formations in light of pulsation theory, review, XXIII, 1580
- Paleozoic formations in light of the pulsation theory, Vol. III, Cambro-Permian pulsation system, review, XXII, 934
- rhythm of the ages. Earth history in the light of pulsation and polar control theories, review, XXV, 4121
- Grabau, Amadeus W., and O'Connell, M., XV, 175; XXI, 1146, XXIII, 1182, 1190
- Grabau, Amadeus W., and Sherzer, W. H., PROB, 546, 549
- Grabau, Amadeus W., and Shimer, H. W., XXVII, 573
- Grabau, Amadeus W., and Ting, V. K., XXIX, 132
- Graben, PROB, 745, MEX, 194, 212, 213, Fig. 32 (in pocket)
- between Mexia fault and Balcones fault, the site of Nigger Creek field, Texas, STR I, 410, 414
- central, in Texas deep domes, GAS, 718
- in anticline in which one fault ends against the other, XXVIII, 542
- in Austin chalk, XXVIII, 549
- in Conroe field, GC, 790; XX, 737
- in High Island dome, GC, 932, XX, 583
- in Irma field, Texas, STR I, 11
- in Mexia and Tehuacana fault zones, Texas, STR I, 307
- in Orange field, GC, 896; XX, 548
- in Raccoon Bend, GAS, 719
- in Stephens field, Arkansas, STR II, 8
- interandean, XXIX, 1078
- of Tularosa basin, XXI, 895
- Pliocene, in southern Moluccas, XXII, 45
- productive area at Jennings dome in, XXVII, 1116
- Ridge Basin the deepest in coastal California, XXIII, 524
- Graben-and-horst interpretation of data at Cheneyville field, Rapides Parish, Louisiana, XXVIII, 545
- Graben-and-horst structure, XXVIII, 543
- complicated, XXVIII, 544
- Graben area over Conroe structure, GAS, 724
- Graben development of late Lampasas and early Strawn time, XXIV, 109
- Graben fault system overlying Heidelberg structure in Mississippi, XXIX, 822
- Graben faulting in coastal plain of northeastern Brazil, XXIX, 549
- Graben faults at Wilmington oil field, XXII, 1057
- terminating at or above line of convergence, XXVIII, 542
- Graben structures, oil in, XXVIII, 1253
- Graben-type faults, XXVIII, 582
- Grabens formed over intrusions, XXVIII, 551
- in anticlines outside Gulf Coast, XXVIII, 547
- in Gulf Coast anticlines and their relation to other faulted troughs, XXVIII, 541, 697
- in Llano uplift area, XXIV, 105
- in salt domes, XXVIII, 551
- of central and eastern Texas, XX, 1357
- on shallower salt domes, collapse as explanation of formation of, XXVIII, 1307
- Graciosa coarse-grained member, XXVII, 1339
- Graciosa member, XXVII, 1356
- Graciosa Ridge, stratigraphic relations of Careaga sandstone on, XXVII, 1356
- Gradation, XXVI, 1753
- lateral, from dolomitic limestones into evaporite and clastic sediments in Whitehorse and San Andres groups, XXIV, 18
- progressive, southwestward across Caliente Range region during Miocene, XXV, 202
- Gradational agents, XXVI, 38

- Gradational analysis, environment of crinoidal sediment, XXVI, 1755
- Gradational contact, MEX, 25, 63, Fig. 10 (in pocket)
- Grade scale, RMS, 559, 560, 562, 563, 606, 610, 613
- Wentworth, RMS, 544
- Graded profiles, RMS, 220, 239
- in near-shore area, RMS, 238
- Gradient, normal geothermal, in United States, XIX, 78
- of torsion balance, adjustment of, and application of undulation method to gravity measurements, discussion, XIV, 1221
- Gradient curve in Getty pool, changes corresponding to lithologic changes, XXI, 1205
- Gradients, RMS, 71, 75
- areal distribution of, XIX, 112
- density, RMS, 76
- effect of, on sea water, RMS, 72
- mineral, RMS, 593
- on crest of structure, XIX, 96
- on flank of structure, XIX, 100
- pressure, RMS, 63
- relating to gravity, in Eastern Cacaillao, MEX, 184
- velocity, RMS, 78
- vertical and horizontal, in sea water, RMS, 53
- winds in sea, RMS, 113
- Graduate record examination, results of, significant to geologists, XXVI, 1235, 1238
- Graduates in petroleum geology, where shall they acquire field experience? Editorial, XXII, 1613
- where shall they acquire field experience? Discussion, XXIV, 2047; XXV, 167, 1180
- where will they acquire field experience? XXIV, 1386
- Grady County-Caddo County fields, Oklahoma, XIV, 48
- Graefe, Ed., XXI, 1274
- Graford formation, III, 138
- Graford group, Cross Cut-Blake district, STRAT, 549
- Grage, V. P., and Warren, E. F., Jr., XXVIII, 579
- Lisbon oil field, Claiborne and Lincoln parishes, Louisiana, XXIII, 281
- Graham, A. P., XVII, 536
- Graham, David H., memorial of, XXVIII, 1556
- Graham, W. L., Permian of Logan and Lincoln counties, Oklahoma, discussion, XVII, 562
- Graham, William Armstrong Patterson, memorial of, XIX, 1082
- Graham, Fox, Shalom Alechem, and Tatum pools, Pennsylvanian in, GAS, 586
- Graham field, Oklahoma, VIII, 593
- Graham formation, V, 324
- Graham group, XXIV, 90
- Cross Cut-Blake district, STRAT, 549
- Graham pool, GAS, 588, 592, 599; V, 173
- Graham saline, XXIV, 878
- Graham sand, GAS, 589
- Graham-Thirty unconformity, GAS, 627
- Grahamite, PROB, 79; MEX, 38
- in Oregon, XI, 398
- Grahamite mine, V, 628
- Grain of Texas, interpretation of, (Grain)
- XVI, 486
- orientation of, data on, RMS, 590
- shape, RMS, 603
- size of sediments as related to environments of deposition, RMS, 249
- size of sediments on Mississippi delta, RMS, 166
- Grain and pore size, PROB, 826
- Grain residue of Brentwood limestone, XXIV, 429
- of Hale formation, XXIV, 426
- of Kessler limestone, XXIV, 431
- of Pitkin limestone on Bunch Mountain, XXIV, 417
- Grain size, graph showing inverse proportion of, to organic content, XXVI, 160
- relation to depth, XXII, 206
- Grain-size analyses, STRAT, 293, 584, 595
- Grain size comparison of loess with Great Salt Lake clay and dust, XXII, 1351
- Grains, factors affecting porosity and permeability of aggregates of, XXII, 1272
- Gram, M. P., Gilpin, J. E., and Day, D. T., PROB, 148
- Gram-Charlier series, in mechanical analyses, RMS, 585
- Gram ionic concentration, RMS, 65
- Gran, H. H., RMS, 438
- Grand and San Juan counties, Utah, geology and structure of portions of, VII, 384
- Grand Banks, RMS, 115, 147
- Grand Bay field, Plaquemines Parish, XXIII, 885; XXVIII, 1269
- electric-log cross section, XXVIII, 1271
- Grand Bay tuffs, XXIV, 1597
- Grand Bayou member, XXIX, 59
- Grand Cane oil field, XXVI, 1265
- Grand Canyon, Permian strata in, X, 824
- section, XX, 1199
- Grand Canyon district, XXI, 1252
- Grand Coulee Dam, Washington, XXVI, 1808
- fault zones at site of, XXVI, 1812
- geology at site of, XXVI, 1809
- map of abutment for, showing structural details of finished excavation, XXVI, 1811
- section showing principal structural features of excavated foundation for, XXVI, 1810
- system of joints at site of, XXVI, 1812
- Grand Isle, RMS, 188
- Grand Lake, Cameron Parish, Louisiana, XXIV, 1087
- Grand Lake field, Cameron Parish, XXVIII, 1263
- electric-log cross section, XXVIII, 1265
- production from, XXIV, 1087
- Grand Rapids field, Michigan, XXIV, 981, 985; XXV, 1129
- Grand Rapids formation, XXVIII, 872
- Grand Rapids-Parma break, PROB, 551
- Grand Rapids series in Michigan, XXI, 124
- Grand River group, XXIV, 1969
- of Pennsylvanian in Michigan, XXI, 1599
- Grand River sections of Osage, XXIII, 331
- Grand Rivers fault, XXV, 2051
- Grand Saline dome, PROB, 641, 651, 996; SD, 9, 12, 29, 212, 215, 222, 223, 225-231, IX, 839, 842, X, 19, 20, 36
- Grand Saline Salt Company, SD, 227
- Grand Terre, RMS, 188
- Grand Tower-Dutch Creek sequence Onondaga in age, XXVIII, 1521
- Grand Tower formation, XXVIII, 1521
- Grand Tower limestone, XXV, 681, 682; XXVI, 1707
- Grand Tower limestone deposition, paleogeographic map of time represented by, XXVI, 1751
- Grand Valley First Sand pool, Venango district, STRAT, 517
- Grand Valley-Triumph pool, Venango district, STRAT, 523
- Grande limestone, XXV, 2109
- Grandone, P., and Kraemer, A. J., PROB, 109
- Granos shale (Cretaceous), SBP, 198, IV, 76; V, 198; VI, 72; XXII, 1633
- Hugoton field, STRAT, 84, 85
- Osage field, STRAT, 851
- Grandfield district, VI, 38
- Grandview-Marsing area, GAS, 223, 234
- Granger, XXV, 2043
- Granger, A. E., XXVIII, 500
- Granger, Walter, XXV, 139
- Granger, Walter, and Sinclair, W. J., XXV, 141
- Granite, MSC, 109, 127, 133, 135; RMS, 262, 272, SC, 52, 55; XX, 1598, 1601
- California, VI, 307
- in East Indies, RMS, 350
- in Eldorado anticline, STR II, 163
- in wells in eastern New Mexico, V, 163
- Kansas, I, 111; II, 98; IV, 255; V, 69, 141, 146, 153, 279, 330, 397, 509, 580; VI, 427
- Nebraska, II, 100
- New Mexico, IV, 100; V, 163, 330, 605, VI, 89
- Oklahoma, I, 125; IV, 174; V, 34, 121, 128, 421; VI, opp. 6
- relation to oil production in Kansas, IV, 255
- South Africa, VI, 369
- Texas, IV, 121; V, 564
- Granite and limestone velocity determinations in Arbuckle Mountains, Oklahoma, XVIII, 106
- Granite basement, SC, 12; XX, 1558
- Granite blocks brought up from depth, MEX, 150
- Granite Canyon, MSC, 27, Fig. 14 (in pocket)
- Granite core in Petrolia field, Texas, STR II, 550
- in Texas Panhandle field, XIX, 1092
- Granite cores, PROB, 610
- Granite hill in Cushing field, Oklahoma, STR II, 406
- Granite mountains, buried, XXIII, 986
- Granite pool, VI, 88, 422
- Granite ridge, PROB, 292, 317, 339, 410, 858; XXIII, 995, 998
- Eldorado field, Kansas, STR II, 160
- elevation of, and thickness of overlying pre-Redbed sediments, relationship between, XXIII, 986
- Kansas, XI, 821
- Kansas-Nebraska, X, 95, 295
- post-Permian or Laramide tilting of, XXIII, 987

- (Granite)
relationship between elevation of, and thickness of overlying pre-Redbed sediments, XXIII, 986
section across, XXIII, 1030
Texas Panhandle, XXI, 1029, 1030
Granite Ridge fields, PROB, 240, 295
Granite Ridge folds in Burbank field, Oklahoma, STR I, 224
in Garber field, Oklahoma, STR I, 180
in Kay County oil fields, Oklahoma, STR I, 161
in McPherson, Harvey, and Reno counties, Kansas, XXII, 1597
in Nemaha Mountains region, Kansas, STR I, 60
in Rainbow Bend field, Kansas, STR I, 54
Granite Ridge pools of Kansas and Oklahoma, possibility of distant source of oil, XV, 1445
source and date of accumulation of oil in, XV, 1431
Granite Ridge region, Kansas, flank production, STR I, 60
Granite ridges, GAS, 386, 391, 395
Granite wash, GAS, 390-392, 396; XXIII, 998, XXVII, 34
accumulation of oil in, XXIII, 1003
Amarillo district, XVII, 881
Granite wash and red shale, inter-relationship between, in Gray County, Texas, XXIII, 999
Granite wash oil trend south of Granite ridge, XXIII, 1012
Granite wash pools in Gray County, on terrace or slope of Granite ridge, XXIII, 1003
Granite wash series, XXIII, 999
gradation to limestone in Moore County, Texas, XXIII, 1031
in Texas Panhandle, XXIII, 1040
Granite wells in northern Mid-Continent region, IX, 351
Granites of Kansas, I, 111
discussion, I, 125
Granitic areas, XXI, 550
Granitic basement, CAL, 27, 29; SC, 7, 14, 71, 75, 76; XX, 1553, 1560, 1617, 1621, 1622
Granitic basement rock in Caliente Mountain district, SC, 77; XX, 1623
Granitic intrusive rocks in Tejon Quadrangle, XXI, 213
Granitic outcrops, SC, 3; XX, 1549
Granitic province, SC, 2; XX, 1548
Granitic rocks, Los Angeles Basin, California, X, 755
of Anacapan Basement, SC, 107; XX, 1653
of La Panza Mountains, SC, 79; XX, 1625
of Sierra Nevada, temperature phenomena of, XXI, 1201
Granitic type of province in Southern California, XXI, 551
Granitoid basement rock, SC, 115; XX, 1661
Granny's Creek field, West Virginia, STR II, 575
Granodiorite pebbles, Arroyo Seco, XXIX, 1239
Granodiorites in Whittier conglomerates, XXIV, 662
Granophyres in Wichita Mountains, XXV, 289
Grant, Carroll W., and ZoBell, C. E., XXVII, 1178
Grant, Carroll W., ZoBell, Claude E., and Haas, Herbert F., marine microorganisms which oxidize petroleum hydrocarbons, XXVII, 1175
Grant, R. P., oil and gas developments in Michigan in 1940, XXV, 1125
oil and gas developments in Michigan in 1941, XXVI, 1097
Grant, Rex, XXVIII, 196
Grant, Sally, XXVII, 1175
Grant, Ulysses S., RMS, 270; SC, IV, 77, XXIII, 518; XXVIII, 953
memorial of, XVII, 206
review, XXI, 532
Grant, Ulysses S., and Burchard, E. F., XXVI, 43
Grant, Ulysses S., Eaton, J. E., and Allen, H. B., Miocene of Caliente Range and environs, California, XXV, 193
Grant, Ulysses S., IV, and Cushman, Joseph A., MSC, 25, Fig. 14 (in pocket)
Grant, Ulysses S., IV, and Gale, Hoyt Rodney, CAL, viii, 228, 233, 247, 249, 301; XVIII, 493, 495
Grant, William M., IX, 233
Grant, Haskell, Morton, Stevens, and Seward counties, Kansas, and Texas County, Oklahoma, Hugoton gas field, STRAT, 78
Granule sands on beaches of Great Salt Lake, XXII, 1388
Granville beds, XXIX, 683
Grape Creek coal, XXIII, 1387, 1391
Grapeland, Houston County, Texas, XXII, 731
Grapeland District, Houston County, XXIII, 893
Grapeland field, Houston County, Texas, XXIV, 1066; XXV, 1086; XXVI, 1053; XXVII, 786; XXVIII, 847
gas production at, XXI, 1066
Grapeland gas field, Houston County, Texas, XXI, 1066
Grapevine Canyon, CAL, 18, 121, 140, 309; SC, 24; XX, 1570
Magdalena, Abo, Yeso, and San Andres in, XXI, 854
Graphic arrangement of a symposium on petroleum discovery methods, XXVI, 1410
Graphic calculation of particle size from cumulation curve, RMS, 554, 555
Graphic presentation and statistical analysis of particle properties, methods of, XXIX, 1245
of sedimentary data, RMS, 558
Graphic treatment of folds in three dimensions, XXII, 483
Graphical form of plotting mineral frequencies, RMS, 607
Graphical integration, use in determination of formation thicknesses, IX, 451
Graphical method for determination of true dip in pits, XIX, 908
for determining projection of dip, XXI, 341
for determining surface projection of axis and crest traces at any depth of an asymmetrical anticline, V, 159
for determining true dip from two components, discussion, XX, 1496
for determining true dip from two components and for constructing contoured structural maps from dip observations, XVI, 92
(Graphical)
for eliminating regional dip, XIX, 1538
for some geologic calculations, XXVI, 1155
new, for torsion balance-topographic corrections and interpretations, XIII, 39, 245
of calculation of terrance effects, XIII, 763
Graphical methods, block diagrams and other, used in geology and geography, review, IX, 918
for appraising oil wells, VI, 533
of calculation in interpretation in work with torsion balance, discussion, XIII, 388
Graphical plotting of intensity of X-ray patterns, RMS, 619, 628
Graphical solution of dip, depth, distance, and thickness of strata, XXVI, 1155
of strike and dip from two angular components, XIII, 1211; XV, 79
discussion, XV, 283
Graphite, MEX, 16; PROB, 79, SBP, 58
in some ancient quartzites, slates, and schists in Virginia, possible origin of, XVI, 736
Graptolite shales, Ordovician black, RMS, 367
of southern Sweden, XXI, 1146
Graptolite zone, Silurian, in Crane County, Texas, XXVI, 857
Graptolites, XXV, 653, 1631, 1638, 1790; XXVI, 13
from well core, Carter County, Oklahoma, XXIX, 454
in Black Knob Ridge, XXI, 6
in Kansas, XVII, 80
in Oklahoma and Arkansas, some tentative correlations on the basis of, XX, 301
of Bigfork chert, XXI, 8
of Polk Creek shale, XXI, 8
on well cuttings, Carter County, Oklahoma, XXIX, 1043
Ordovician, references on, XXVI, 1775
references on, XXVII, 1392
table of tentative Lower Paleozoic correlations on basis of, XX, 1252
three more, from Simpson of Oklahoma, XXVII, 1388
transcendent value of, for correlation, demonstrated, XXII, 221
two more Ordovician well-core, Crane County, Texas, XXVI, 1771
Viola, from well-core east of Norman, Oklahoma, XXVIII, 873
wide range of, XXII, 221
Graser, F. A., GAS, 188, 189
Grashof, XIX, 848
Grass Creek dome, Wyoming, STR II, 623; XXVII, 448
Grass Creek field, PROB, 349, 687, 936; IV, 37; V, 195, 328; XXVII, 470
review, VI, 389
tilt of water-oil contact at, PROB, 838
Grasses, RMS, 169, 266
growing in water, RMS, 162
Grassland syndcline in Copley pool, West Virginia, STR I, 452, 453
Grassroots field, XXVI, 1019
Grassy Creek shale, XXV, 2112
Grassy Knob chert, XXV, 674
Grassy Lake, gas in, XXV, 846

- Grassy-Saverton shale, XXIV, 778
unconformable on Ordovician and Devonian beds, XXIV, 782
- Gratex refinery, XXVI, 216
- Gratiot County pool, Michigan, G.A.S., 807
- Graton, L. C., XII, 921, XXVI, 1816
- Graton, L. C., and Fraser, H. J., XXII, 1274
systematic packing of spheres—with particular relation to porosity and permeability, review, XX, 324
- Gravel, RMS, 155, 156, 207, 233, 269, 270, 272, 328, 335
histograms of size, sphericity, roundness, and fabric of, XXIX, 1237
- Gravel banks, RMS, 18
- Gravel beaches, RMS, 208
- Gravel glacial outwash, RMS, 594
- Gravell, Donald W., XXIV, 435; XXVIII, 1355
- Gravell, Donald W., and Hanna, Marcus A., GC, 832; XIX, 1169, 1170, 1172; XXII, 990, 1004, 1006; XXIV, 376; XXVIII, 1344, 1357, 1358, 1359, 1676
- Conroe oil field, Texas, discussion, XX, 985
subsurface Tertiary zones of correlation through Mississippi, Alabama, and Florida, XXII, 984
- Graves, H. B., Jr., XXVI, 81; XXVII, 1050
- Graves Creek, MSC, 21, Fig. 14 (in pocket)
- Graves Creek section, MSC, 300
- Gravimeter, XXV, 1261
prospecting with, XXVIII, 746
use of, in Oklahoma, XXVII, 794
- Gravimeter map of middle and north Hannover, XXII, 496
- Gravimeters, XXVIII, 827
- Gravimetric and seismic studies in northern Argentina, XXIX, 514
of determination of calcium carbonate, SBP, 78
- Gravimetric method of determining solubility, XXV, 855
- Gravimetric methods advanced by development of practical gravimeters, XXVIII, 912
- Gravimetric prospecting, elevation control in, XXI, 1168
- Gravimetric surveys, XXV, 1260
experimental, XXI, 1171
- Gravimetrischen Verfahren der Angewandten Geophysik*, review, XIV, 245
- Gravitational acceleration, RMS, 542
- Gravitational anomalies, evidence of, concerning interior of earth, CD, 12
in ocean, CD, 19
- Gravitational compaction, effect of, on structure of sedimentary rocks: discussion, XI, 621, 889, 1333
- Gravitational components, RMS, 122
- Gravitational differentiation within crude oil, PROB, 150
- Gravitational distribution of gas, oil, and water, PROB, 7, 8, 10, 844
- Gravitational effects of moon and sun on sea, RMS, 128
- Gravitational force, RMS, 111, 116
- Gravitational forces, effect on water in wells, XXII, 1246
important in water control, XXII, 1247
possibly at a maximum at some particular point on earth's surface, (Gravitational)
- causing drift, CD, 215
- Gravitational-hydraulic theory, of migration of oil, PROB, 259, 260
- Gravitational motive force in formation of salt domes, GC, 81
in formation of salt domes, XVIII, 1177
- Gravitational pendulum, gravity anomalies and petroleum exploration by, XII, 889
- Gravitational settling, RMS, 79
- Gravitational sliding of sediments possibly responsible for horizontal-shift faulting in Trinidad, XXIV, 2120
- Gravitational theory of accumulation, PROB, 254, 256, 301, 303-305
- Gravitational adjustment, PROB, 375
- Gravities, different, with varying abilities to stain sands, XXI, 1477
of oil. (See Oil gravities, Specific gravities)
- of oil in Coalinga field, PROB, 195
- of oils, slight variation in Santa Fe Springs field, PROB, 227
- oil, in Rocky Mountain states, PROB, 157, 172-175
- Gravity, RMS, 64, 107, 109, 110, 111, 132
accuracy of determination of relative, by torsion balance, XVI, 1235
- A.P.I., increase of, with depth, XXI, 920
- A.P.I., increase of, with geologic age, XXI, 921
- A.P.I., of fractions, variation of, with depth and age, XXI, 919
- A.P.I., of Spindletop crude with depth, variation of, GC, 330; XIX, 639
- as cause of currents, RMS, 105
- Baumé, XI, 191
- Baumé, of oil in Flat Rock pool, Illinois, map, XXIX, 1257
- Baumé, of Rocky Mountain oils, XIII, 1249
- Baumé, variation with depth in Gulf Coast salt-dome area, XIV, 1394
- gradient of, XIII, 41
- in southeastern Virginia, XXI, 333
- influence of, on motion of débris, RMS, 14, 23
- of crude oils of Poland, variations in, XXI, 1192
- of Dakota oil, PROB, 409
- of gas in Hugoton field, XXIV, 1802
- of Jennings crude, distribution, SD, 418
- of Muskegon oil, XXII, 405
- Gravity of oil (See oil analyses)
- Abell field, XXV, 1056
- Alamo, Jardín, Paso Real, and San Isidro, MEX, 223
- Alberta, PROB, 161
- Amelia field, XXIII, 1658
- Appalachian province, PROB, 101
- Archer County fields, XXVII, 780
- Bahrein Island, XXIII, 964
- Barbers Hill field, PROB, 115
- Barco area, XXIX, 1125
- Bardsdale district, California, XXI, 981
- Boggy Creek salt dome, XVI, 599
- Bowers field, XXVII, 34
- Brady field, XXVIII, 792
- Bryson field, XVI, 186
- Buckner field, XXII, 721
- Cabin Creek field, XI, 716
- California fields, XXII, 704-713; (Gravity)
- XXIII, 935, 937, 939-943
- Carthage field, XXIX, 771
- Cat Canyon field, PROB, 208
- Cedar Point field, XXIII, 880
- Cerro Alquitran, XVI, 823
- Coke field, XXVII, 782
- Concord field, XXVII, 784
- Consciana district, STR I, 369
- Dominguez field, California, PROB 217; XXIV, 1123
- East Coyote Hills field, PROB, 225
- East Hackberry salt dome, XV, 247, 253
- East Long Lake field, XXVI, 1050
- East Tecumseh pool, XXVI, 1067
- East Utopia field, XXVIII, 792
- East Watchorn pool, XXVII, 798
- Edna gas field, XXV, 107
- Elk Basin field, Wyoming and Montana, STR II, 585
- Emba Basin, Russia, XI, 509
- East Texas fields, XXIII, 891-894
- East Texas fields, developed during 1938, XXIII, 891-894
- Eola field, XXIV, 1083; XXV, 1379, 1393
- Fall City pool, XXV, 1112
- Ferris dome, Wyoming, STR II, 666
- fields of Santa Maria district, PROB, 758
- Fishers Reef, XXV, 1009
- Florence and Cañon City fields, Colorado, STR II, 89
- Frannie field, XXV, 1151
- Fruitvale field, PROB, 205
- Fuhrman pool, XXVII, 757
- Gage field, XXVIII, 792
- Gebo field, XXVIII, 796
- Gilbertown field, XXIX, 917
- Graham field, Oklahoma, VIII, 611
- Grand Lake field, XXIV, 1087
- Greeley field, California, XXIV, 1119
- Gulf Coastal region, XXII, 738-744
- Helm field, XXVI, 1145
- Henderson field, XXVIII, 843
- Hendrick field, XIV, 923
- Hickory Grove pool, XXVII, 799
- High Island dome, GC, 955; XX, 606
- Hoeftle pool, XXVI, 1045
- Hoffman field, XXIV, 2142
- Homer field, Louisiana, STR II, 225
- in Cisco limestone, King County, XXVIII, 837
- in Cisco sands in Texas, XXI, 1022
- in Dakota series in New Mexico, XXI, 995
- in Edwards limestone in Salt Flat field, XIV, 1417
- in Ellis formation in Kevin-Sunburst field, XXVIII, 797
- in Frio sand, XXV, 1009
- in Frontier formation, PROB, 170
- in Gulf line deposit in Midland basin, XXIV, 1038
- in Jones sand, XXII, 721
- in Madison limestone at Penderoy field, XXVIII, 796
- in Mississippian limestone in Young County, Texas, XXV, 1069
- in Morgan sands, XXII, 721
- in north Texas pools, XXIII, 853, 855, 856
- in Queen formation, XXVII, 755
- in Ranger zone at Wilmington oil field, XXII, 1078
- in sands in Laredo district, XXI, 1429
- in Simpson formation, XXIV, 130
- in Sunburst or Moulton sand,

(Gravity)

- XXVII, 857
 in Tensleep sandstone, XXV, 1150, XXVII, 856, 857
 in upper Terminal zone at Wilmington oil field, XXII, 1078
 in well in Forest City basin, XXVII, 811
 in wells in Darrow dome, XXII, 1421
 in wells of Princess area, XXIX, 657
 in Wilcox sand, XXIV, 1919
 in Wilcox sand, Seminole district, Wyoming, variation of, STR II, 349
 in Wyoming fields, XXIV, 1101
 Iraq, XXIII, 962
 Ivy area, Texas, XXI, 1022
 Jacalitos field, XXVI, 1145
 Japanese fields, XVIII, 910, 915, 920
 Jennings dome, GC, 980; XIX, 1327
 Jennings field, distribution with depth, X, 92
 Katalla-Yakataga field, FOP, 11, XXV, 1443
 Kettleman Hills, PROB, 407
 Kettleman Hills North Dome, XXIV, 1945
 Kevin-Sunburst field, Montana, STR II, 256, 265
 Kildare field, XXVII, 784
 La Cira field, XXIX, 1113
 La Place area, XXIV, 1088
 La Rosa field, XXV, 317
 Lance Creek field, Wyoming, STR II, 610, 611
 Larissa field, XXVII, 784
 Lehn and Masterson pools, XXV, 1049
 Little Lost Soldier dome, Wyoming, STR II, 650
 Live Oak field, XXV, 1049
 Lompoc field, PROB, 208
 Los Angeles County, PROB, 192
 Louisiana fields, XXVI, 1263-1267, 1273, 1274
 Luling field, Texas, XI, 849
 Lytton Springs field, Texas, XI, 849
 Mabree pool, XXVIII, 817
 Magnolia-Sealy south pool, XXV, 1048
 Mallalieu field, XXIX, 825
 Manifest field, XXVIII, 273
 Manziel field, XXVIII, 844
 McCamey field, XXVIII, 817
 McCandless pool, XXVIII, 819
 McKnight pool, XXIV, 129
 Medicine Bow, XXI, 994
 Merkel field, XXVI, 1046
 Montana fields, PROB, 717; XXVII, 855
 Montebello field, California, XXIV, 1119
 Muskegon field, XVI, 166
 Nebo field, XXVIII, 275
 Nemaha Mountains, XI, 929
 New Hope field, XXVIII, 844
 New York City field, XXVI, 1042
 Newhall-Potrero field, XXII, 707
 Noelke field, XXV, 1047
 Norman Wells field, XXVIII, 866
 North Cut Bank field, XXIV, 1107
 Northeast Coalinga field, XXIV, 1113
 Northern fields, MEX, 173, 179, 181, 184, 185, 196, 197, 200, 201
 Oak Canyon field, XXVI, 1142
 Oklahoma City field, XVI, 998
 Olson field, XXV, 1049
 Osage County, Oklahoma, STR II, 395

(Gravity)

- Osage County, Oklahoma, variation of, STR II, 392
 Paloma field, XXIV, 1113, XXVII, 871
 Pánuco field, XII, 428
 Pauls Valley pool, XXVII, 800
 Pechelbronn, XVI, 1103
 Pittsburg field, XXV, 1081
 Pleasant Grove field, XXVI, 1052
 Powder Wash field, XXII, 1022
 produced from Ellenburger dolomite, XXIV, 130
 Quitman field, XXVII, 785
 Raccoon Bend field, GC, 692, 697, XVII, 1475, 1480
 Raisin City field, XXVI, 1143
 Refugio field, GC, 667, XVIII, 522
 Riverdale field, XXVI, 1147
 Rock River field, Wyoming, STR II, 619, 620
 Rocky Mountain fields, XXIII, 907, 908, 911, 913; XXVII, 473
 Rosecrans field, California, PROB, 217; XXIV, 1123
 Russell pool, XXVIII, 815
 Russian fields, XI, 499, 500, 502
 Saginaw field, XI, 963
 Salt Creek field, Wyoming, STR II, 602
 San Joaquin Valley, California, XXI, 985
 Santa Ana Canyon, PROB, 224
 Santa Ana gas field, XXVII, 774
 Santa Fe Springs field, PROB, 226, 404
 Santa Maria field, PROB, 207
 Santa Maria Valley oil field, XXIII, 48
 Saxet field, XXIV, 1811, 1812
 Saxet field, relation of production of distillate and of dry gas, XXIV, 1832
 Schuler field, XXVI, 1471
 Shipley pool, XXV, 1055
 Shiprock district, XIII, 142
 Smith-Ellis field, Texas, STR II, 569
 South Arkansas fields, XXVI, 1255-1258
 South Cowden field, XXV, 1050
 South Texas fields, XXIII, 865-868
 South Tyler field, XXIX, 770
 Southeast Mt View field, XXIV, 1118
 Southeast Stroud pool, XXVIII, 782
 southern fields, MEX, 107, 209, 210, 216, 217, 219, 223
 Spindletop, GC, 315; XIX, 624
 Steamboat Butte, XXVIII, 796
 Stephens County, XXVI, 1046
 Subalpine oil province, XII, 496
 Sulphur Bluff field, XXI, 1065
 Summerland field, PROB, 209
 Temperanceville field, XI, 956
 Thorpe pool, XXIX, 1597
 Tinsley field, XXIV, 1027
 Tipton field, XXI, 1011
 Tri-County field, Indiana, XI, 607, 610
 Tubb pool, XXIV, 128
 Turnbull Canyon field, XXVI, 1145
 Tussey field, XXI, 1011
 TXL pool, XXIX, 749
 Union Avenue field, XXVI, 1141
 Union field, XXVIII, 815
 variation, PROB, 98, 178, 229
 variation, due to differences of source rocks and reservoirs, PROB, 107
 variation, in Allegany County, New York, STR II, 284

(Gravity)

- variation, in Arroyo Grande field, PROB, 206
 variation, in Belridge field, PROB, 197
 variation, in Brea Canyon-Olinda fields, PROB, 215
 variation, in Buena Vista field, PROB, 201
 variation, in Caddo field, Louisiana, STR II, 192, 194
 variation, in Coalinga field, PROB, 194
 variation, in Elk Hills field, California, STR II, 56
 variation, in Elwood, PROB, 190
 variation, in Huntington Beach field, PROB, 220
 variation, in Inglewood field, PROB, 216
 variation, in Kern Front field, PROB, 204
 variation, in Long Beach field, PROB, 218
 variation, in Lost Hills field, PROB, 197
 variation, in Midway-Sunset field, PROB, 200
 variation, in Montebello field, PROB, 214
 variation, in Munich Tertiary basin, XVIII, 78
 variation, in North Belridge field, PROB, 188
 variation, in Potrero field, PROB, 216
 variation, in Raccoon Bend field, GC, 694, XVII, 1477
 variation, in Richfield field, PROB, 224
 variation, in Rincon field, PROB, 212
 variation, in Santa Maria field, California, STR II, 20
 variation, in Saratoga field, SD, 517
 variation, in Seal Beach field, PROB, 219
 variation, in southern United States and adjacent Gulf of Mexico, GC, 197; XVII, 1451
 variation, in Stephens field, Arkansas, STR II, 13, 14
 variation, in Torrance field, PROB, 222
 variation, in Venice field, PROB, 223
 variation, in Ventura Avenue field, California, STR II, 32, PROB, 210
 variation, in Whittier field, PROB, 214
 variation, in Wyoming and New Mexico, PROB, 724
 variation, with age, PROB, 103, 104, 106
 variation, with age, depth, metamorphism, and structural position, PROB, 97, 106, 161
 variation, with depth, PROB, 71, 106, 144, 185, 501
 variation, with depth, in Big Lake field, Texas, STR II, 529
 variation, with depth, in California pools, PROB, 404
 variation, with depth, in Gulf Coast Miocene crude oils, PROB, 115
 variation, with depth, in Spindletop, PROB, 114, 119
 variation, with depth, in Temblor sands, PROB, 187
 Venezuela fields, XIII, 1190
 Ventura County fields, PROB, 191-193, 405

- Gravity)
 Ville Platte field, Louisiana, XXII, 738
 Walker pool, XXVII, 756
 Wasco field, XXIII, 935
 Watson field, XXVII, 772
 West Columbia field, XXVI, 1453
 West Coyote Hills field, PROB, 225
 West Edison area, XXVI, 1148
 West Hotulke pool, XXVI, 1068
 West Texas, relation to price, XXVII, 751
 West Texas fields, XXVI, 1024-1026, 1028, 1032, 1033
 Westbrook field, Texas, XI, 473
 Wieland field, XXVII, 785
 Wilmington oil field, XXII, 1052, 1072, 1073
 Wilson Creek field, XXV, 1153
 Winnsboro field, XXIX, 770
 Woodlawn field, XXIII, 879
 Wyatt field, XXV, 1051
 Young County, Texas, XXI, 1023
 Gravity of Wilcox oil, Keokuk pool, XXIII, 241
 of Woodbine oil at Bellevue field, Louisiana, STR II, 249
 periodic variation of, with time, XXIV, 1382
 porosity determinations, RMS, 530
 relationship of sulphur content to, in pre-Jurassic oils of Wyoming, XXVII, 1312
 tidal variations of, XXIV, 1383
 variation of, with latitude, RMS, 109
 Gravity anomalies, XXIV, 1411
 in Beartooth-Bighorn region, XVII, 692
 in East Indian Archipelago, XXI, 114
 in Schleswig-Holstein, XXII, 497
 in southern Maryland, Virginia, and North Carolina, map showing contours on, XXIX, 86
 of salt domes, GC, 101; XVIII, 1197
 plotted on State geologic map of Oklahoma, XXIV, 2147
 Gravity anomalies and major structural features in southeastern Oklahoma and parts of adjoining states, map showing relationship between, XXIV, 2144
 Gravity anomalies and petroleum exploration by gravitational pendulum, XII, 889
 Gravity apparatus, Brown type, developed by the Coast and Geodetic Survey, description of, XXI, 333
 Gravity collapse of normal sediments due to southeastward tilt of earth's crust in Trinidad, XXIV, 2115
 Gravity determinations by E. Kol-schütter analyzed by Willis, XXI, 114
 in Virginia and North Carolina, XXIX, 83
 made by Coast and Geodetic survey in southeastern Oklahoma, XXIV, 2149
 Gravity distortions of earth, Pratt hypothesis of, XXIX, 1633
 Gravity effect of same structure at three different depths of burial, XXIV, 1381
 Gravity fault along eastern coast of Africa, XXI, 114
 Gravity field of earth, distortion of, by mountains, XXIX, 1632
 Gravity gas accumulation, XXVII, 774
 Gravity gradients as indicated by isotatic and free-air anomalies, XXI, 338
 (Gravity)
 at Suwa Basin, XIX, 60
 Gravity "highs", local, XXIV, 1381
 Gravity-interval pattern, reliability of, XXV, 567
 use in identification of crude oils, XXV, 565
 Gravity-interval pattern types in Gulf Coast crude oils, XXV, 583-592
 Gravity-interval patterns common to two or more oil fields, XXV, 582
 Gulf Coast, XXV, 578, 583
 regional study of, XXV, 578
 Gravity intervals, normal A.P.I., XXV, 564
 Gravity investigations of Gulf Coast geosyncline, XXIX, 1330
 Gravity map of Novogatchinsk salt dome, Ural-Emba district, Russia, XIV, 97
 Gravity measurements, adjustment of gradient of torsion balance and application of undulation method to, discussion, XIV, 1221
 Gravity meters, use of, XIX, 23
 Gravity method of exploration, XXVIII, 805
 Gravity minima and maxima, XXIV, 1429
 Gravity minimum along Gulf Coast, possible explanations, GC, 198; XVII, 1452
 proper objective for torsion balance, XXIV, 1406
 Gravity observations, MEX, 183
 recent, in southeastern Oklahoma, structural interpretation of, XXIV, 2143
 Gravity prospecting on Gulf Coast, recent developments in, XIX, 19
 Gravity research in Java, XXII, 50
 Gravity stations along intersection of two pronounced lines of pre-Cretaceous deformation, XXIV, 2143
 in southeastern Oklahoma, principal facts for, XXIV, 2145
 in Virginia, XXI, 336
 Gravity structure, XXVI, 1816
 Gravity studies on Mississippi delta, XXIII, 203
 Grawe, Oliver R., XII, 944
 Grawunder sand at Raccoon Bend field, GAS, 723; GC, 678, 688, 692, 700; XVII, 1461, 1472, 1475, 1483
 Gray, A., XV, 1383
 Gray, Allan B., XIV, 37
 Gray, K., Washington, XX, 1031, 1055
 Gray, P. H. H., and Thornton, H. G., XXVII, 1176, 1180
 Gray, William D., memorial of Noah C. Adams, XI, 779
 Gray Bull faunal zone in Wasatch beds, XXV, 2040
 Gray County, Texas, XXIII, 985
 columnar section of Finely pool, XXIII, 1002
 pre-Redbed columnar section of Taylor area, XXIII, 1009
 pre-Redbed columnar section of Webb pool, XXIII, 1008
 prospective oil areas in, XXIII, 1044
 stratigraphy of, XXIII, 998
 structural geology of, XXIII, 995
 subsurface geologic map of, XXIII, 996
 Gray lime, GAS, 390, 392, 396
 in Amarillo district, Texas, XVII, 881
 Texas, X, 462
 Gray sand, XXVI, 1044
 Grayburg field, XV, 784
 Grayburg formation, PTNM, 707; XXIV, 44, 45, 59; XXV, 607, 1049, XXVI, 707, 1020; XXVII, 491, 756, 768
 description, XXIV, 45
 of Whitehorse group, productive in North Cowden field, XXV, 607
 production from, XXIX, 745
 productive in Central Basin platform from Yates to North Cowden field, and in Eunice and Monument fields of Lea County, New Mexico, XXIV, 47
 Grayburg-Jackson field, XXIX, 750
 Grayburg-Marlow time, paleogeography of, XXVI, bet. 240 and 241
 Grayburg pool, XXIV, 45
 Grayburg-Queen movement, XXVII, 506
 Grayburg-San Andres contact, XXVII, 491
 Grayburg zone, XXVI, 1037
 Grayson formation, XXIX, 179
 contact at top of, XXIX, 181
 Grayson fossils, XXIX, 181
 Grayson marl, XXIX, 172, 173
 Grayson pool, extension, XXIX, 745
 Grayson shale, Cenomanian age of, XXIX, 1426
 Grayson shale and Buda limestone in South Texas, upper Albian in age, XXIX, 1467
 Grayson-Woodbine contact in Grayson and Cooke counties, Texas, map showing outcrop localities of, XXIX, 180
 Graywackes and the petrology of Bradford oil field, Pennsylvania, discussion, XXV, 2071
 Greasewood area, Colorado, STRAT, 22; XVII, 433
 Greasewood field, Colorado, FOP, 60; PROB, 729, 950; STRAT, 21; XXV, 1492
 Greasewood Flats, Weld County, Colorado, discovery of oil at, XVI, 256
 Greasewood oil field, Weld County, Colorado, STRAT, 19
 accumulation of oil, STRAT, 41, 42
 analyses of oil and water, STRAT, 40-41
 cost of drilling, STRAT, 41
 Greasewood sandstone, Greasewood field, STRAT, 26, 28, 29, 33, 35, 36
 Great Artesian Basin in Australia, XI, 64
 Great Barrier Reef, RMS, 365
 Great Basin, CAL, 26, 35, 48, 119, 182, 193; XXIII, 122, 125; XXVII, 429
 Jurassic in, CAL, 75
 southwestern United States, decline of, XVI, 1
 Triassic in, CAL, 301
 Great Basin scarp, production in, MSC, 133
 Great Basin section, GAS, 222
 Great Basin structure, theory of, XVI, 2
 Great Britain, geological results of search for oilfields in, XXIX, 1353, Jurassic system in, MSC, 80, 90
 Jurassic system in, review, XVIII, 268
 problems of oil supply, XXV, 366
 resources, review, VI, 391
 Great Falls-Calgary arch, PROB, 698
 Great Khingan Mountains, XXVIII, 1419
 Great Plains, CAL, 182

- (Great)
 northern, areal geology of, XXVI, 1558
 uplifts in, XXVII, 425
 Upper Cretaceous in, XXII, 1631
 Great Plains province, XXVIII, 324
 Great Plains region, STRAT, 21
 Upper Cretaceous sequence in, XXII, 1633
 Great Salt Lake, Utah, algal bioherms at, XXII, 1392
 analyses of water from, XXII, 1321
 analyses of waters tributary to, XXII, 1322
 anticlinal structures in basin of, XXII, 1411
 burial of islands of, XXII, 1408
 buried hill structure in basin of, XXII, 1410
 chemical precipitates in, XXII, 1322, 1329
 chemistry of, XXII, 1319
 correlation of inflow with size of, XXII, 1317
 deep-lake deposits of western area, XXII, 1352, 1357
 fluctuations of surface level and salinity of, XXII, 1316
 geologic history of, XXII, 1308
 granule sands on beaches of, XXII, 1388
 hydrogenic shingle on beaches of, XXII, 1387
 hydrography of, XXII, 1316
 lateral variations of types of sediments of, XXII, 1408
 life in, XXII, 1330
 near-shore deposits of western area, XXII, 1352, 1357
 origin of, XXII, 1307
 rate of sedimentation in, XXII, 1330
 relation of magnesium to insolubles in, XXII, 1347
 river-mouth deposits in eastern division, XXII, 1352, 1357
 salinity of, XXII, 1319
 salinity curve of, XXII, 1320
 sediments of, XXII, 1305, 1333
 sediments of—comments, XXIII, 1089
 sequence of salt precipitation in, XXII, 1323
 soluble contents of waters tributary to, XXII, 1322
 stages of level of, XXII, 1316
 topographic map showing distribution of commonest types of sediments, XXII, 1311
 Great Salt Lake area, Utah, GAS, 223, 240, 241
 geography and topography of, XXII, 1309
 Great Salt Lake clay and dust, grain size comparison of loess with, XXII, 1351
 Great Salt Lake clays, calculated mineral content of fine white material in, XXII, 1346
 chemical analyses of, XXII, 1339, 1340, 1344
 origin of, XXII, 1350
 Great Salt Lake clays and loams, mechanical analyses of, XXII, 1336
 Great Salt Lake oolites, XXII, 1364
 composition of, XXII, 1369
 theory of origin of, XXII, 1384
 Great Salt Lake sediments, microscopic determination of physical constituents in, XXII, 1337
 Great Salt Lake water, solubility of car-
- (Great)
 bon dioxide in water, sodium chloride solution, and, XXII, 1324
 Great Salt Lake waters, temperature gradient of, XXII, 1319
 Great Valley, California, CAL, 1, 11, 16-18, 27, 30, 31, 45, 48, 59, 111
 Chaco strata along eastern border, SC, 11; XX, 1557
 correlation, CAL, 303
 Cretaceous in, CAL, 99, 109
 Cretaceous sections in, XXIX, 972-978
 Eocene in, CAL, 120, 124, 145
 lithologic character, formational divisions, and foraminiferal zones in surface sections along west side of, XXIX, 963
 Pliocene in, CAL, 236
 stratigraphic relations of Upper Cretaceous in, XXIX, 956
 zonal range of most diagnostic foraminifera species in Upper Cretaceous of, XXIX, 968
 Great Valley geosyncline, trend of, parallel with west side of valley, XXIX, 996
 Greater Seminole district, Oklahoma, STR II, 315 (See Seminole district, Oklahoma)
 Viola limestone in, STR II, 332
 Grebe, J. J., and Sanford, Ross T., XXIV, 1361; XXV, 850
 Grecian Archipelago, Recent foraminifera from, MSC, 13
 Greeley field, California, XXI, 983; XXII, 939
 extension, XXII, 712
 gravity of oil at, XXIV, 1119
 Vedder sand productive in, XXIV, 1119
 Greeley gypsum, II, 75
 Green, A. P., Fire Brick Company, XVIII, 39
 Green, C. H., XXV, 1166, 1343
 Green, Darsie A., XXI, 1513, 1561, 1562, 1564, 1565, 1567, 1570, 1571; XXIII, 566, 579, 581, 1708, 1754, 1777, 1790, 1803, 1817, 1818; XXIV, 320; XXV, 1682, 1684; XXVI, 238
 discussion of Permian, XXI, 1560
 discussion of Permian redbeds in Kansas, XXIII, 1817
 discussion of Permian sections in North America, XXIII, 1678
 major divisions of Permian in Oklahoma and southern Kansas, XXI, 1515
 Permian and Pennsylvanian sediments exposed in central and west-central Oklahoma, XX, 1454
 Green, G. E., Bybee, H. P., Boehms, E. F., Butcher, Carey P., and Hemphill, H. A., detailed cross section from Yates area, Pecos County, Texas, into southeastern New Mexico, XV, 1087
 Green, George L., XIV, 1354
 Green, O. G., XXIX, 956
 Green, W. Lowthian, theory of continental drift, CD, 34
 theory of isostasy, CD, 12
 Green ash, MEX, 53
 Green chert, XXV, 1755
 Green mud and glauconite in East Indies, RMS, 350, 397
 Green River basin, Colorado, Utah, and Wyoming, VIII, 302
 map, FOP, 56; XXV, 1488
- (Green)
 structure section, FOP, 57; XXV, 1489
 Wyoming, XXVII, 431
 Wyoming, exploration for evaporite salts in, XXV, 1799
 Wyoming and Colorado, FOP, 53, XXV, 1485
 Green River formation, IV, 62, 197; V, 207; XXV, 142, 1735, 1741
 in northwestern Colorado, STR II, 98
 (Middle Eocene), XXII, 1032
 origin of, VIII, 662
 upper, XXII, 1023
 Green River formation and its oil shale origin of, IX, 247
 Green River formation waters, XXIV, 1316
 Green River gas field, GAS, 822
 Green River sandstones, PROB, 172
 Green River shale, PROB, 271, 728
 waters from, IX, 171
 Green shale at breaks throughout Ohio from Cambrian to Pennsylvanian rocks, XXIV, 677
 at top of Silurian in Pecos and Crane counties, XXIX, 1341
 basal Agua Nueva, MEX, 25, 33, 45, 49, 64
 in Black River group in Ohio, analysis of, XXIV, 684
 in Vance well, XXIV, 677
 Green strength of clay, RMS, 483
 Greenalite, relation of, to faecal pellets, RMS, 519
 Greenberg, L., and Lipman, C. B., XXVII, 1176
 Greenbrier formation in Cabin Creek field, West Virginia, STR I, 466
 oblitic zones in, XXV, 801
 Greenbrier limestone (Cg) (Mississippian), SBP, 351, 353, 357-379, 413
 Gay - Spencer - Richardson trend, STRAT, 810
 Greenbrier sand, PROB, 490, 494
 Greenbrier series, XXV, 800
 in Copley pool, West Virginia, STR I, 448
 Greenbush cyclothem, XXVI, 1589
 Greendale field, XXII, 407
 Greendale high in Michigan, gas fields on, XXII, 138
 Greene, XXII, 884
 Greene, Frank Cook, PROB, 763; III, 270; V, 119; VIII, 317, 323, 332; IX, 350, 814; X, 293; XII, 1156; XIV, 37; XVI, 651; XVIII, 866; XIX, 503; XXIII, 1754; XXV, 25, 29, 31, 32, 36, 49, 61; XXVI, 1587
 are there redbeds of Chester age in Mid-Continent region? VII, 696
 contribution to geology of eastern Osage County, II, 118
 discussion of geology of Stonewall quadrangle, Oklahoma, IX, 355
 Geologists-international petroleum show, VIII, 685
 granite wells in northern Mid-Continent region, IX, 351
 origin of oil in northern Mid-Continent, review, VII, 454
 Greene, Frank Cook, and Clair, XXV, 31
 Greene, Frank Cook, and Hinds, Henry, XVIII, 1320; XIX, 1063; XXV, 31, 42, 44, 46, 50, 55, 56, 61, 70, 71
 Greene, Frank Cook, and McQueen, H. S., XXV, 30, 31, 46

- Greene, Frank Cook, and Moore, R. C., XXV, 31
- Greene, Frank Cook, and White, Luther, correlation of "Wilcox" sand of Okmulgee district with the Osage, Oklahoma, V, 399
- Greene, R. G., exploration for evaporite salts in Green River basin, Wyoming, XXV, 1799
- oil on Agua Caliente anticline, Department of Loreto, Peru, XXIII, 688
- Greene County, Pennsylvania (well 420), SBP, 349-379, 410
- Greenfield, California, outcrop section G, SBP, 167-194, 410
- Greenhorn limestone, III, 358; IV, 76, 98; VI, 72, 551; XXI, 192, 955; XXII, 676, 1633
- Fairport field, Kansas, STR I, 37
- Hugoton field, STRAT, 84, 85 (Kt) (Cretaceous), SBP, 198
- Nebraska, structural map of top of, XXVI, 1531
- Osage field, STRAT, 851
- waters from, XXIV, 1313, 1315
- Greenish S M, GAS, 609
- Greenish gray limestone, at Mesa de Solis, MEX, 55
- San Felipe, MEX, 63-65, 189, 223, Figs. 9, 10 (in pocket)
- Greenish shale at Monroe-Niagara unconformity in Ohio, analysis of, XXIV, 677
- Greenland, change of location relative to Europe shown by astronomical observations, CD, 101
- Greenly, Edward, and Williams, Howel, methods in geological surveying, review, XV, 91
- Greensand, XXIX, 67
- Greensand horizon of Cardabia series in Northwest Basin, Australia, fossils from, XX, 1057
- Greensand (Twe), SBP, 336. (See Weches greensand member of Mount Selman formation)
- Greensburg field, Decatur County, Indiana, XXVII, 820; XXVIII, 758
- Greensburg gas field, Green and Taylor counties, Kentucky, GAS, 877
- Greenvale pool, Kansas, XXIII, 804
- Greenville, Mississippi, geologic relationship of borings at, XXIII, 1394
- Jackson Eocene from borings at, XXIII, 1393
- Greenville, Texas (wells 376, 377), SBP, 292-335, 409
- Greenville field, GAS, 832, 833
- Greenwich and Nemaha trends, map of Kansas showing location of, XXIII, 644
- Greenwich area, topographic map of, XXIII, 646
- Greenwich pool, Sedgwick County, Kansas, acidization at, XXIII, 657
- artificial stimulation and rejuvenation of, XXIII, 657
- bottom-hole pressures at, XXIII, 662
- cross section showing relationship of Permian, Pennsylvanian, Mississippian, and Ordovician formations at, XXIII, 656
- development of, XXIII, 643
- increase of production by acidization, Viola limestone, XXIII, 660, 661
- isopach maps of, XXIII, 650, 651
- log of, XXIII, 648
- map of, XXIII, 645
- Mississippian in, XXIII, 648, 649
- (Greenwich)
- oil zones at, XXIII, 652
- Ordovician in, XXIII, 648, 649
- Pennsylvanian in, XXIII, 648
- Permian in, XXIII, 648
- production at, XXIII, 644, 647, 652, 658, 659
- proration at, XXIII, 647
- shooting of Simpson sand wells at, XXIII, 662
- structure of, map contoured on Mississippian limestone, XXIII, 653
- Sedgwick County, Kansas, subsurface study of, XXIII, 643
- water encroachment at, XXIII, 662
- Greenwich structure a closed anticline, XXIII, 652
- located by core-drill exploration, XXIII, 643
- Greenwood and Butler counties, Kansas, origin of Bartlesville shoestring sands, XVIII, 1313
- origin of shoestring sands of, XXII, 1458
- Green-Butler counties, Kansas, region, map of, wells and shoestring trends in, XVIII, 1315
- Greenwood County, Kansas, Mississippi lime buried hills in shoestring pools, STR II, 159
- Greenwood field, Louisiana, XXV, 1033
- Greenwood field, New York, XXVII, 837
- (well 412), SBP, 349-379, 410
- Greenwood pool, Kansas, STR II, 157
- Greenwood pool, Steuben County, New York, XXII, 260
- Greer, Frank E., X, 1286
- Greer, Frank E., and Bastin, Edson S., PROB, 915; XXVII, 1182
- additional data on sulphate-reducing bacteria in soils and waters of Illinois oil fields, XIV, 153
- Greer and Quartermaster formations in Collingsworth County, Texas, XXI, 450
- Greer formation, I, 103; II, 74, 114; III, 170, 268; IV, 270; XXI, 429
- Greger, D. K., V, 123, 175, 287, 548; VI, 5, 10; XI, 49, 1074; XVIII, 1133; XX, 805, 808
- Greger, D. K., and Branson, E. B., XXV, 131
- Gregersen, Albert I., SC, ix, 77; XVIII, 1353; XX, 1535; XXV, 195, 214; XXVI, 1154; XXVIII, 1781
- Gregersen, Albert I., and Porter, William W., II, developments in California in 1943, XXVIII, 743
- Gregersen, Albert I., Richards, G. L., Jr., and Klempell, R. M., MSC, 65
- Gregg, E. T., IX, 314
- Gregg, Rusk, Cherokee, Smith, and Upshur counties, Texas, East Texas oil field, STRAT, 600
- Gregg County, Texas (wells 314-334), SBP, 292-335, 408, 409
- Gregory, XXIV, 1606
- Gregory, E., XXV, 374
- Gregory, F. E., XVII, 1444
- Gregory, Herbert E., VI, 211, 213; VII, 389; XI, 802; XIII, 147, 1414, 1427, 1441, 1442, 1443; XIX, 1476; XXIII, 139, 1170; XXV, 1761; XXIX, 511
- Gregory, Herbert E., and Moore, R. C., XI, 802; XIII, 1431; XVII, 125; XIX, 1496, 1498
- Gregory, H. E., and Noble, L. F., XIII, 1418
- Gregory, John Walter, CD, 129, 185; XX, 890, 892; XXI, 113; XXII, 1218, 1220; XXIV, 2118; XXIX, 534, 1082
- Wegener's hypothesis, CD, 93
- Wegener's hypothesis, discussion by van der Gracht, CD, 210
- Gregory, Joseph T., and Sellards, E. H., XXIX, 1710
- Gregory field, Texas, XXIX, 784
- Gregory Rift Valley, XXI, 114, 115
- Greig-Smith, R., XXVII, 1186
- Greit, II, 149, 152, 154, 155, 157
- Grenada formation, XXIV, 1892
- Grenness, J., RMS, 551
- Grasley, W. S., XVII, 1527, 1532
- Greta, McPaddin-O'Conner, Fox, Refugio, White Point, and Saxet fields, Texas, GC, 664; XVIII, 519
- Greta or *Marginalia* zone productive in coastal area of south Texas, XXIII, 867
- Greta oil field, Refugio County, Texas, GC, 648; XIX, 544
- development of, GC, 668; XVIII, 523
- sections, GC, 658-660; XIX, 554-556
- Greta sand, XXIV, 1829; XXV, 1985
- isopach map of La Rosa field, Refugio County, Texas, showing interval from top of, to top of 5,900-foot sand, XXV, 310
- Greta sand and Frio beds, unconformity between, XXV, 313
- Greta sand zone, XXIII, 868
- Greta unconformity, XXIV, 1821
- Grey, Sir George, XXV, 373
- Greybull field, tilt of water-oil contact at, PROB, 838
- Greybull sand, Wyoming, PROB, 160; V, 196; XXIII, 911
- Greybull sandstone, GAS, 250
- Greybull section, Wyoming, outcrop section a, SBP, 243-255, 411
- Greybull water in Frannie oil field, XXIV, 1255
- in Skelton dome, XXIV, 1257
- Gribben, D. J., Jr., STRAT, 9
- Grid rulings on lantern-slide copy, XXVI, 1662
- Gridley Canyon, California, outcrop section N, SBP, 167-194, 411
- Griep, E. F., XXI, 584
- Gries, John Paul, two deep water wells near Rapid City, South Dakota, XXVII, 646
- Gries Ranch formation, CAL, 148
- Gries Ranch horizon, Washington, MSC, 161
- Griffin, J. R., XXIV, 769
- Griffin field, XXV, 1122; XXVI, 1093; XXVII, 777, 819; XXVIII, 758
- repressuring in, XXVII, 820
- Griffin pool, XXIII, 849, 855; XXV, 1066
- Griffith, C. L., MEX, 50
- Griffith, J. S., RMS, 214
- Griffith, J. S., and Krumbein, W. C., XXIX, 1255
- Griffith, P. S., IX, 712
- Griffithville field, West Virginia, STR II, 571
- Griffithville pool, PROB, 495
- Griggs, David, XXVII, 53, 54, 57; XXIX, 1652
- Griggs, David, and Goranson, Roy W., XXVII, 63
- Griggs, Roy L., XXIX, 221
- Griggs' curves for creep of alabaster in different chemical environments, XXVII, 56

- Griggs-Goranson formula, XXVII, 55
 Grigsby, Garland O., memorial of Ed Dickinson Wappler, XXI, 543
 Grigsby, R. L., XII, 946
 Griley, H. L., XV, 433; XVIII, 1310; XX, 1474; XXI, 435, 1559, 1560, 1563, 1569, 1570, 1571, 1572; XXIII, 581, 1788, 1817; XXIV, 9, 2148, XXV, 1684
 discussion of anhydrite-gypsum of Blaine formation, XXVIII, 1310
 discussion of Permian beds of northwestern Oklahoma, XV, 433
 Griley, H. L., and Meier, J. Lawrence, XXVIII, 1622
 Griley, H. S., XXI, 1493
 Grim, Ralph E., GAS, 887; RMS, 457, 467, 473, 603, 619, 625, 628
 properties of clay, RMS, 466
 Grim, Ralph E., and Allen V. T., XXVI, 53
 Grimes, G. E., XI, 569
 Grimes, Glenn, XIX, 410
 Tatum pool, Carter County, Oklahoma, XIX, 401
 Grimes and Brazos counties, Texas, application of name "Ferguson Crossing dome," XXIII, 1092
 Grimes County, Texas, restriction of name "Carlos," XXIII, 1091
 Grimm, M. W., Shreveport field, Caddo Parish, Louisiana, XXII, 1277
 Grimm, M. W., and Bell, H. W., some tests on cement and cement accelerators, XII, 279
 Grimsby formation in Ontario, GAS, 73, 78, 79
 Grimsdale, T. F., XXIV, 1550, 1559
 Grimsley, G. P., XVIII, 1299; XXIV, 487
 Grinding, effect of, on base exchange, RMS, 456, 463, 472
 Grinding action in streams, RMS, 38
 Grinnell, Fordyce, Jr., CAL, 287
 Grinsfelder, S., XXI, 584
 memorial of William G. Gallagher, Jr., XVII, 345
 Gripenberg, Stina, RMS, 1, 258, 263, 274, 281, 387, 437, 554, 564, 578
 mechanical analysis, RMS, 532
 sediments of Baltic Sea, RMS, 298
 study of sediments of north Baltic and adjoining seas, review, XIX, 128
 Gripp and Harbort, XII, 472
 Gripp, J. K., SD, 47, 160, 163; IX, 435
 Griswold, D. H., XVI, 1263
 Griswold, L. S., XVIII, 972, 982
 Griswold, W. T., V, 460; VII, 608, 611, 613
 Griswold, W. T., and Munn, M. J., PROB, 465
 Grits of Artinsk, XXIV, 273
 Grizzly Bear tongue, XXIX, 1621
 Grizzly formation, CAL, 62, 63
 Groeber, Pablo, XXVIII, 1477; XXIX, 501, 502, 504, 508
 Groesbeck, Texas (wells 391, 392), SBP, 292-335, 410
 Groesbeck district, Texas, STR 1, 308, 311, 339, 362; GAS 678
 Groesbeck field, PROB, 779
 Groesbeck-Mexia district, GAS, 652, 667, 671, 674
 Groesbeck-Mexia-Powell-Sulphur River line of faults, GC, 266; XVII, 1209
 Grogan, S. A., GAS, 997; MEX, x, 31, 48, 74
 Grogan, Samuel, XXIX, 1417
 Grogan Oil Company, XXIII, 322
 Grogan pool, XXVII, 779
 Grohskopf, J. G., XXV, 32, 49, 61
 Grohskopf, John, review, XXI, 1498
 Groningen, Holland, RMS, 348
 Gronland, 1939, XXIV, 882
 Gronwall, K. A., and Harder, XV, 154
 Gros Ventre formation, XXV, 127
 Gros Ventre member, XXIII, 481
 Gros Ventre Mountains, faulted, XXVII, 430
 Gros Ventre River, Wyoming, outcrop section C, SBP, 243-255, 411
 Gros Ventre shale, XXV, 1733
 Grosse, Emil, XVII, 212, 215, 216, 217; XXIV, 1615; XXVI, 804, 808, 821, 824; XXIX, 532, 533, 1078, 1081, 1082, 1087, 1089, 1091, 1092, 1134
 Grotensohn, A., XX, 1491
 Groton field, New York, XXVII, 837, 838; XXIX, 668
 Ground, adaptation of, for military use, XXVI, 1834
 Ground water, XXII, 490
 available for Houston district, investigation of, XXIX, 254
 effects of, on subsurface temperatures, PROB, 999
 geology and its relation to occurrence of, XXVII, 1083
 in Houston district, chemical character of, XXVII, 1098
 in Houston district, quality of, XXVII, 1101
 limitations of, as aid in determination of geologic structure, XVI, 335
 movements of, XX, 704; XXIV, 115; XXVII, 1089
 Ground water and geologic structure of Natchitoches area, Louisiana, XXIX, 23
 Ground water and relation of geology to its occurrence in Houston district, Texas, XXVII, 1081
 Ground-water contours in California fields, XVI, 342-354
 Ground Water Division of United States Geological Survey, XXIX, 23, 886
 Ground-water geology of Camp Polk and North Camp Polk, Louisiana, XXIX, 1169
 Ground-water motion, theory of, XXV, 1418
 Ground-water resources of Kansas, XXV, 1412
 Ground-water resources and geology of Cimarron County, Oklahoma, XXVIII, 877
 Ground-water terminology, GC, 275; XIX, 322
 Ground waters, normal, map showing types of, Texas Gulf Coast, PROB, 892
 problems of origin and evolution of, GC, 272; XIX, 319
 Ground waters and soils, inorganic analyses of, XXIV, 1406
 Group, XXIII, 1074
 Grove, Brandon, and Ball, J. R., XXVI, 16
 Grove gas field, GAS, 634
 Growth of deltas at mouth, RMS, 159, 164
 of organisms in sea, conditions of, RMS, 145
 of plankton, conditions of, RMS, 437-438
 Growth form, XXVI, 1732
 Grozescu, Voitești, and Preda, SD, 112
 Grozny, Russia, oil and water content of oil sands, XIII, 811
 Grozny area of North Caucasus, XXI, 1075
 Grozny district, Russia, XI, 1036; XXI, 1077, XXII, 758; XXIII, 951
 gas in, XVIII, 749
 Grozny fields, waste of natural gas in, XXIII, 955
 Grubb Two zone, XXIX, 651
 Grubenmanns Upper Zone, CAL, 84
 Gruber test, GAS, 543
Grundfragen der Oelgeologie, review, XIV, 1234
Grundwasser und Quellen Kunde, review, XIX, 1701
 Grundy and Daviess counties, Missouri, Des Moines series in, section, XXV, 45
 Missouri series in, section, XXV, 44
 Grundy County, Illinois, RMS, 471
 Gruner, John W., RMS, 423, 504, 505, 506, 513, 515, 625; XII, 767
 algae believed to be Archean, review, VII, 302
 Gruse, William A., XX, 290; XXI, 1470
 petroleum and its products, review, XII, 1117
 Gruse, William A., and Stevens, Donald R., chemical technology of petroleum, review, XXVII, 652
 Gryphaea zone, XXI, 736, 740
 Grzybowski, J., XII, 20, 23, 24, 25, 26
 Gshelian beds, XXIV, 245, 248
 Guadalupe and Ochoa series in Glass Mountains, classification of, PTNM, 655; XXVI, 655
 Guadalupe Cañon, Sierra Tamaulipas, contact metamorphism in, MEX, 149, 170
 Guadalupe County, Texas, columnar section from, to Sierra de Oballos in east-central Coahuila, Mexico, XXIX, 1436
 Guadalupe-Delaware Mountains and Glass Mountains, fusuline zones of, XXV, 97
 Guadalupe Escarpment, XXI, 842, 866
 Carlsbad limestone in, XXI, 864
 Guadalupe fault, XXI, 842
 Guadalupe fault system, XXI, 896
 Guadalupe formation, XXIX, 523, 530
 coal beds in, XXIX, 1090
 Guadalupe monocline, XXI, 844, 895
 Guadalupe Mountains, PTNM, 538, 545; XIII, 930, 962; XXI, 837, 839; XXVI, 538, 545
 coralline algae in, XIII, 1079
 panorama and section in North McKittrick Canyon, PTNM, 635; XXVI, 635
 panorama and sections, PTNM, 627; XXVI, 627
 Permian formations in, XIII, 934
 San Andres in, XXIV, 43
 Sierra Diablo, and vicinity, tectonic maps of, PTNM, 615, 616; XXVI, 615, 616
 Guadalupe Mountains and vicinity, map, PTNM, 552; XXVI, 552
 Guadalupe Mountains proper, Brokeoff Mountains, Crow Flat, map, XXI, 843
 Guadalupe Mountains region, geography and tectonics of, PTNM, 551; XXVI, 551
 sections of Wolcamp and Leonard series, PTNM, 558; XXVI, 558
 sedimentation and tectonics in,

- (Guadalupe)
PTNM, 613; XXVI, 613
Guadalupe Mountains section, PTNM, 550; XXVI, 550
four series in, PTNM, 555, XXVI, 555
Guadalupe Peak, Culberson County, Texas, XXI, 842
section extending from, to Harrison County, Texas, XXI, 1084
Guadalupe scarp, XXI, 838
Guadalupe series, PTNM, 575; XXIV, 341, XXV, 80, 1681, 1683, 1685; XXVI, 250, 575
correlation of San Andres group with lower part of, XXV, 83
correlations, XXIII, 1678
fossils of, PTNM, 597; XXVI, 597
in and around Delaware basin, divisions, XXIII, 1676
in Delaware basin, correlation of, PTNM, 699; XXVI, 699
in Glass Mountains, PTNM, 654; XXVI, 654
in Glass Mountains, correlation of formations of, with Guadalupe Mountains section, PTNM, 658; XXVI, 658
in Guadalupe Mountains region, sections, PTNM, 584; XXVI, 584
in Marfa basin, PTNM, 700; XXVI, 700
of Permian in Guadalupe Mountains, XXIII, 1675
Guadalupe time, features of, in West Texas region, PTNM, 744; XXVI, 744
maps showing paleogeography of, PTNM, 745-747; XXVI, 745-747
middle, XXVI, 240
Guadalupe, diagram of Point of, XXI, 875
Point of, XXI, 865
Guadalupean fauna, XXI, 873; XXV, 1717
Guadalupean section, correlation of, XIII, 1021
Guadalupean sediments of Delaware basin, XXVIII, 1598
Guadalupe coal-bearing formation, XXIX, 530
Guadalupe formation, XXIX, 523
correlated with coal-bearing Eocene of southwestern Venezuela, XXIX, 1102
Gualanday beds, XXVI, 807
Gualf, Mesa, and Honda formations, type localities and outcrops of, XXVI, 810
Gualf formation, XXVI, 798, 812; XXIX, 1105
Pleistocene in age, XXVI, 828
Gualterius, Nicholas, XXV, 1216
Gualtieri, XXV, 1214
Guamito formation, XXIX, 1099
Guano, RMS, 146
Guapo fault zone, XXIII, 963
Guarumen sandstone group and Ortiz sandstone of north-central Venezuela, XXVI, 126
Guatemala and British Honduras, Cretaceous in, XXVIII, 1117
Guayabal, MEX, 105, 110, 114, 118
mega-fossils of Upper Temporal formation from, MEX, 114
Guayabal foraminifera, MEX, 105, 106
Guayabal formation, synonym for Temporal beds, MEX, 110
Guayalejo Cañon, MEX, 62, 160
Guayalejo River, Tamesí beds in, (Guayalejo)
MEX, 78
Guayana highlands, XXIX, 1082
Guayana shield, XXVIII, 26; XXIX, 1073, 1131
Guayaquil limestone, age of, XIII, 383
in Ecuador, fossils of, XIV, 281
Guayuta group, XXVIII, 10
Gubkin, I., XXVIII, 1487, 1499; XXIX, 1745, 1751
Gubin, V., and Tzschomskaya, V., PROB, 915
Guelph beds, GAS, 80
Guelph-Camillus, GAS, 64
Guelph dolomite, GAS, opp. 80
Guelph-Salina formation in Ontario, GAS, 78
Guelph-Salina gas fields, GAS, 72
Guerrassimov, N. P., XXIV, 289, 297
Guerecul formation, XXVIII, 10
fault contact between Chimana formation and, XXVIII, 10
fossils of, XXVIII, 11
Guernsey formation, V, 189
Guerrero, State of, MEX, 61, 92, 95, 97
town of (State of San Luis Potosí), MEX, 37, 64, 66, 74, 75, 140, 249
Guerrero dome, widening of Carrizo sandstone over crest of, GC, 600; XIX, 1369
Gueydan formation, XXV, 2003
Guffey, J. M., SD, 615; IX, 507
Guffey, J. M., Petroleum Company, SD, 443, 502, 503
Guiana shield, XXIX, 521, 524, 539
Guiberson, S. A., JR., VII, 619
Guide book—ninth annual field conference, Kansas Geological Society, review, XIX, 1562
Guide des Excursions Deuxième Réunion en Roumanie, Association pour l'Avancement de la Géologie des Carpathes, review, XIII, 182
Guide species in Eocene formations, MEX, 106
Guidinger, Edw., XVI, 1024, 1026
Guijarral Hills sections, CAL, 216
Guimardes, Djalma, XIX, 1756; XX, 1208, 1223; XXI, 99, 100
Guinda beds, XXIX, 990
Guinda formation, XXVII, 283
Guinea Basin, RMS, 382, 386, 392
Guinea Swell, XXIII, 1667, 1670
Gulf (Colorado) horizons in Alberta, GAS, 22
Gulf (Colorado), reserves in, GAS, 24
Gulf of Aqaba and Red Sea, series of faults paralleling, XXII, 1218
topographically and tectonically distinct units, XXII, 1222
Gulf of Bengal, RMS, 397, 399, 402
Gulf of Bothnia, RMS, 102, 298, 300, 307, 310, 314, 317, 321, 437
Gulf of California, RMS, 3, 447
Gulf of Certe, France, RMS, 449
Gulf of Finland, RMS, 298, 305, 307, 309, 310, 312, 314
Gulf of Maine, RMS, 222, 223, 225, 229, 231, 233, 237, 242, 417
Gulf of Mexico, PROB, 56; RMS, 3, 45, 108, 154, 155, 179, 180, 379, 383, 385, 447, 483, 484
ancestral, XXV, 2008
concentration of salt in, XXV, 1201
potential source of salt-dome oil, XXV, 1007
sediments from, XXIII, 1123
Gulf of Mexico and Caribbean Sea, petroleum resources in environs of, XXVIII, 1508
Gulf of Oman, RMS, 365
character of bottom, XXI, 1580
Gulf of Oman bottom, fossils of, XXI, 1580
Gulf of Panama, RMS, 115
Gulf of Paria, structure, VI, 474
Gulf and Eocene subsurface strata, southern Arkansas, XXII, 961
Gulf and western interior regions of United States, ranges of identical and analogous species of Upper Cretaceous fossils in, XXII, 1637
Gulf Border salt deposits, age of, XVIII, 1227, 1267
climatology of Brown's hypothesis on origin of, discussion, XX, 821
Gulf Coast, MSC, 102, 178; RMS, 44, 153-177, 446
bibliography on correlation of stratigraphic units of, XXV, 743
correlation of crude oils with special reference to crude oil of, XXV, 561
deep coastal zone in, XXIV, 1085
deep drilling along, XXII, 748
depth variation of specific gravity of crude oils of, XXI, 924
development in 1917, II, 34
Eocene in, XXIII, 1409; XXV, 2015
forecast of future prospecting and production in, GC, xiv
important new sand development in, XXIV, 1089
in Texas and Louisiana, oil-producing horizons of, GC, 1
intermediate zone in, XXIV, 1084
Jackson group of, XXI, 80
Louisiana and Texas, sediments, heavy-mineral zones of, XXIV, 2069
marine sedimentation and oil accumulation on, I, Progressive marine overlap, XXV, 2010
of Florida, sketch of, showing bays enclosed by bars similar to Verden sand bar of Oklahoma, XXIII, 578
of Louisiana, developments in 1944, XXIX, 792
of southeast Texas and Louisiana, review of developments in 1938, XXIII, 871
of Texas between Colorado and Nueces rivers, map of part of, showing location of post-Vicksburg flexure and upper limit of Oligocene sand wedge, XXIII, 1628
of Texas, correlation of surface and subsurface formations in two typical sections of, XXIII, 1603
of Texas, deposition of Lissie and Beaumont formations of, XXIV, 693
of Texas, map of part of, between Colorado and Nueces rivers, XXIII, 1606-1607
of Texas and Louisiana, map of, XXIV, 2072
of Texas and Louisiana, occurrence of sulphur waters in, and their significance in locating new domes, SD, 774; IX, 35
of upper Texas and Louisiana, developments in 1943, XXVIII, 853
of upper Texas and Louisiana, review of developments in 1939, XXIV, 1079
of upper Texas and Louisiana, review of developments in 1940, XXV, 1004
of upper Texas and Louisiana, review of developments in 1941, XXVI, 983

(Gulf)

- of upper Texas and Louisiana, review of developments in 1942, XXVII, 730
- oil-producing horizons of, in Texas and Louisiana, XVIII, 500
- Oligocene in, XXII, 989; XXIII, 1408
- Oligocene production from, GC, 11
- paleontological zonation in, XXII, 985
- recent developments in gravity prospecting on, XIX, 19
- rock-salt deposits of, XXI, 1268
- section along, showing updip wedging-out of producing sands, XXVII, 896
- sections showing detail of underground to depth of 12,000 feet, XXIII, 1608
- sections showing distribution of paleontological zones in, XXII, 993-995
- sequence of groups, formations, and zones in, XXII, 987
- shallow piercement type salt-dome structures of, type of reservoirs in, XXIX, 1566
- some oil field waters of, III, 310
- tentative correlation chart of, XXV, 742
- Texas and Louisiana, recent developments in, XVII, 558
- upper, of Texas, developments in 1944, XXIX, 785
- upper, of Texas, discoveries in 1944, XXIX, 786
- upper, of Texas, extensions and new sands in 1944, XXIX, 788
- upper, of Texas, fields discovered in 1944, XXIX, 787
- upper, of Texas, geophysical exploration in, XXIX, 790
- value of seismic survey to greater depth, XXV, 1258
- zones of paleontological correlation in, XXII, 989
- Gulf Coast and Roumania, comparison of salt structures, SD, 139; IX, 155
- Gulf Coast anticlines, grabens in, and their relation to other faulted troughs, XXVIII, 541, 697
- Gulf Coast area, map showing geologic setting of salt domes, GC, 50, 52; XVII, 1055, 1057
- of Louisiana, Mississippi, and Alabama, map showing datum planes for regional subsurface contours, XXIII, 1407
- of Texas east of Rio Grande, map showing datum planes for regional subsurface contours, XXIII, 1406
- proving ground for geophysical methods, XXI, 198
- stratigraphic units sampled in, SBP, 336
- Gulf Coast country, review of developments in 1917, II, 16
- Gulf Coast crude oil, PROB, 98, 237, 240; V, 335, 683
- argument against evaporation theory of origin of, XXI, 938
- argument against surface influence on origin of, XXI, 939
- decrease of ratio of carbon to hydrogen involved in evolution of, XXI, 946
- evolution of, XXI, 914
- evolution of, from naphthenic to paraffinic, as effect of temperature,

(Gulf)

- pressure, and time, XXI, 941
- law of variation of, XXI, 941
- methanation theory of evolution of, XXI, 943
- natural history of, PROB, 109
- summarized basic data for variation of, XXI, 916
- Gulf Coast crude oils, gravity-interval pattern types in, XXV, 583-592
- mean percentage composition of, XXI, 915
- United States Bureau of Mines analyses of, XXI, 916
- variation of heaviness in, XXI, 940
- Gulf Coast district, crooked-hole problems in, XIV, 595
- discoveries in 1941, XXVI, 984
- map of, showing new producing fields discovered during 1938; and new producing fields, extensions, and new sands on old domes, discovered during 1939, XXIV, 1080
- map of, showing new producing fields, extensions and new sands on old domes, and new salt domes, XXIII, 881
- map showing new producing fields, extensions, and new sands on old domes, discovered during 1940, XXV, 1005
- map showing oil discoveries in 1942, XXVII, 731
- Gulf Coast domes, cap-rock production from, GC, 5; XVIII, 504
- cessation of growth of, GC, 67; XVII, 1072
- derivation of hydrogen sulphide in, SD, 708
- Eocene production from, XVIII, 513
- Jackson production from, XVIII, 513
- Lissie-Reynosa production from, GC, 5; XVIII, 504
- Miocene production from, GC, 5, 9; XVIII, 504, 508
- Oligocene production from, XVIII, 510
- overhang of cap rock and part of salt core on, GC, 75; XVII, 1080
- similarity to German domes, GC, 45; XVII, 1050
- Texas and Louisiana, GAS, 692, 694, 696
- Yegua production from, XVIII, 515
- Gulf Coast fields, V, 684, X, 77
- cap-rock production from, GC, 3, 5
- flank production from, XVIII, 505
- map of, IX, opp. 1231
- Oligocene production from, XVIII, 510
- shallow-dome type of, GAS, 699
- Gulf Coast formations, difficulties of correlation with European standard section of, XXII, 988
- sedimentation—time diagram of, XXIX, 1318
- Gulf Coast geologic section, GAS, 688
- Gulf Coast geology, GAS, 686
- Gulf Coast geosyncline, GC, 192; 455; XVII, 1446; XXIII, 197; XXVIII, 1251; XXIX, 1325
- Appalachian geosyncline compared with, XXIX, 1332
- cross section of, XXIII, 196
- development of, XXIX, 1328
- diagram representing possible nature of, XXIX, 1329
- diagrams, XXIX, 1331
- Gulf Coast gravity-interval patterns, XXV, 578, 583

- Gulf Coast natural gas occurrences, GAS, 699, 1069
- Gulf Coast Oil Corporation, SD, 551
- Gulf Coast oil deposits, evidence against three common theories of origin of, XXI, 931
- Gulf Coast petroleum province of Texas and Louisiana, petroleum potentialities of, XIV, 1379
- Gulf Coast refineries, XXV, 1288
- Gulf Coast region, PROB, 57, 110, 237, 340, 631, 815
- areal variation of properties in beds correlated with Oakville sandstone in, SBP, 342
- areal variation of properties of marine Oligocene in, SBP, 343
- datum planes for contouring, XXIII, 1404
- deltaic deposits in, XXIX, 1308
- domes in, XIV, 1108
- location of samples studied in, SBP, 334
- logs and oil zones of wells in, SBP, 338
- near-shore deposits in, XXIX, 1311
- of Texas and Louisiana, résumé of facts and opinions on sedimentation in, XXIX, 1304
- off-shore deposits on continental shelf in, XXIX, 1313
- oil fields of, GC, 4, XVIII, 503
- salt facies of Eagle Mills formation widespread in, XXVII, 1431
- use of seismic and torsion-balance methods in, XIV, 1107
- Gulf Coast rock salt, chemical composition of, XXI, 1300
- minerals of, XXI, 1283
- Gulf Coast salt, Permian age of, SD, 218
- Gulf Coast salt cores, upthrust of, GC, 53; XVII, 1058
- Gulf Coast salt deposits, age of, XXIII, 193
- Gulf Coast salt dome, density relations of, XIV, 214
- Gulf Coast salt-dome area, Louisiana, shallow-dome fields in, GAS, 710
- natural gas of, GAS, 683
- Gulf Coast salt-dome cap rock, IX, 601
- Gulf Coast salt-dome oil fields, production in, GC, 117; XX, 734
- Gulf Coast salt-dome province, XXII, 285
- Gulf Coast salt domes, PROB, 60, 418
- age of motivating force in formation of, GC, 45, XVII, 1050
- depth of salt or cap *versus* size of dome, GC, 66; XVII, 1071
- downbuilding of root of, GC, 54; XVII, 1059
- geology of, PROB, 629
- hauertite associated with, XIII, 177
- intrusive origin of, GC, 848; XX, 170
- means of discovery, GC, 111; XX, 728
- mode of formation, GC, 45; XVII, 1050
- of Texas, Cretaceous on, XIII, 1065
- of Texas and Louisiana, mechanics of formation of, GC, 20; XVII, 1025
- of Texas and Louisiana, mechanics of formation of salt domes with special reference to, XVII, 1025
- sedimentary origin of salt of, GC, 42; XVII, 1047
- static downward thrust of sediments the effective force in formation of, GC, 53; XVII, 1058

- (Gulf)
 trend of, GC, 263; XVII, 1206
 year of discovery, GC, 109; XX, 726
 Gulf Coast salt plug, evidence of erosion of salt stock in, in late Oligocene, XXIII, 604, 1576; XXVII, 85
 Gulf Coast salt plugs, data on water-insoluble residue in rock salt of, XXI, 1271
 potash salts in, XXI, 1272
 Gulf Coast salt structures, age of, PROB, 666
 geomorphology of, and its economic application, XX, 1413
 Gulf Coast samples, carbon content of, SBP, 27-31
 carbon-nitrogen ratio of, SBP, 34, 35
 key to productivity of, SBP, 346
 properties of, arranged by formations, SBP, 340
 relation of properties of, to oil zones, SBP, 347
 summary of properties of, SBP, 341
 variation of nitrogen-reduction ratio of, with respect to distance from oil zones, SBP, 347
 (wells 398-409), SBP, 334-349. (See also Texas samples)
 Gulf Coast section, MSC, 176
 Gulf Coast sequence, MSC, 179
 Gulf Coast stratigraphic correlation, XXV, 744
 Gulf Coast stratigraphy, GAS, 687; I, 35
 Gulf Coast structure, regional, GC, 722; XVII, 1375
 Gulf Coast sulphur, Sicilian sulphur deposits similar to, SD, 707
 Gulf Coast Tertiary, fossils of, XXII, 984
 revisions of nomenclature of, XXIX, 1307
 Gulf Coast Tertiary and Cretaceous districts, microscopic work in, XV, 746
 Gulf Coast Tertiary microfossils, list of localities of, XXVI, 1197
 neglected, XXVI, 1188
 references on, XXVI, 1198
 Gulf Coast Tertiary stratigraphy, XXV, 2012
 Gulf Coast waters, III, 310
 Gulf Coastal developments in 1935, XXI, 1050
 in 1937, XXII, 736
 Gulf Coastal Plain, GC, 529; PROB, 577; SD, 36, 38, 221, 248, 772; STRAT, 590
 basin margin flexure of, XXVII, 1236
 Cenozoic, XXIII, 195
 Claiborne group in, XXIII, 155
 Cretaceous seas, XXIII, 195
 Eocene series in, XXII, 155
 Fleming group in, XXIII, 185
 fossil zones of marine Miocene in, XXIII, 179
 Frio formation in, XXIII, 169
 geologic history of, XXIII, 192
 geology of, VIII, 21; X, 9
 geophysical methods in, IX, 669
 Houston group in, XXIII, 188
 in vicinity of Harris County, Texas, stratigraphy and historical geology of, XXIII, 145
 Jackson group, XXIII, 161
 marine Lower Miocene in, XXIII, 178
 Miocene and Pliocene series in, XXIII, 185
 Miocene series in, XXIII, 178
 northern, stratigraphy of Cotton Valley beds of, XXVIII, 577
 of Mexico, XI, 1177, XX, 1300
 of United States and Mexico, ancient land masses in, XXVIII, 324
 oil-field waters of, PROB, 891
 Oligocene series in, XXIII, 165
 physiographic history of, XXIII, 209
 Pleistocene series in, XXIII, 188
 Pliocene series in, XXIII, 187
 pre-Cretaceous floor of, XVIII, 1253
 pre-Tertiary of, XXIII, 192
 Recent series in, XXIII, 192
 regional structure of, XVIII, 1249
 résumé of geology of, VIII, 21
 salt domes of, X, 1
 significance of barrier beaches of, XXIII, 210
 source beds in, PROB, 59
 south of Ouachita Mountains, pre-Cretaceous rocks found in wells in, XV, 801
 southeastern, subsurface stratigraphy and lithology of Tuscaloosa formation in, XXVII, 596
 stratigraphy and historical geology of, in vicinity of Harris County, Texas, XXIII, 145
 surface geology of part of, XXV, 2011
 unconformities in, VII, 380
 Upper Jurassic in, XXVIII, 577, 609
 Gulf Coastal Plain states, statistics on wildcat drilling for all, for 1938, XXIII, 792
 wildcats drilled in, in 1939, XXIV, 955
 Gulf Coastal Prairies of Louisiana, phases of sedimentation in, XIV, 903
 Gulf Coastal productive areas discovered during 1937, the result of geophysical exploration, XXII, 737
 Gulf Coastal region, CAL, 110, 120
 character of oil and gas traps, XXI, 207
 extensions to proved fields in, XXI, 1061
 extent of Upper Jurassic sea in, XXVII, 1235
 reserves in, XXI, 1062
 Gulf Coastal Texas, factors governing accumulation of oil and gas in Mirando and Pettus districts, and their application to other areas, XV, 755
 map of, showing San Patricio County oil and gas producing fields, XXV, 1970
 Gulf Company, The, GAS, 456; SD, 386
 Gulf Cretaceous, Arkansas-Louisiana-Texas area, XXIII, 294
 Lisbon field, stratigraphic sequence of, XXIII, 293
 Monroe field, GAS, 774
 Richland field, GAS, 778
 Texas, GAS, 656, 666
 Gulf Development Company, SD, 684
 Gulf embayment province, XIII, 428
 Gulf horizons, GAS, 26
 Gulf Oil Company, XXIII, 1526
 Gulf Oil Corporation, GC, x; XXI, 997, 1013; XXIII, 891; XXIV, 128, 1037; XXIX, 714, 770
 Bagg 1 (well 63), SBP, 87-153, 404
 Hicks 1 (well 377), SBP, 292-335, 409
 Risser 1 (well 241), SBP, 194-243, 407
 Vail (well 100), SBP, 87-153, 404
 Gulf Oil Corporation and Crankfill Brothers, XXIV, 127
 Gulf Oligocene, eastern, formations and members of, XXVIII, 1316
 Gulf Pipe Line Company, XXIII, 321, 1665
 Gulf Pipe Line Corporation, XXVII, 820
 Gulf Production Company, GAS, 726, 729; SD, 443, 482, 484, 498, 502, 504, 529, 549, 572, 584, 592, 596, 609, 611, 612, 774, GC, x, 912; XIX, 20; XX, 563; XXI, 477, XXIII, 877
 Gulf province, western, analysis of Midway fauna of, XXV, 644
 western, new Rangia from upper Miocene of, XXIV, 476
 Gulf Refining Company, GAS, 774; SD, 274, 275, 305, 307, 329, 334, 405; XXII, 132, 1413, XXIX, 797, 821, 824, 825, 827
 of Louisiana, SD, 347-349, 475, 476
 Gulf region, correlation of Jurassic formations of, XXVII, 1437, 1473
 eastern, breaks in deposition of Upper Cretaceous in, XXII, 1641
 eastern, Prairie Bluff chalk and Owl Creek formation of, XXI, 806
 eastern, Upper Cretaceous sediments of, XXII, 1639
 end of Jurassic time in, XXVII, 1527
 Jurassic formations of, XXVII, 1407
 of Mexico and United States, salt masses in, of Divisian age, XXVII, 1438
 of United States, Jurassic in, XXVII, 1422
 references on Jurassic formations of, XXVII, 1530
 Upper Jurassic in, XXVII, 1411
 Gulf region and western interior region, comparison of Upper Cretaceous deposits of, XXII, 1629
 Gulf Research and Development Company, XXI, 1168
 Gulf series, MEX, 17, 21; XXV, 1692, 1693, 1698; XXVIII, 40
 Cotton Valley field, XIV, 986
 Homer field, Louisiana, STR II, 198, 202, 207
 Hugoton field, STRAT, 84
 lowest beds in, XXII, 973
 Monroe field, GAS, 750
 of Upper Cretaceous in Veracruz, section, XXVIII, 1131
 Pine Island field, Louisiana, STR II, 169
 Richland field, unconformity at base of, GAS, 780
 Schuler field, unconformity at base of, XXVI, 1475
 section of, Stephens field, Arkansas, STR II, 6
 south Arkansas, XXII, 956, 972
 Stephens field, Arkansas, STR II, 5
 Sugar Creek field, XXII, 1508
 Texas, XIII, 1323
 Texas and Arkansas, XI, bet. 2 and 3
 unconformities, XI, 15
 Viking field, GAS, 53
 Gulf Shaft Company, SD, 389
 Gulf Stream, RMS, 52, 108, 117, 231, 234, 235, 236, 238, 240, 244, 283, 290
 effect of, on sea bottom, RMS, 236
 Gulf-Waddell area, GAS, 456
 Gulf-Wentz pool, XXVII, 764
 Gulick, J. C., XXIX, 1265
 Gulishambarov, S. O., XXIX, 1738
 Gullely, M. Gordon, XXI, 1093
 memorial of Thurman H. Meyers,

- (Gulley)
 XXV, 347
 memorial of Willem A. J. M. van Waterschoot van der Gracht, XXVII, 1066
- Gum Cove field, XXIX, 792
- Gumbos, correlating, IX, 906
- Gun bottom samplers, RMS, 655-657
- Gun perforating, XXV, 1781
 selective, XXVI, 1147
- Gun perforations, completion of wells through, XXIV, 1374
- Gun perforator, Lane-Wells, XXV, 754
- Gun perforators, formation samples from, XXV, 752
- Gundermann, E., XVIII, 69
- Gunlock fault, XXIII, 135
- Gunsight formation, III, 138
- Gunsight horizon in Archer County fields, Texas, STR, 1, 426
- Gunsight sand, Seymour pool, STRAT, 762
- Gunter, Herman, XXVIII, 1675, 1677, 1722; XXIX, 928
 basement rocks encountered in a well in Florida, XII, 1107
- Gunter sandstone in Ozarks, XVI, 636
- Gunther, A. E., and Terpstra, G. R. J., XXIII, 1243
- Guppy, R. J. L., IX, 201, 1001
- Gura-Ocutzei field, XXIII, 961
- Gurich, G., XVIII, 728
- Gurley, R. R., XVIII, 1133; XX, 301
- Gurney pool, XXIV, 1002
- Gurwitsch, Leo, scientific principles of petroleum technology, review, XI, 766
- Gusher, MEX, 175, 176
 salt water, MEX, 52, 179, 181
- Gushes in Jennings field, SD, 413
 in Mexico, PROB, 389, 395
- Gussett Survey, Texas (well 403), SBP, 335-349, 410
- Gutenberg, Beno, CD, 12, 14, 18, 30, 43; SC, 133; XIX, 1806, 1807, 1809, 1813, 1816; XX, 1679; XXVI, 388
 calculation of interior densities, CD, 16
 editor, internal constitution of earth, review, XXV, 172
Grundlagen der Erdbebenkunde, review, XI, 766
- Gutenberg, Beno, and Buwalda, J. P., XX, 1679
- Gutenberg, Beno, Berlage, H. P., and Sieberg, A., *Handbuch der Geophysik, Band 4, Erdbeben*, review, XIV, 955
- Gutenberg's theory of continental spreading, XIX, 1806
- Guthrey, W. M., and Miller, C. A., STRAT, 797
- Guthrie, R. K., and Hill, H. B., XXVIII, 235
- Guthrie Creek member of Warsaw limestone, XXIV, 805
- Guthrie dolomite member, XXIV, 98
- Guthrie pool, XXVI, 1066
- Gutoskey sand in Raccoon Bend field, GAS, 720, 723; GC, 678, 692, 694; XVII, 1461, 1475, 1477
- Guyardot, West Virginia (well 427), SBP, 349-379, 410
- Guye formation, XXIX, 1394
- Guyod, Hubert, and Deussen, Alexander, use of temperature measurement for cementation control and correlations in drill holes, XXI, 789
- Guyton, W. F., XXVII, 1081, 1091, 1093, 1101; XXIX, 1169, 1177
- Gwinville field, Mississippi, XXIX, 823
- Gwynne, C. S., XXIII, 479, 1445, 1487
- Gym limestone, New Mexico, X, 847
- Gyp Hill anticline, XXVIII, 547
- Gypsiferous formation, Utah, VI, 204, 219
- Gypsiferous sandstone beds typical of basal Blaine formation, XXI, 1541
- Gypsum, MEX, 96, RMS, 602; SBP, 413; XXI, 853, XXIV, 142; XXV, 1742
 alteration of anhydrite to, XXV, 156
 commercial deposits of, underlying Custer, XXI, 445
 effects of formation of, from anhydrite, in Seven Rivers formation, XXVI, 90
 hydration of anhydrite to, XXI, 1492
 in cap rock, IX, 43, 1229
 in Embar group and Chugwater formation, XXV, 895
 in rock salt, XXI, 1293
 in St. Louis formation, XXIV, 231
 in salt dome cap rock, SD, 50, 51, 53, 55-57, 151, 169, 225, 630, 652
 in salt domes, XIV, 1470
 in salt stocks in Germany, IX, 426
 in Secura formation in Peru, XII, 28
 natural gas, and salt in pre-Cambrian rocks at Edwards, New York, XVI, 727
 of Seven Rivers formation, XXVI, 92
 secondary, in Delaware Mountain region, discussion, XIII, 1395
 structure in, Harvey County, Kansas, IX, 1062
 unequal distribution of, in Cloud Creek formation, XXI, 1529
- Gypsum and redbeds within Sundance formation, XXI, 770
- Gypsum and sandstone in Minnelusa formation, alternations of, XXI, 1249
- Gypsum-anhydrite, PROB, 151
- Gypsum-anhydrite cap, SD, 50; IX, 42
- Gypsum-anhydrite problem of Blaine formation, XXI, 1492
- Gypsum beds of Michigan formation, PROB, 552
- Gypsum cap, XV, 516
- Gypsum cap rock, XI, 817
 at High Island dome, GC, 927; XX, 577
- Gypsum cement, XXVII, 488
- Gypsum deposits, RMS, 331
 in Blaine and Dog Creek formations, XXVIII, 1019
 in Como Bluff anticline, XXVIII, 1214
- Gypsum flowage in Persia; Masjid-i-Sulaiman oil field, discussion, XIII, 685
- Gypsum grains, RMS, 290
- Gypsum horizons of Kiger division, XXI, 427
- Gypsum Spring formation, XXV, 136; XXIX, 1025
 of Bighorn and Wind River basins of Wyoming, XXIX, 1023
- Gypsoms, dolomites, and anhydrites, value of, as horizon markers, XXI, 1566
- Gypsy Oil Company, GAS, 380; XXIII, 1234
- Barkus 9 (well 299), Barnett 1 (well 262), Fairfax 1 (well 268), Maho 1 (well 271), Mongrain 1 (well 266), Pearson 1 (well 283), Poppin 2 (well 275), Shaky Payne 11 (well 297), Whitehorn 1 (well 270), SBP, 255-285, 407, 408
- Gyrals, oceanic, RMS, 77, 123
- Gyroidina obesa zone, MSC, 319
- Gyttja, RMS, 381; XXV, 839
- H
 Haag, F. E., XXVII, 1179, 1181
- Haalck, Hans, XIII, 46, 763
- Gravimetrischen Verfahren der Angewandten Geophysik*, review, XIV, 245
- Lehrbuch der angewandten Geophysik. Geophysikalische Aufschlussmethoden*, review, XVIII, 1374
- Magnetische Verfahren der Angewandten Geophysik*, review, XII, 953
- Haalck, W., calculation of average density of sial and sima, CD, 16
- Haarmann, Erich, XXIV, 2115, 2120; XXVIII, 1169, 1171
um das geologische Weltbild-Malleo et Mente, review, XIX, 1074
- Haarman, Erich, and Bain, G. W., XXV, 419
- Haas, Herbert F., XXVII, 1176, 1181, 1187, 1188, 1190
- Haas, Herbert F., and Bushnell, L. D., XXVII, 1181, 1182
- Haas, Herbert F., Zobell, Claude E., and Grant, Carroll W., marine microorganisms which oxidize petroleum hydrocarbons, XXVII, 1175
- Haas, I. O., and Hoffmann, C. R., PROB, 997
 temperature gradient in Pechelbronn oil-bearing region, Lower Alsace: its determination and relation to oil reserves, XIII, 1257
- Haas, Merrill, XXII, 1307
- Haas, W. H., XXI, 53
- Haas sand, XXIV, 707
- Haase, Fred M., GC, 414; STRAT, 698; XVII, 642, 645; XV, 2023
- Aspermont pool discovery, Stonewall County, Texas, XXIV, 1839
- Catahoula-Fleming contact, Vernon Parish, Louisiana, XVI, 608
- Lower Peachtree area, Wilcox County, Alabama, XVI, 492
- Meridian area, Lauderdale County, Mississippi, XVI, 491
- Habakov, A. V., XXII, 773
- Habener, B. H., VIII, 778
- Haber, E., RMS, 148
- Habiger pool, Kansas, XXIII, 804
- Habighorst-Höfer salt dome, SD, 202; IX, 1262
- Habitat classification of marine organisms, XXIV, 1167
- Hachita Peak, XXII, 531
- Hachita Quadrangle, New Mexico, XXII, 526
- Hacienda San Jose de las Rusias, GAS, 999
- Hackberry assemblage, XXVII, 1139
- Hackberry foraminifera, subdivisions of, Starks field, Calcasieu Parish, Louisiana, XXIII, 1835
- Hackberry foraminiferal zonation at Starks field, Calcasieu Parish, Louisiana, XXIII, 1835
- Hackberry shales, XXI, 425
- Hackberry zone, XXIX, 797
- Hackford, J. E., PROB, 235, 270; SBP, 2; XIX, 600; XXI, 1182
 chemistry of conversion of algae into

- (Hackford)
bitumen and petroleum and of
fucosite-petroleum cycle, review,
XVI, 427
- Hacquet, XV, 14
- Hada, Yoshine, MSC, 12, 14
- Haddock, M. H., deep borehole sur-
veys and problems, review, XVI,
107
- Haehl, H. L., and Arnold Ralph, CAL,
206
- Haehn, Hugo, PROB, 41, 42
- Haemocyanin in blood of marine ani-
mals, RMS, 149
- Hafner, W., XXVIII, 618
- Haft Kel field, Iran, XVII, 239; XXIII,
960, XXVIII, 1498
- Hagan, A. M., XI, 635; XIII, 1523
- Hage, C. O., and Hume, G. S., XXIX,
1608
- Hager, Dilworth S., SD, 600; XIII,
1387
factors affecting color of sedimentary
rocks, XII, 901
memorial of M. Wood Stanley, XIII,
1089
- Hager, Dilworth S., and Brown, I. O.,
Minerva oil field, Milam County,
Texas, VIII, 632
- Hager, Dilworth S., and Stiles, E.,
Blue Ridge salt dome, Fort Bend
County, Texas, SD, 600; IX, 304
- Hager, Dorsey, PROB, 436; STR I,
180; III, 157, 184, 297; IV, 284;
VII, 621; VIII, 719; X, 830; XI,
675; XIII, 1421, 1427, 1442, 1443,
1444; XVI, 939
fundamentals of petroleum industry,
review, XXIII, 1106
practical oil geology, review, XXIII,
105
- Hager, Lee, SD, 15, 352, 354, 782; IV,
285, 290; IX, 286, 349, 497, 845,
862, 1285, 1290; XIII, 425, 575;
XV, 206; XXVII, 1123
memorial of, XXVIII, 1666
theory of origin of salt domes, IX,
844
- Hager, Luce, and Russ Petroleum
Company, XXI, III, 1065
- Hager well, SD, 353
Section 28 salt dome, IX, 1291
- Hagner, A. F., XXV, 2181
- Hague and Weed, X, 986
- Hague, Arnold, XXI, 720, 731, 747;
XXV, 2041
application of name Ellis to marine
Jurassic in Yellowstone National
Park, XXI, 731
- Hahn, IX, 349
- Hahn, F. F., SD, 23, 118; V, 230; IX,
853, 864; XIX, 276
- Hahn, O., XXIX, 15
- Hahn, O., and Born, H., XXIV, 1533
- Hahn, O. C., XI, 1284
- Haigh, Berte R., XXIV, 1036
- Haigh, Berte R., and Bybee, H. P.,
developments in West Texas and
southeastern New Mexico in 1936,
XXI, 1034
- Haigh, Berte R., and Fritz, W. C.,
XXIV, 194
- Haigh, Berte R., Bybee, H. P., and
Cole, Taylor, developments in
West Texas and southeastern
New Mexico in 1937, XXII, 694
- Haigh, Berte R., Bybee, H. P., and
Taylor, Surce John, developments
in West Texas and southeastern
New Mexico during 1938, XXIII,
- (Haigh)
836
- Haiges, R. W., XVI, 959
- Haiwee Lake section, California, out-
crop section V, SBP, 167-194, 411
- Hake, Benjamin F., CAL, 43, 250, 251,
GAS, 41; STRAT, 238; XI, 42;
XV, 1127; XVIII, 1451; XXII;
133, 137; XXIV, 1966; XXIX, 125,
126
discussion of Turner Valley gas and
oil field, XVIII, 1451
geologic occurrence of oil and gas in
Michigan, XXII, 393
review, XXI, 1600
- Hake, Benjamin F., and Addison,
Carl C., sediments of Montana age
in Milk River Ridge region, Al-
berta, ALTA, 87; XV, 1215
- Hake, Benjamin F., and Maebius, Jed
B., XXIV, 1964, 2150; XXVII,
574, 595; XXVIII, 182, 183
- Halaváts, XVIII, 927
- Halbouty, Michel T., GC, 161, 412,
910; XVII, 642, 647, 1511, 1512;
XX, 561, 818; XXVII, 1104, 1116
geology and geophysics of southeast
flank of Jennings dome, Acadia
Parish, Louisiana, with special
reference to overhang, GC, 961;
XIX, 1308
geology and geophysics showing cap
rock and salt overhang of High
Island dome, Galveston County,
Texas, GC, 909; XX, 560, 818
- High Island dome, Galveston Coun-
ty, Texas, XVI, 701, 944
review, XXIV, 1339
- stratigraphic reservoirs in University
oil field, East Baton Rouge Parish,
Louisiana, STRAT, 208
- Vicksburg formation in deep test,
Acadia Parish, Louisiana, XVI,
609
- Halbouty, Michel T., and Eby, J.
Brian, Spindletop oil field, Jeffer-
son County, Texas, XXI, 475
- Halbouty, Michel T., and Simmons,
Benjamin T., Hitchcock field,
Galveston County, Texas, show-
ing stratigraphic accumulation and
structure, STRAT, 641
- Halbouty, Michel T., *et al.*, sedimenta-
tion, XXIV, 374
- Halcon-Camalote sector, producing
zones in, MEX, 65, 164, 178
- Hale, J. P., XXII, 1088, 1090, 1091,
1095
- Hale, John D., XXIX, 957
- Hale, Lucille, XXV, 732; XXVIII,
187; XXIX, 13
study of sedimentation and strati-
graphy of lower Mississippian in
western Michigan, XXV, 713
- Hale and Pitkin formations, relation
between, across Adair County,
XXIV, 417
- Hale formation, XXII, 889
- grain residue of, XXIV, 426
in Adair County, Oklahoma, lithol-
ogy, XXIV, 418
in northwest Arkansas, XIV, 131
insoluble residues of, XXIV, 426
on Bugger Mountain, XXIV, 418
- Oklahoma, Kessler limestone mem-
ber of Bloyd formation on, XXIV,
430
- Hale Mountain section in northwest
Arkansas, XIV, 121
- Hale sandstone, cross-bedding in, Hun-
- (Hale)
gry Mountain district, XXIV, 421
disconformable on Pitkin limestone,
XXIV, 423
in Ozark Highlands, GAS, 543
limestone reef in, Hungry Mountain
district, XXIV, 422
phosphatic nature of, XXIV, 426
Half Moon Bay field, PROB, 185, 228
Halfmoon Bay, MSC, 109
Halfway pool, Lea County, New Mex-
ico, XXIV, 1042; XXV, 1723
Tansil formation in, XXV, 1725
Halfway syncline, XXV, 77
Halifax dome, XXVI, 995
Halistas, XXIII, 1191
Halite, PTNM, 612; PROB, 637;
XXVI, 612
in upper Castile formation, XXIII,
1689
Halite beds of Salado formation, XXVI,
65, 72
Halite zone in Delaware basin, XXIII,
1686
Hall, XV, 605; XXII, 94, 542
Hall and Vanuxem, XXI, 311
Hall, E. B., XVIII, 435; XXI, 584
Hall, E. B., and Armentrout, A. L.,
XIV, 567
Hall, George Martin, bibliography of,
XXV, 1830
memorial of, XXV, 1828
review, XIX, 1701
Hall, Ivan C., PROB, 266
theory of folding, IX, 422
Hall, James, RMS, 215, SD, 147; IX,
422; XIII, 592; XV, 673; XVIII,
1133; XX, 910; XXII, 268; XXV,
684, 2126; XXVI, 123; XXIX, 126
Hall, J. R., and Joslin, L. R., XXVI,
1656
Hall, O., and Row, V. P., XIII, 1146
Hall, Roy H., STRAT, 127; XII, 180,
190, 193; XIII, 955, 995, 1030;
XIV, 787
age of so-called Hunton limestone of
southern McPherson and north-
west Harvey counties, Kansas,
discussion, XVIII, 266
discussion on Salina basin, XII, 190
review, XVIII, 1550
Hall, Roy H., and Folger, Anthony,
STRAT, 124, 127
Hall, W. T., SBP, 21
Hall-Armentrout device for orientation
of cores, XIV, 567
Hall Canyon, California, outcrop sec-
tion N, SBP, 167-194, 411
Hall County, Texas, Custer formation
in, XXI, 453, 454
Hall pool, XXIV, 1002
Hall Summit formation, XXIX, 58
Midway age of, XXIX, 59
Halle, T. G., XIX, 1735, 1737
Halle, Th. G., and Anderson, J. G., XX,
1221
Halliburton, H. P., Inc., Bagwell 1 (well
301), SBP, 255-285, 408
Hallig region, RMS, 335
Hallimond, A. F., XIX, 1593
Halllock, W., PROB, 1020
Hallowan, R. A., XXI, 584
Halloway, RMS, 457, 470, 471, 486,
490, 620, 623, 626, 628
identification of, by X-ray, RMS, 624
625
in Atlantic sediments, RMS, 383
in zeolite-opal rock, XXV, 293
Halloway minerals, RMS, 468, 484
Hallville Oil and Gas Company, SD,

- (Hallville)
228
Halmahera, RMS, 351, 365
Halmayrolyse, RMS, 507
Halo pattern, first recognition of, in microscopic geochemical prospecting at Hastings oil field, XXIV, 1459
Halo phenomena observed experimentally in soil analyses, XXIV, 1414
Halo theory, XXIV, 1465
Halobia, XXII, 9
Halse, George W., XXIV, 2125
oil and retortable materials, review, XI, 1237
Halsell field, XXV, 1071, 1072
Halstead field, GAS, 477
Halvorson, H. O., RMS, 423
Ham, W. E., and Dott, R. H., new evidence concerning age of Spavinaw granite, Oklahoma, XXVII, 1626
Ham, W. E., and Merritt, C. A., XXV, 1624
pre-Cambrian zeolite-opal sediments in Wichita Mountains, Oklahoma, XXV, 287
Hamaker, J. I., RMS, 212
Hamblin, Ralph H., and Sloss, Laurence L., stratigraphy and insoluble residues of Madison group of Mississippian of Montana, XXVI, 305
Hambre, MSC, 92, Fig. 14 (in pocket)
Hambro field, PROB, 776
Hamburg, Germany, RMS, 498
Hamburg oolite, XXIV, 785
Hamden sandstone of Jackson and Vinton counties, Ohio, GAS, 904
Hamlin, James M., XV, 867, 870, XXVII, 1364; XXIX, 956
Hamilton, A., Survey, Texas (well 361), SBP, 292-335, 409
Hamilton, Henry L., memorial of, X, 358
Hamilton, S. H., XXII, 264
Oriskany explorations in Pennsylvania and New York, XXI, 1582
Hamilton, Walter Raleigh, memorial of Henry L. Hamilton, X, 358
development of petroleum geology in California, V, 457
Hamilton, Indiana, XXV, 687
Hamilton age, limestone of, XXVIII, 1521
limits of beds of, XXVIII, 1522
Hamilton coral biostromes, XXVI, 1734
Hamilton County, Texas, XXI, 1022
Hamilton dome, Hot Springs County, Wyoming, PROB, 688, 724, 936; IV, 37; V, 61, 191 XXIII, 909; XXVII, 470
Cloverly water in, XXIV, 1257
Embar water in, XXIV, 1286
structural contour map of, XXIII, 910
Hamilton Dome field, Hot Springs County, Wyoming, XXII, 684
Hamilton field, XXVII, 455
Hamilton formation, IV, 45; V, 95; XXIV, 1990
(Dua, etc.) SBP, 351-354
Hamilton fossils, XXIV, 1991
Hamilton group, XXV, 679
isopach map of, XXI, 312
of New York, stratigraphy of, XXI, 311, 316
of New York and northern Pennsylvania, subsurface distribution of, XXI, 311
Hamilton limestone, XXII, 1529
Hamilton-Marcellus shale, XXV, 809
Hamilton overlap, XXVIII 531
Hamilton Switch pool, V, 290
Hamlin, XII, 560; XV, 374
Hamlin, Homer, MSC, 7; XIX, 522; XXV, 216; XXVI, 1797
Hamm, Dow, XXI, Pl. B, opp 1085
Hammar, Harold B., PROB, 26, 262; RMS, 263, 424; SBP, 6; XXVIII, 1347; XIX, 600, 611; XXI, 1256, 1378, XXII, 1307, XXV, 1933
bibliography of, on source beds, SBP, 8
relation of micro-organisms to generation of petroleum, PROB, 35
Hammar, Harold E., and Trask, P. D., XX, 289, XXVII, 256
preliminary study of source beds in late Mesozoic rocks on west side of Sacramento Valley, California, XXVIII, 1346
Hammar, Harold E., Trask, Parker D., and Wu, C. C., PROB, 450
origin and environment of source sediments of petroleum, review, XVII, 199
Hammer, A. A., IX, 903
Rattlesnake Hills gas field, Benton County, Washington, XVIII, 847
Hammer, A. A., and Lloyd, A. M., PROB, 697
Quadrant formation of east-central Montana, X, 986
Upper Cretaceous sedimentation and diastrophism in Montana, IX, 886
Hammill, Chester Armstrong, III, 137
Cretaceous of northwestern Louisiana, V, 298
memorial of, XXVI, 1173
Hammond, H., XXIX, 221
Hammond, Mamie, Hamby 1 (well 315) SBP, 292-335, 408
Hammond, W. W., Magnolia City field, Jim Wells County, Texas, XXIII, 1238
Hamner, Ed. J., Amelia oil field, Jefferson County, Texas, XXIII, 1635
Hamor, and Bacon, VII, 621
Hamor, W. A., and Padgett, F. W., XXI, 1468
Hampshire formation, XXIV, 1993
Hampton, James, XXVII, 1060
Hampton field, XXVII, 733
Hampton formation, XXV, 2113
Hampton Roads fault, XXIX, 89
Hanbury, Doyle, Milroy, Nellie, Wheeler, and Cruce pools, redbeds in, GAS, 586, 587
Hance, James Harold, V, 460
development in Illinois oil fields during the year 1920, V, 336
drilling in western Canada, VII, 82
reviews, V, 105, 107, 108; VI, 155, 157, 483; VII, 84, 85, 196, 197, 303, 304, 453; IX, 356
Hancock, E. T., GAS, 349; STRAT, 277, 281, 293; V, 203; VII, 8; IX, 899; XIV, 1022; XXII, 1028; XXVII, 1580, 1581; XXVIII, 1196
Hancock, J. M., XVI, 743, 758
Hancock Oil Company, XXVI, 1141
Hancock sand, V, 293; VI, 464
Handbook of rocks, XXIV, 1498
Handbuch der Geophysik, Band 4, Erdbeben, review, XIV, 955
review, XVI, 423
Handley, Howard Walter, memorial of, XXV, 184
Hanigsen-Nienhagen field, Germany, (Hanigsen-Nienhagen)
XII, 475
Hanigsen-Obershagen-Nienhagen field, XVI, 1146
Hankamer, PROB, 115
Hankamer dome, Texas, GAS, 729
Hanks, Henry G., XII, 1109
Hanna, G., Dallas, CAL, viii, ix, 110, 115, 151, 154, 179, 189, 192, 196, 209, 217; MSC, 25, 26, 27, 232, 256, Fig. 14 (in pocket), VIII, 540, X, 554, XII, 982; XIII, 1150; XIV, 569, 1323, 1447; XV, 201, 742, 743, 744, 840; XVII, 1162, 1177; XVIII, 531; XX, 220, XXV, 230, 1235; XXVII, 255, 279, 299; XXIX, 956, 958
age and correlation of Kreyenhagen shale in California, IX, 990
age of diatom-bearing shales at Malaga Cove, Los Angeles County, California, discussion, XII, 1109
an early reference to theory that diatoms are source of bituminous substances, XII, 555
foraminifera, smaller, for stratigraphy, VIII, 246
Monterey shale of California at its type locality with a summary of its fauna and flora, XII, 969
name "Lillis formation" in California geology, XVII, 81
Hanna, G., Dallas, and Anderson, F. M., XIII, 234
Hanna, G., Dallas, and Camp, Charles L., methods in paleontology, review, XXII, 317
Hanna, G., Dallas, and Church, C. C., MSC, 12
Hanna, G., Dallas, and Cushman, J. A., XIV, 1324, XXIV, 1932
Hanna, G., Dallas, and Gaylord, E. G., X, 130
organic shales in southern end of San Joaquin Valley, California, IX, 228
Hanna, G., Dallas, and Grant, W. M., CAL, 246
Hanna, G., Dallas, and Hanna, M. A., XXIV, 1931
Hanna, G., Dallas, and Taff, A. J., age and correlation of Moreno shale, X, 812
Hanna, Marcus A., CAL, 122; GC, 146; PROB, 359, 431, 651, 654, 656; SBP, 92; XII, 915; XV, 747, 748; XVI, 470, 480; XVII, 915, 1494, 1497; XX, 171, 865; XXI, 1270, 1279, 1306; XXIII, 1047, 503; XXIV, 1915; XXV, 147; XXVI, 49, XXVIII, 1011, 1355
evidence of erosion of salt stock in Gulf Coast salt plug in late Oligocene, XXIII, 604, 1576; XXVII, 85
galena and sphalerite in Fayette at Orchard salt dome, Fort Bend County, Texas, XIII, 384
geology of Gulf Coast salt domes, PROB, 629
hauertite associated with Gulf Coast salt domes, XIII, 177
interesting volcanic ash from Calcasieu Parish, Louisiana, X, 93
review, XXV, 1420
secondary salt-dome materials of Coastal Plain of Texas and Louisiana, XIV, 1469
Wilcox Eocene production at Segno field, Polk County, and Cleveland

- (Hanna)
field, Liberty County, XXII, 1274
Hanna, Marcus A., and Cushman, J. A.,
XXIV, 1932
Hanna, Marcus A., and Gravel, Don-
ald W., XIX, 1169, 1170, 1172;
XXII, 990, 1004, 1006; XXIV,
376; XXVIII, 1344, 1357, 1358,
1359, 1676
Conroe oil field, Texas, discussion,
XX, 985
subsurface Tertiary zones of correla-
tion through Mississippi, Alabama,
and Florida, XXII, 984
Hanna, Marcus A., and Hanna, G.
Dallas, XXIV, 1931
Hanna, Marcus A., and Minor, H. E.,
GAS, 661; XXV, 1862; XXIX, 172
East Texas oil field, XVII, 757
East Texas oil field, Rusk, Cherokee,
Smith, Gregg, and Upshur coun-
ties, Texas, STRAT, 600
Hanna, Marcus A., and Parker, W. G.,
notes on an occurrence of galena at
Pierce Junction salt dome, Harris
County, Texas, XVII, 438
Hanna, Marcus A., and Wolf, Albert G.,
aragonite in Texas and Louisiana
salt-dome cap rocks, XXII, 217
gold, silver, and other elements in
salt-dome cap rocks, XXV, 750
Texas and Louisiana salt-dome cap-
rock minerals, GC, 119; XVIII,
212
Hanna basin, PROB, 929, 938; XXVII,
431
Hannibal, XI, 1321
Hannibal and Waring, XII, 979
Hannibal formation, XXIV, 785; XXV,
1655
Hannover, Germany, RMS, 396, 409
middle and north, gravimeter map of,
XXII, 496
Hannover district, SD, 155, 157, 189
Hannoverian type of salt structure, SD,
190, 194, 203; IX, 1250, 1254
Hanover area of north German basin,
salt structures and oil fields in,
similar to Emba domes in U.S.S.R.,
XXIII, 513
Hanover district, IX, 1249
Hanover limestone, XXVI, 1590
Hansard field, XXVI, 1043
Hansawa, Shoshiro, XXVIII, 1695
Hansen, Daisy Clarke, XXII, 718;
XXIII, 948
Potrero Hills gas field, Solano Coun-
ty, California, XXIII, 1230
Hansford County, Texas, XXI, 1031
Hanson, A. H., XIX, 503
Hanst, J. F., GAS, 1111
Hanstholm, RMS, 335
Hantken, K, 169
Hantzschel, Walter, RMS, 196, 197,
202, 322
tidal flat deposits (Wattenschlick),
RMS, 195
Hanway, Jonas, XIX, 474
Hanzawa, Shoshiro, MSC, 12; XXIV,
280
Hanzawa, Shoshiro, and Yabe, H.,
MSC, 13
Hapgood pool, XXV, 1071
Haplophragminae, MSC, 187
Haplophragmoides trullissata zone,
MSC, 98
Haplophragmoides trullissata zonule,
MSC, 116
Happytown, St. Martin Parish, Louisi-
ana, XXIV, 1085
Haragan limestone, XXII, 1566
Haragan shale, XXIX, 193
Harbaugh, M. D., XVII, 1436
Harbin, Darwin, XXVII, 1060
Harbison, Anne, and Richards, Horace
G., XXIX, 895, 897
Harbison, Robert R., Hughes, Urban
B., et al., surface formations in
Mississippi, XXIV, 2033
Harbors, tides in, RMS, 130
Harbort and Grupp, XII, 472
Habort, E. S., SD, 45, 46, 118, 153, 154,
163; IX, 326, 428, 429, 433, 440;
XIX, 806
Hard, Edward W., SBP, 2; STRAT,
238; XXI, 1144, 1145, 1146, 1150;
XXII, 404; XXIII, 1181; XXIV,
1967; XXIX, 13, 287
black shale deposition in central New
York, XV, 165
Mississippian gas sands of central
Michigan area, XXII, 129
Hardeman County, XXIV, 1054
Hardeman syncline, XXIV, 1054
Hardenberg, H. J., developments in
Michigan in 1942, XXVII, 822
developments in Michigan in 1943,
XXVIII, 760
developments in Michigan in 1944,
XXIX, 693
Hardendorf natural gas line, GAS, 413
Harder, E. C., RMS, 423; XX, 260
Harder, E. C., and Gronwall, K. A.,
XV, 154
Hardin, Meade, and Breckinridge
counties, Kentucky, Chester rocks
of, XXII, 267
Hardin and Pope counties, Illinois,
Rosiclare-Fredonia contact in and
adjacent to, XXIX, 1654
Hardin County, Texas, Batson oil field,
SD, 524
Saratoga oil field, SD, 501
section through, based on electrical
logs, XXVII, 1087
Hardin dome, Liberty County, Texas,
XX, 1122
Hardin field, Liberty County, Texas,
STRAT, 564, 578; XIX, 1389;
XXV, 2015
Davis sand lens, STRAT, 564
Hardin field, Montana, FOP, 44; GAS,
246, 269; PROB, 702, 716; XXV,
1476
waters in, XXVI, 1374
Hardin gas field, XXVII, 461
Hardin-McNairy saddle, XXVII, 1054
section, XXVII, 1057
Hardin structural terrace, XXVII, 461
Harding, R. L., Weatherby, B. B., and
Born, W. T., XIX, 6
granite and limestone velocity deter-
minations in Arbuckle Mountains,
Oklahoma, XVIII, 106
Harding sandstone, XXVI, 1377
Hardinsburg sandstone, XXIV, 215,
831
siltstone, and shale formation, XXV,
876
Hardison, George P., Henderson pool,
discovery, Clay County, Texas,
XXIV, 1495
Hardman, XX, 1396
Hardman, E. T., X, 1124; XXV, 374
Hardness and density of clay minerals,
RMS, 469
Hardpan fault, XXV, 2037
Hardy, Norman, and Cunningham,
C. M., geology and status of de-
velopment of Seal Beach and Ala-
- (Hardy)
mitos areas, XI, 870
Hare, Charles E., STRAT, 826; XXIV,
493; XXVII, 1221, 1223
Hare, Charles E., Price, Paul H., Mc-
Cue, J. B., and Hoskins, H. A.,
XXIV, 487
Harell, S., Survey, Texas (well 312),
SBP, 292-335, 408
Hares, C. H., VII, 142, 166
Hares, C. J., V, 201, 205, 208, IX, 896;
XIV, 1071, XVIII, 1673, XXIII,
1068; XXV, 150; XXVI, 336;
XXVII, 1569, 1574, 1576
memorial of Charles T. Lupton, XX,
513
Hargreaves, W. A., XI, 83
Harker, A., XV, 283; XXI, 340, 348,
350; XXII, 1255, 1256, 1257, 1258,
1259, 1261; XXIII, 663; XXVII,
160
Harker method for finding original dip
of underlying beds, three-dimen-
sional drawing showing basis of,
XXII, 1256
Harker's solution of problem of sec-
ondary tilt, corrected, XXII, 1255
of problem of two tilts, XXII, 1261;
XXIII, 663
Harkins, T. I., XVIII, 121; XXII, 1413
Harklowa field, Poland, XV, 17
Harkness, R. B., GAS, 849, 1072;
PROB, 12
account of early endeavors on anti-
clinal theory in Canada, XV, 597
natural gas fields of Ontario, GAS, 59
Harlan, R., XXIII, 1228, 1229
Harley dome, GAS, 369, 1057
gas in Jurassic beds at, FOP, 67;
XXV, 1499
Harley field, XXVII, 450
Harloff, XXII, 28
Harlow, Bruce H., GAS, 439, 514; XI,
659, 1071; XIII, 885; XIV, 798;
XV, 737, 1034, 1041; XVIII, 972,
986, 989, 991, 992; XIX, 12; XXI,
12; XXIII, 147, 1330, 1336; XXIV,
75, 81, 2147; XXV, 11, 1669, 1670;
XXIX, 143, 144, 145, 152
Carboniferous stratigraphy of the
Ouachitas with special study of the
Bendian, XVIII, 1018
interpretation of microfauna of
Pennsylvanian age from the Johns
Valley shale, XVIII, 991
Ordovician age of producing horizon,
Big Lake field, Reagan County,
Texas, XIV, 616
reviews, XV, 479; XVII, 1538
stratigraphy of Bendian of the Okla-
homa salient of Ouachita Moun-
tains, XXII, 852
Harlow, Bruce H., and Galloway, J. J.,
XII, 467
Harlow, Bruce H., and Lowman, S. W.,
XXV, 1646
Harlow, Bruce H., and Rothrock,
Howard E., review, XVI, 268
Harmon field, XXVII, 744
Harney section, GAS, 222
Harnöand Deep, RMS, 305, 307
Harnsberger, Thomas Kennerly, me-
morial of, XVIII, 1554
memorial of Warner Wilson Newby,
XI, 109
Harper, H. I., XXVII, 1188
Harper, Kip, XXVII, 924
Harper, S. C., XXVI, 1826
Harper pool, XXIII, 841
Harper sandstone, II, 74, 77; XXIII,

- (Harper)
1767, 1782; XXI, 1557
Harpersville formation, XXIV, 41
Harpeth Valley and eastern Dickson County, Tennessee, geologic section in, GAS, 871
Harrassowitz, H., RMS, 485
Hairel, D. C., XXV, 181
Harriman novaculite, XXV, 672
Harrington, D., and Denny, E. H., GAS, 1061
Harrington, G. H., XVI, 882
Harrington, H. L., XXVIII, 1466, 1476, 1477
Harris, I., 33, 37, XXIII, 1229
Harris and Hill, IX, 838
Harris, Gilbert D., GC, 389, 402, 422, 482; SD, 12, 13, 16, 17, 43, 211, 214, 216, 224, 273, 285, 287, 312, 329, 334, 338, 340, 344, 347, 397, 418, 426, 436, 437, 452, 496, 599, 684; STRAT, 791; STR II, 208; II, 61; IV, 117, 124; V, 230, VI, 179, 182; VII, 612; VIII, 427; IX, 80, 167, 168, 169, 170, 348, 464, 619, 739, 756, 842, 846, 856, 861, 862, 873, 1001, 1285; X, 3, 16, 75, 83, 221, 233, 234, 235, 237, 277, 282, XIII, 594, 1338; XV, 166, 532, 535; XVII, 616, 619, 620, 624, 629, 632, 645, 652, 653, 1306, 1505; XVIII, 1239, 1240, 1245; XX, 1442, 1496, XXI, 340; XXII, 310, 311, 1659; XXV, 734; XXVII, 608, 1123, 1125, 1133, 1140; XXVIII, 977; XXIX, 25, 51, 62, 63, 64, 886
biographical sketch of, XIX, 922
Harris, Gilbert D., and Veatch, A. C., PROB, 665; SD, 6, 10; IX, 840, 904; X, 260, 276, 686, 288; XIV, 439; XVII, 614, 629, 636; XXI, 1270; XXIX, 45
Harris, J. E., XVII, 1226
Harris, R. Merrill, XXVII, 990
Harris, R. W., STRAT, 802; XIV, 1505; XVI, 975
Harris, Richard C., memorial of Roy Ernest Dickerson, XXVIII, 888
Harris, Sidney L., XXIV, 118
Harris County, Texas, Fairbanks and Satsuma fields, XXIII, 686
Friendswood field, XXII, 1602
geochemical log, dry hole, XXIV, 1425
geochemical log, edge producer, Friendswood oil field, XXIV, 1423
geochemical log, producing well, Friendswood oil field, XXIV, 1422
geophysical history of South Houston salt dome and oil field, XXIX, 210
Goose Creek oil field, SD, 546
Hockley salt dome, SD, 570
map of oil fields and oil wells in, XXIII, 146
map of South Houston field, XXIX, 211
relation of phenomenal rise of water levels to a defective gas well, XXIX, 253
stratigraphy and historical geology of Gulf Coastal Plain in vicinity of, XXIII, 145
table of formations penetrated by drill in, XXIII, 154
(well 400), SBP, 335-349, 410
Harris formation, CAL, 189
Harris pool, Kansas, STR II, 157
Harris sand, XXIII, 908
Harrisburg coal, XXIII, 1385
Harrisburg coal No. 5 of Illinois, XXIII, 1390
Harrisburg dome in St. George district, Utah, XXIII, 143
Harnsburg Run sand, Music Mountain pool, STRAT, 500
Harrison and Eaton, XI, 88
Harrison, J. B., RMS, 386
Harrison, J. B., and Franks, G. F., XXIV, 1585, 1590
Harrison, J. B., and Jukes-Browne, A. J., XXIV, 1552, 1572, 1577, 1584, 1585, 1586, 1590
Harrison, J. T., XXIX, 1080
Harrison, John Vernon, PROB, 646; XVII, 217, 218; XIX, 802, 809; XXI, 1274; XXIII, 606; XXVI, 829, 833
geology of some salt plugs in Laristan, southern Persia, review, XV, 713
Harrison, John Vernon, and Falcon, N. L., XXIV, 2115
Harrison, John W., IX, 713
Harrison, T. J., XXIX, 1074, 1078
Harrison, T. W., XIII, 594
Harrison, Thomas H., PROB, 634, 635, 657, 658, 727
Harrison, Thomas S., IV, 183; X, 128 734; XI, 378, 381, 786, 790, 803, 804, 807; XIII, 1445; XVII, 967, 968; XIX, 1473
Colorado-Utah salt domes, XI, 111
Grass Creek dome, Hot Springs County, Wyoming, STR II, 623
oil accumulation in Rocky Mountain region, VII, 661
porphyry at Amarillo, VII, 434
Harrison, Preston 1 (well 393), SBP, 292-335, 410
Harrison anticline, XXII, 257; XXV, 1144
Harrison County, Texas, section extending from Guadalupe Peak, Culbertson County, to, XXI, 1084 (well 306), SBP, 292-335, 408
Harrison County, West Virginia, Shinnston oil pool, STRAT, 830
stratigraphy of deep well in, XXVII, 1539
Harrison field, New York, XXVII, 837; XXIX, 668
Harrison pool, Potter County, Pennsylvania, XXII, 257; XXV, 1144; XXVII, 846; XXVIII, 732
Harriss, T. F., and Woodford, A. O., CAL, 42, 64, 95, 203; XXIV, 665
Harshberger, T. K., V, 49
Hart, William A., GAS, 1087
Hart County field, GAS, 856, 874, 879
Hart limestone in Oklahoma, IX, 984
Hart limestone member of Stratford formation, base of Permian in Ardmore basin, XXV, 1668
Hart pool in Stephens County, Texas, STR II, 478
Hartford and Washburn anticlines growing throughout late Atoka, Hartshorne, and McAlester time, XXI, 1412
Hartford anticline, GAS, 568
Hartley, Burton, XXI, 1273
certain relations between production and structure in northeastern Osage County, Oklahoma, VI, 464
oil fields of Mexico, V, 504
Hartley, Kenneth, XIX, 23
Hartman, Olga, XXVIII, 1011
Hartman field, XXVIII, 862
Hartmann, XIII, 1465
Hartmann, A., and Heim, A., XII, 496
Hartnagel, Chris A., SBP, 356; XVI, 727; XXI, 1586; XXII, 1183; XXIV, 2065; XXIX, 667
Medina and Trenton of western New York, XXII, 79
Hartnagel, Chris A., and Russell, W. L., New York oil fields, STR II, 269; IX, 798
Hartsel anticline, Park County, igneous sill on, XXI, 989
Hartselle formation in Alabama, GAS, 856, 872
Hartselle sandstone in Mississippi, GAS, 856
Hartshorne Quarry Sta. 48, section of, XXII, 906
Hartshorne sandstone, III, 148, 268; V, 549; VI, 3; XVIII, 1052; XXI, 1407, 1419; XXII, 1568; XXIII, 226
in Arkansas basin, GAS, 512, 514-532, 544, 554
McAlester shale, Savanna sandstone, and Boggy shale, lithologic character of strata in, XXI, 1413
Hartshorne sandstone and Hartshorne coal in Arkansas, XX, 1347
Hartson, D. P., XXVI, 35
Hartsok, A. J., XVI, 385, 394
Hartt, XX, 1229
Hartt and Derby, XXI, 299
Hartville uplift, XXI, 1253; XXVI, 1559, 1567; XXVII, 427
at Lance Creek field, Wyoming, STR II, 607
Hartzell, T. B., Larsen, W. P., and Diehl, H. S., XX, 262
Harvard University, RMS, 230
Harvey, C. J., and Burkhead, W. Z., Fairbanks and Satsuma fields, Harris County, Texas, XXIII, 686
Harvey, H. W., RMS, 50, 437
biological oceanography, RMS, 142
Harvey and McPherson counties, Kansas, Nikkel pool, STRAT, 105
Harz area, Germany, salt beds, IX, 424
Harz block, XVI, 173
Harz Mountains, XIV, 1166
Haseltine, W. Lloyd, XXV, 318; XXVI, 1404
Haseman, J. D., VI, 339; PROB, 56, 374; XXI, 1182, 1249
humic acid origin of asphalt, V, 75
origin and environment of source sediments of petroleum deposits, XIV, 1465
Haseman, William Peter, XIX, 879
memorial of, XVI, 527
Hashimoto, K., XIX, 607
Haskell, Grant, Morton, Stevens, and Seward counties, Kansas, and Texas County, Oklahoma, Hugoton gas field, STRAT, 78
Haskell and Vening-Meinesz, XXVII, 53
Haskell County, Texas, XXIII, 854; XXVI, 1044
Haskell sand in Bradford field, Pennsylvania and New York, STR II, 416, 422, 424
Haskell sand gas pool, McKean County, production from in 1944, XXIX, 672
Haskew gypsum member, XXIII, 1798
Haslam area, Shelby County, Texas, gas in, XXI, 1072
Hass, W. H., and Knechtel, M. M., XXVI, 313
Hassler, G. L., XXIV, 1464
Hassler, J. O., review, XXI, 1352

- Hat Creek anticline, XXIII, 926; XXVI, 1567
- Hatch, F. H., and Rastall, R. H., XVII, 1223
- Hatch, F. H., Rastall, R. H., and Black, M., XXVI, 318
- Hatch, T., RMS, 574
- Hatcher, John Bell, XXIV, 1684
- Hatcher, John Bell, and Stanton, T. W., XV, 1135, 1187, 1198
- Hatchetigbee anticline, VI, 195; XXVIII, 59, 1318
- Hatfield, H. S., dielectric separation, review, VIII, 682
- Hatfield pool, XXVI, 1094
- Hathaway zone at Santa Fe Springs field, GAS, 203, 204
- Hattiesburg and Pascagoula formations in Louisiana, GC, 413; XVII, 643
- Hattiesburg clay, GC, 415; XVII, 645; XXVIII, 62
- in Covington County, Mississippi, GC, 371; XIX, 1150
- Hutton Canyon, MSC, 36
- Hauerite, PROB, 656
- associated with Gulf Coast salt domes, XIII, 1777
- in a salt-dome cap rock, X, 531
- in rock salt, XXI, 1292
- Haug, Emile, CAL, 76; MEX, 92, 94; MSC, 11, 81; SD, 111; IX, 1189; XII, 400; XVI, 1095, 1118; XVII, 220; XX, 936; XXIII, 1723; XXIV, 1192, 1197, 1760; XXV, 409; XXVII, 117
- Haun, F., I, 25
- Hauptman, C. A., XXIV, 1215
- Haury pool, GAS, 468, 476
- Hauschild area of Kansas, XXI, 1005
- Hausen, J., XIX, 1735, 1756
- Hauser, E. A., RMS, 554
- Hausmann, Karl, XVIII, 94
- Hauterivian, XXVIII, 1158
- of Mexico and Central America, fossils of, XXVIII, 1089
- Hauterivian beds, XVIII, 1089
- Hauterivian fossils, XXVIII, 1152
- in northern Zacatecas, XXVIII, 1155
- Havlock, G. C. H., XIX, 833, 835
- Haverhill pool, Kansas, PROB, 775, 996, 1004
- Haviland, B. C., XXIII, 1446
- Havre field, PROB, 704, 714
- helium in, GAS, 1057
- Hawaii, RMS, 113, 114, 117, 497
- Hawaiian Islands, foraminifera collected near, MSC, 11
- Hawker, H. W., GC, 564; XVII, 489, 493, 502, 514
- Hawkins, A. C., II, 28; XXI, 893
- Hawkins, Glenn D., XXV, 1234
- Hawkins field, Wood County, Texas, XXV, 898, 1081; XXVI, 1053; XXVII, 787, 920; XXVIII, 848
- Woodbine sand productive at, XXV, 1084
- Hawkins structure, XXV, 1084
- Hawkinsville dome, PROB, 651, 655
- electrical survey of, XIV, 1158
- Hawley, Henry J., SBP, 287; XIII, 927; XXVII, 3
- memorial of Conrad K. Bontz, XII, 231
- Hawley, Henry J., and Gester, G. C., GAS, 449; XIII, 1511; XV, 1088
- Yates field, Pecos County, Texas, STR II, 480
- Hawley, J. E., PROB, 270, 370; SBP, 2; XIII, 1222; XVI, 1031
- (Hawley)
- generation of oil in rocks by shearing pressures, XIII, 303, 329; XIV, 451
- Hawley, J. E., and Rand, Wendell P., PROB, 449
- Hawley field, Texas, XXI, 1022
- Hawn, F., II, 71
- Hawn, F., and Swallow, G. C., XXIV, 299
- Hawn, R. H., IV, 195
- Haworth, Erasmus, STRAT, 57; I, 23, 25, 26, 33; II, 70, 71, 87, 89, 101; XIII, 884; XVIII, 1498; XXIII, 1756; XXIV, 301; XXIX, 479
- memorial of, XVII, 343
- Haworth, Erasmus, and Beede, J. W., XXIII, 1232
- Hawthorn formation, XXII, 792, 794, 796
- Hawtof, E. M., PROB, 146, 992, 993; XVIII, 26; XIX, 107
- Hawver Cave, CAL, 266, 303
- Hay, O. P., XXIII, 1228; XXVIII, 1001; XXIX, 1723
- Hay, Robert, I, 23; II, 71, 76; V, 68; XXIII, 1756, XXIV, 299, 303
- Hayden, CD, 14
- Hayden, F. V., II, 71; XV, 1095; XIX, 1668; XXI, 717, 718; XXII, 1032; XXIV, 299; XXV, 1625
- Hayden, F. V., and Meek, F. B., STRAT, 21; V, 21; XIII, 884; XV, 1251, XX, 1190; XXIV, 299; XXIX, 1607
- Hayes, A. O., PROB, 636; SD, 3
- Hayes, Charles Willard, MEX, 176; SD, 13, 14, 418, 496; II, 134, 150, 151, 154; V, 453, 464; VII, 606, 611, 617, 618, 620; IX, 843; XVIII, 818; XXI, 2, 5
- Hayes, Charles Willard, and Kennedy, William, GC, 437; VII, 539; IX, 601, 744, 844; XVII, 464, 653, 1460, 1505; XIX, 656; XXIX, 1708
- theory of origin of salt domes, IX, 844
- Hayes, Charles Willard, and Paige, Sidney, handbook for field geologists, review, VI, 260
- Hayes area, XXVII, 736
- Hayes field, XXV, 1048
- Hayes gas field, XXVI, 1019
- Hayford, John F., XII, 895
- theory of isostasy, CD, 12
- Hayford, John F., and Bowie, William, XXI, 333
- Hayman, R. J., RMS, 606
- Haymond formation in trans-Pecos Texas, XIX, 228
- Haynes, Winthrop Perrin, GAS, ix; SD, 122; II, 98; VII, 2; XIII, 1258; XVI, 445, 1093; XVII, 212; XXI, 132; XXIV, 1441; XXV, 562
- geological work in the Carpathians, VI, 523
- leader, foreign geology conference at Chicago convention, XXIV, 604
- meeting of Petroleum Section of International Geological Congress, VII, 187
- memorial of Fred Hall Kay, XXVII, 1561
- reviews, XV, 849; XVIII, 822; XIX, 1555; XX, 318; XXVI, 286; XXIX, 460
- translator, Carpathian Oil Geological Institute of Poland, review, XIX, 1555
- Haynes, Winthrop Perrin, and Miller, A., review, XVI, 220
- Haynes, Winthrop Perrin, and Moore, Raymond Cecil, an outcrop of basic igneous rock in Kansas, IV, 183
- Haynes Brothers (well 342), SBP, 292-335, 409
- Haynesville dome, Texas, XII, 540
- Haynesville field, Louisiana, PROB, 417; IV, 133; V, 341, 629, 690; VI, 53, 142, 188, 192, 250, 252, 263, 350, 371, 474, 477, 479, 556; XXIX, 808; review, VI, 160
- possible explanation of large initial production of some wells of, VII, 295
- Haynesville oil field, XXVI, 1264
- Haynesville structure, XXVI, 1264
- Hays, J. W., XXV, 2162
- Hays limestone, brecciated in subsidence areas, XVIII, 1496
- Haystack gypsum, II, 114
- Hayti, review, VI, 386
- Hayward, John T., XX, 1006; XXIII, 1822, 1824
- Hayward Company, RMS, 661
- Hayward fault, CAL, 39, 309
- Hazard rotary under-reamer, VIII, 143
- Hazel sandstone, XXIV, 147
- in Van Horn region, Texas, XXIV, 149
- Hazeltine, R. S., XIII, 157
- Hazleton, MSC, 61
- Hazleton pool, XXVII, 819
- Hazen, IX, 207
- Hazlett, and West, VII, 133
- Hazlewood, Arthur J., VII, 384; XI, 375
- Hazzard, A. M., GAS, 119
- Hazzard, John C., XIV, 1353; XXVIII, 1780
- Hazzard, Roy T., XIX, 1536; XXII, 1474, 1681; XXIII, 247, 283, 295; XXVII, 1136, 1229, 1410, 1411, 1468; XXVIII, 29, 579, 594; XXIX, 184, 1008, 1417
- Hazzard, Roy T., and Blanpied, B. W., XXVIII, 1345
- compilers, guidebook of the eleventh annual field trip of the Shreveport Geological Society in southeast Mississippi, review, XIX, 571
- correlation of Cockfield and Gosport formations, eastern Mississippi and western Alabama, XXII, 309
- developments in North Louisiana and South Arkansas in 1941, XXVI, 1250
- developments in north Louisiana and south Arkansas in 1942, XXVIII, 257
- field and wildcat developments in south Arkansas in 1942, XXVIII, 326
- field developments in north Louisiana in 1942, XXVIII, 333
- interesting wildcat wells drilled in north Louisiana in 1942, XXVIII, 554
- salt-dome discoveries in north Louisiana in 1942, XXVIII, 561
- Head, R. E., XXI, 260
- Head, R. E., and Slavin, Morris, XXI, 260
- Head of Passes, Louisiana, RMS, 161
- Headlee, A. J. W., SBP, 357
- Headlee, A. J. W., and Nolting, J. P., Jr., XXVII, 1200
- Headlee, A. J. W., and Price, Paul H., XXIX, 1257
- geochemistry of natural gas in Appalachian province, XXVI, 19
- natural coal gas in West Virginia,

(Headlee)

- XXVII, 529
regional variations in composition of natural gas in Appalachian province, XXII, 1153
Headquarters oil field, XXVI, 1105, 1108; XXVII, 823, 828, 831
Headquarters Traverse field, XXVI, 1097
Heald, Kenneth Conrad, PROB, 242, 270, 278, 309, 992, 997; SBP, 7, 8, SD, 29, 211; STRAT, 823, III, 257; V, 575; VI, 43, 193; VII, 517; VIII, 506, 717, 769; IX, 246, 859; X, 297, 311, 405, 944, 1037; XI, 659, 1221; XII, 766; XIII, 3; XIV, 425, 1452; XV, 230, 613, 732, 749, 810, 814, XVI, 721, 727, 916, XVII, 713; XVIII, 26, 1175, XIX, 888; XX, 292, XXI, 1296, 1379; XXIV, 1363, 1679, 1686, 2030; XXVII, 1175; XXVIII, 142; XXIX, 1512, 1748
contribution to stratigraphy of western Kansas, VIII, 242
discussion of conversion of fatty and waxy substances into petroleum hydrocarbons, XVII, 1265
discussion of deep sand development in Tioga County, XV, 936
discussion of Max Ball's "the relative ages of major and minor folding and oil accumulation in Wyoming" V, 408
geologists will be deferred from Military service, XXVII, 1278
is it injurious to close in an oil well? VI, 379
Kevin-Sunburst field, Montana, X, 197
meeting of Geological Society of America, X, 100
memorial of Edwin Binney, Jr., XIII, 295
methods of detecting small quantities of petroleum, V, 620
National Research Council and oil geology, VII, 467
oil in Idaho? VI, 472
oil in middle Ordovician in Indiana, VI, 374
oil-bearing horizons of Wyoming, V, 186
oil geology and science, VIII, 473
oil showing in granite in South Africa explained, VI, 369
report of national service committee, XXVIII, 662; XXIX, 601
research and American Association of Petroleum Geologists, XII, 939
reviews, VI, 57, 58; VII, 302, 304, 306, 454, 588; VIII, 97; IX, 359, 362, 918; X, 533, 638, 906; XI, 201, 997, 998; XIII, 239; XVI, 217, 1160; XXIII, 106, 1859
rhyming letters for Victory, XXVI, 1838
sandstone inclusion in salt in mine on Avery's Island, VIII, 674
subsurface temperature gradients, foreword, PROB, 987
suggestions for writing reviews, VII, 88
Heald, Kenneth Conrad, and Gilluly, James, stratigraphy of El Dorado oil field, Arkansas, review, VII, 198
Heald, Kenneth Conrad, and Mather, Kirtley F., XIX, 1735; XXI, 107; XXIX, 511, 513
Heald, Kenneth Conrad, and Rubey,

(Heald)

- W. W., El Dorado oil field in Arkansas not on an anticline, VI, 358
Heald, Kenneth Conrad, and Smith Philip S., STR II, 305
Heald, Kenneth Conrad, and Wegemann, C. H., VII, 611
Healdton anticline, GAS, 585
Healdton field, Oklahoma, PROB, 239; GAS, 590; III, 121, 257, 444; IV, 47, 121; V, 32, 48, 173, 326, 344, 469, 627; VI, 23, 476; XXV, 21
earliest recognized example of a buried hill, STR II, 694
geothermal variations at, PROB, 991
ideal lease, XXVIII, 239
Healdton Island, Pennsylvanian sedimentation around, IV, 47
Healdton sand, GAS, 589
Heard Islands, RMS, 406
Heart Mountain and South Fork thrusts, Park County, Wyoming, XXV, 2021
Tertiary structural and stratigraphic history, XXV, 2045
Heart Mountain overthrust, XXVII, 1257
Heart Mountain thrust, XIII, 431
age of, XXV, 2042
areal extent, XXV, 2023
character of thrust sheet, XXV, 2023
map of southwestern Wyoming showing possible southward extent of, XXV, 2029
map and cross section showing remnants of, and their relation to South Fork thrust, XXV, 2024
Sheep Mountain and Logan Mountain remnants of, XXV, opp. 2027
Sheep Mountain remnant of, XXV, opp. 2026
source of, XXV, 2028
Heat, PROB, 247, 255, 268; RMS, 84
as related to properties of pure water, RMS, 67
effect on gravity of crude oil, PROB, 157
equalization of, in ocean, RMS, 86
exchange of, at the surface of the ocean, RMS, 60, 72, 84
loss of, by conductivity, CD, 44
mechanics of transfer in a liquid, RMS, 75
relation to generation of oil, PROB, 36, 269
skin-frictional, generated in compaction of sediments, XXVIII, 1513
Heat accumulation from radioactivity, CD, 42, 48
Heat capacity of water, RMS, 61, 67, 71
Heat conduction, RMS, 73, 75
Heat decomposition of cellulose, effect of increasing charging density on, XXIV, 1880
Heat decomposition theory, XV, 612
Heat diffusion, RMS, 75
Heat distillation, PROB, 448
Heat energy in sea, RMS, 58
Heath, F. E., XX, 73, 74
review, XXI, 810
Heath, F. E., Waters, J. A., and Ferguson, W. B., GC, 762; PROB, 648, 649, 654; XV, 279
Clay Creek salt dome, Washington County, Texas, XV, 43
Heath formation, XXVII, 465, 1297
in Zorritos oil fields, Peru, XII, 24
Heathman, J. H., XXV, 138
Heathman, W. W., XX, 950
Heating, effect of rate of, on determi-

(Heating)

- nation of reduction number, SBP, 47, 54
Heating values for Oriskany fields, XXII, 1175
Heatley, F. E., XIX, 379, 383
Heaton, Ross L., GAS, 373; PROB, 343, 928, STRAT, 96, 100, 101, 327; XI, 112, XIX, 1002, 1004; XXI, 133; XXIII, 143, 1140; XXV, 1758, 1762; XXVI, 1395
Ancestral Rockies and Mesozoic and late Paleozoic stratigraphy of Rocky Mountain region, XVII, 109
contribution to Jurassic stratigraphy of Rocky Mountain region, XXIII, 1153
memorial of Ivy Allen Keyte, XV, 985
relation of accumulation to structure in northwestern Colorado, STR II, 93
stratigraphy versus structure in Rocky Mountain region, XXI, 1241
Heaving shale, IX, 526
fields and wells having, in Texas Coastal Plain, XXIII, 216
in Orange field, GC, 890; XX, 541
in Texas Coastal Plain, bibliography on, XXIII, 217
in Texas Coastal Plain, geologic aspects of, XXIII, 212, 607
in West Columbia field, Texas, STR II, 459
problem of, XXIII, 212
Heaving shale beds in Moore County, Texas, XXIII, 1032
Heaving shale trends of Texas Coastal Plain, XXIII, 214-215
Heavy concentrates, RMS, 215
Heavy Crude pool, XXV, 1139
Heavy fuel oil for navy, XXV, 1269
Heavy isotopes of hydrogen and oxygen, RMS, 67
Heavy liquids, RMS, 530, 595, 600
Heavy-mineral and radon content of soils, correlation between, XVI, 1349
Heavy-mineral analyses, correlation by, XIII, 449
of Keweenaw sandstones and arkoses, XXVIII, 115
Heavy-mineral assemblage carried by Mississippi River into southern Louisiana, XXIV, 2101
Heavy-mineral assemblages at Catahoula-Vicksburg contact in Mississippi, useful in correlation, GC, 372; XIX, 1151
in Mississippi, useful in correlation, XIX, 1151
Heavy mineral content of Chester sandstones of Indiana, significance of, XXIV, 845
of Honda series, XXVI, 816
Heavy-mineral correlation of some Permian sedimentary rocks, New South Wales, possibilities of, XXIV, 636
discussion, XXIV, 1682
Heavy-mineral data at the southern end of San Joaquin Valley, XI, 369
Heavy-mineral residues in Permian rocks of New South Wales, XXIV, 639
Heavy-mineral samples, methods of preparation and examination, XXIV, 2070
Heavy-mineral studies in New South

- (Heavy-mineral)
 Wales, bibliography of, XXIV, 648
 on correlation of sands at Kettleman Hills, California, XVIII, 1559
 Heavy-mineral suite in Domingue sands, XXIV, 1750
 Heavy-mineral zones, characteristics of, XXIV, 2070
 for stratigraphic correlation, XXIV, 2073
 from Sabine Parish to Jefferson Davis Parish, Louisiana, section showing, XXIV, 2076
 from Vermilion Parish to Rapides Parish, Louisiana, section showing, XXIV, 2074
 of Louisiana and Texas Gulf Coast sediments, XXIV, 2069
 Heavy minerals, RMS, 212, 529, 593, 600, 602, 611; STRAT, 594
 correlative value of, VIII, 158
 frequencies, RMS, 178
 genesis of a sandstone dyke, as indicated by, XII, 271
 in Anzoategui geosyncline, XXI, 242
 in California oil-field sediments, VIII, 166
 in Kulnura grit, Muree beds, Braxton sandstone, and Ravensfield sandstones, XXIV, 638; 640
 in Oriskany sandstone, XXII, 556
 in Ripley and Lagrange formations of southern Illinois, XIV, 863
 in Sespe formation, XII, 749
 of sands and sandstones, XXIX, 2
 of various Paleozoic and pre-Cambrian formations, XXVIII, 114
 studies, technique in, RMS, 596-604
 subsurface correlation by means of, XI, 359
 Heavy oil, PROB, 239; MEX, 196
 survey of California reserves of, XXVII, 862
 Heavy oil producing area of Smackover, Arkansas, subsurface conditions in, VII, 672
 Heavy residues of Scotland formation of Barbados, XXIV, 1560
 Hebronville area, electrical prospecting at, XIX, 71, 73
 Hebler, W. E., GAS, 511
 Hebron anticline, XXII, 257; XXV, 1144
 Hebron gas field, Potter County, Pennsylvania, XX, 1019
 Hebron pool, XXII, 258; XXV, 1144
 reservoir pressure of, XXII, 258
 Hecht, Bertha, XXVI, 1388
 Hecht, Franz, RMS, 200, 421, 444; XX, 435; XX, 1479
 Heck, E. T., STRAT, 311, 810, 811; XXVI, 865; XXVII, 1221
 barium in Appalachian salt brines, XXIV, 486, 887
 Gay-Spencer-Richardson oil and gas trend, Jackson, Roane, and Calhoun counties, West Virginia, STRAT, 806
 hydrogenation of oil: suggested natural source of hydrogen, XXIV, 1475
 regional metamorphism of coal in southeastern West Virginia, XXVII, 1194; discussion, XXVII, 1225
 Heck, E. T., and Price, Paul H., XXVII, 1215
 Heck, E. T., Hare, Charles E., and Hoskins, Homer A., STRAT, 826
 Heck pool, V, 82
 Hecker, O. X, 1201
 Hector, James X., 1228, XVIII, 1390; XIX, 296, XXIX, 1607
 Hector, California, RMS, 471
 Hedberg, Hollis D., GC, 81; MSC, 178, 229, 311; PROB, 280, 542, 619, 620, 812, 814, 815; XI, 621, 624, 876, 889, 983, 1333; XIII, 2, 16, 558; XIV, 2, 8, 14, 31, 1560; XVI, 642, 643; XVII, 1216; XVIII, 1177; XIX, 529, 784, 785; XXI, 1137, 1138, 1350; XXII, 833, 1411; XXIII, 41, 702; XXIV, 1550, 1560, 1561, 1565, 1614, 1770, 2040, XXVI, 48, 1650, 1651; XXVII, 1519; XXVIII, 1643; XXIX, 527, 1074, 1076, 1084, 1085, 1088, 1090, 1091
 Cretaceous limestone as petroleum source rock in northwestern Venezuela, XV, 229
 Cretaceous limestone as petroleum source rock in northwestern Venezuela. Reply to discussion by R. A. Liddle, XV, 475
 effect of gravitational compaction on structure of sedimentary rocks, X, 1035
 effect of gravitational compaction on structure of sedimentary rocks, discussion, XI, 875
 evaluation of petroleum in oil sands by its index of refraction, XXI, 1464
 review, XXIX, 289
 Second Venezuelan Geological Congress, San Cristobal, April, 1938, abstracts, XXII, 1101
 stratigraphic nomenclature, discussion, XXV, 2202
 Trinidad Geological Conference, April, 1939—abstracts, XXIII, 1238
 Hedberg, Hollis D., and Pyre, Augustin, XXIX, 524, 525, 526
 stratigraphy of northeastern Anzoategui, Venezuela, XXVIII, 1
 Hedberg, Hollis D., Rasmussen, Clayton, Levorsen, A. I., and Tuttle, Helen Fowler, selected bibliography of articles describing stratigraphic type oil fields, STRAT, 858
 Hedjaz littoral, faulting in, XXII, 1219
 Hedley, J. D., XXIV, 1807
 Placedo oil field, Victoria County, Texas, XIX, 1693
 Hedrick, O. F., GAS, 609, 645
 Hedstrom, Helmer, electrical survey of structural conditions in Salt Flat field, Caldwell County, Texas, XIV, 1177
 memorial of Karl Sunberg, XXIII, 1282
 Hegler limestone member, PTNM, 582; XXVI, 582
 Hegwein, W. H., MEX, 15, 22; XX, 433; XXVIII, 318, 1147
 Heidelberg field, Jasper County, Mississippi, XXIX, 821
 fossils from, XXIX, 1010
 Upper Cretaceous index fossils in wells in, XXIX, 1012
 Height of beaches, RMS, 208
 Heights well field, artesian pressure in sands at, XXIX, 278
 rise of water level at, XXIX, 279
 Heiland, C. A., XII, 855, 863; XIII, 388, 763; XIX, 59; XXII, 492; XXVI, 48
 (Heiland)
 advances in technique and application of resistivity methods in oil prospecting, XVI, 1260
 construction, theory, and application of magnetic field balances, X, 1189
 directions for use of Askania torsion balance, review, XVII, 445
 geophysical exploration, review, XXIV, 2186
 geophysical methods of prospecting, principles and recent successes, review, XIII, 1402
 graphical methods of calculation in interpretation in work with torsion balance, discussion, XIII, 388
 new graphical method for torsion balance-topographic corrections and interpretations, XIII, 39, 245
 reviews, XII, 561; XIV, 110
 Schweydar-Bamberg types of *Eotvos* torsion balance, X, 1201
 Heiland, C. A., Henderson, Charles W., and Malkovsky, J. A., geophysical investigations at Caribou, Colorado, review, XIV, 110
 Heiland Exploration Company, XXIX, 657
 Heilprin, A., XXII, 1000
 Heim, A., SD, 45
 Heim, A., and Hartmann, A., XII, 496
 Heim, Albert, XII, 847
 Heim, Arnold, CAL, 210; MEX, 8, 9, 13, 35, 38, 47, 150, 160, 161; PROB, 385; IV, 87; IX, 326; XI, 864; XVIII, 670; XIX, 276; XX, 687, 691, 692, 694, 695, 699, 700, 936; XXVII, 1478, 1479, 1482, 1486, 1488, 1491, 1513; XXVIII, 1079, 1133, 1135, 1138, 1141, 1144
 discussion of tectonics of southeastern Caucasus, XVIII, 670
 Himalayan border compared with Alps, review, XXIII, 1417
 studies on marine unconformities in Europe, XX, 694
 theory of isostasy, CD, 12
 Heine, F., XXVII, 1412
 Heinrich, Oswald J., XIII, 1148
 Heinz, R., XXVIII, 1411, 1412
 Heinzman 1 (United Fuel Gas Co.) (well 425), vertical variation of properties in, SBP, 378, 379
 Heiser, F. W., STRAT, 118
 Heisig, G. B., XXVIII, 939
 Heiskanen, W., CD, 13; XII, 896
 Heiskanen tests of depth of isostatic compensation under land masses, CD, 179
 Heithecker, R. C., and Taliaferro, D. B., XXVII, 68
 Heithecker, R. E., XV, 1294
 engineering studies and results of acid treatment of wells, Zwolle oil field, Sabine Parish, Louisiana, review, XIX, 127
 Helderberg group in West Virginia, XXIV, 1983
 (SI) SBP, 351, 355
 Helderberg series, XXV, 811
 Helderbergian, XXV, 673
 correlation of, XXV, 676
 lower of Michigan basin, XXII, 1530
 lower of western Tennessee, XXII, 1531
 Missouri, XXV, 675
 Tennessee, XXV, 669
 Helderberg limestone, XXVII, 852
 Hele-Shaw, H. S., XX, 712
 Helgoland Island, RMS, 331, 335

- Helical movements in water, RMS, 8, 13, 17, 28
- Helicoprion davisi* most important index fossil of Western Australia, XXV, 402
- Heligoland, SD, 35
- Helium, GAS, 1057; PROB, 451; GAS, 369, 370, 394, 410, 808, 1017, 1053-1064, 1068, 1075, 1076, 1125 in gas at Dergachevsky, XVIII, 758 in north German salt domes, origin from alpha radiation of polonium, XXIV, 1533
- nitrogen, carbon dioxide, and hydrogen sulphide, geology of natural gases rich in, GAS, 1053
- origin and concentration in Amarillo fold, Texas, XIII, 799
- Helium-bearing natural gases, ages in different localities, GAS, 1125
- Helium Company, GAS, 1056, 1064
- Helium content of gases in Japan, XI, 196
- Helium extraction, United States Government plant at Amarillo, Texas, GAS, 1125
- Helium gas field, Panhandle, XXIII, 1052
- volume of sedimentary source rock needed to furnish helium of, XXIX, 1493
- Helium plant near Amarillo, Texas, GAS, 1064
- Helium Reserve No. 1, GAS, 384, 1057
- Helkvist, G. A., XXIX, 1748
- Hell Creek formation, XXII, 1634; XXVII, 1574
- Hell Creek member, XXVI, 356
- Helland-Hansen, B., RMS, 50, 99, 103, 104
- Hellman, A. F., XIII, 315, 315
- Hellman productive zone, PROB, 219
- Hellmann, Gustav, RMS, 497, 498
- Helm field, XXVII, 870
- gravity of oil in, XXVI, 1145
- production in, XXVI, 1144
- Helmerich and Payne, XXII, 655, XXIII, 831, XXIX, 717
- Helmert, F. R., CD, 13; XII, 890
- Helms formation, XXIV, 165
- Helsingfors, Finland, RMS, 298, 522
- Helvetian, MSC, Fig. 14 (in pocket)
- lowermost, MSC, 176
- Helvetian formation, Europe, VI, 526
- Helvetian nappe, CAL, 37
- Hematite, RMS, 602
- coatings of eolian material, RMS, 499-502
- in rock salt, XXI, 1292
- quantity of, in a shale, RMS, 509
- Hematite-ilmonite, XXVIII, 78
- Hemicellulose, PROB, 37
- in sediments, RMS, 421, 442, 443
- Heminway, Caroline E., and Gallows, J. J., Tertiary foraminifera of Porto Rico, review, XXV, 1810
- Hemipelagic deposits, RMS, 397, 398
- near-shore sediments—, RMS, 219
- Hemmelsdorfer See, RMS, 363
- Hemminger, A., and Smythe, W. R., XXI, 1199
- Hemmoor stage of North Sea, RMS, 332
- Hempel analyses, XXVII, 1306
- use in determining gravity-interval pattern of a crude oil, XXV, 565
- Hempel fractional distillation analyses of Wason field crude oil, XXVII, 522
- Hempel fractions, correlation indices (Hempel) for, XXVII, 1323
- Hempel method of analysis of crude oil, XXI, 915
- Hemphill, H. A., Bybee, H. P., Boehms, E. F., Butcher, Cary P., and Green, G. E., detailed cross section from Yates area, Pecos County, Texas, into southeastern New Mexico, XV, 1087
- Hemphill, H. A., Cole, Taylor, and Cordry, C. D., McKee and Waddell sands, Simpson group, West Texas, XXVI, 279
- Hemphill, H. A., Sellards, E. H., and Bybee, H. P., GAS, 439, 440, 442, 443; PROB, 352
- Hemphill and Nero oil fields, XXVI, 1268
- Hemphill distillations, general applicability of law of decrease of specific gravity of, to all crude oils of United States, XXI, 943
- Hemsel, Clenon C., STRAT, 90; XXIII, 1679, 1680; XXIV, 1798; XXV, 1684, XXVI, 223, 229
- geology of Hugoton gas field of southwestern Kansas, XXIII, 1054
- Hempstead formation, RMS, 242
- Henbest, Lloyd G., PTNM, 603; XVIII, 986; XXI, 10; XXIII, 1523; XXVI, 603; XXVIII, 1677; XXIX, 162
- Henbest, Lloyd G., and Skinner, J. W., PTNM, 675; XXVI, 675
- Hendee, R. W., GAS, 1108, 1110
- Henderson, XX, 908
- Henderson, A. K., Mrs., XIII, 1247
- Henderson, Edward P., VIII, 773
- Henderson, Edward P., and Schaller, Waldemar T., XXI, 1272, 1289, XXIII, 1690
- Henderson, E. W., GAS, 1057; XXIII, 122
- Henderson, H. Hope, XX, 909
- memorial of Jack Joseph King, XIII, 405
- Henderson, J., and Ongley, M., X, 1238
- Henderson, J. B., XI, 65
- Henderson, J., McClelland, XX, 902, 909
- Henderson, Junius, VII, 177; IX, 247; XV, 1097; XVII, 110, 403, 405, 408; XX, 1192
- Greasewood Lake area, STRAT, 21
- origin of Green River formation, VIII, 662
- Henderson, L. J., RMS, 66
- Henderson, Paul L., XVIII, 435; XIX, 174
- Henderson, W. D., XXIII, 1053; XXVII, 752
- Henderson, Texas (well 347), SBP, 292-335, 409
- Henderson County, Texas (wells 370-371), SBP, 292-335, 409
- Henderson dome, Louisiana, XXIV, 1085
- Henderson field, XXV, 1070; XXVIII, 843
- gravity of oil at, XXVIII, 843
- production at, XXVIII, 843
- Henderson pool, discovery, Clay County, Texas, XXIV, 1495
- Hendon, Bryan, memorial of, X, 1188
- Hendon, Claude, memorial of Bryan Hendon, X, 1188
- Hendrick field, Winkler County, Texas, PROB, 372, 413, 414; XIV, 923
- Hendricks, Leo, and Crowley, A. J., (Hendricks)
- Lower Ordovician and Upper Cambrian subsurface subdivisions in north-central Texas, XXIX, 413
- Hendricks, S. B., RMS, 468, 486, 619
- Hendricks, Thomas A., SBP, 275; XIX, 503, 511, 517, 1694; XX, 102, 306, 312, 491, 1256, 1342; XXI, 2, 28, 34, 78, 1379; XXII, 913; XXIII, 1335, 1336, XXV, 9, 1638; XXVII, 1256; XXIX, 148, 153
- carbon ratios in part of Arkansas-Oklahoma coal field, XIX, 937
- Pennsylvanian sedimentation in Arkansas coal field, XXI, 1403
- structural interpretation of recent gravity observations in southeastern Oklahoma, XXIV, 2143
- Hendricks, Thomas A., and Dane, C. H., correlation of Bluejacket sandstone, Oklahoma, XX, 312
- Hendricks, Thomas A., and Miser, H. D., XX, 1347
- Hendricks, Thomas A., and Read, C. B., GAS, 514; XX, 1343, 1352
- correlations of Pennsylvanian strata in Arkansas and Oklahoma coal fields, XVIII, 1050
- Hendricks, Thomas A., Dane, C. H., and Knechtel, M. M., stratigraphy of Arkansas-Oklahoma coal basin, XX, 1342
- Hendricks, Thomas A., Knechtel, M. M., and Bridge, Josiah, geology of Black Knob Ridge, Oklahoma, XXI, 1
- Hendricks pool, Texas, section, XIII, 1039
- Hendrickson, A. B., STRAT, 9, 15
- Hendrickson, A. B., and Weaver, D. K., GAS, 203
- Hendrickson, B. H., and Beck, W. M., XVII, 932
- Hendrickson, V. J., STRAT, 28, 327; XIII, 781; XVII, 410, 422
- Hendy, William, XXIX, 51
- Henley, Arthur Sidney, Big Hill salt dome, Jefferson County, Texas, SD, 497; IX, 590
- memorial of, XX, 1384
- Henne-Winch-Farris field, Texas, STR I, 402-404; XV, 764
- Hennen, Ray V., GAS, 440; PROB, 373, 414, 415; SBP, 287; STRAT, 808, 818, 832, 841; XI, 635, 1111; XIV, 617, 798, 806; XXV, 796; XXVII, 1215, 1218
- Big Lake pool, Reagan County, Texas, STR II, 500
- memorial of Israel Charles White, XII, 339
- Tertiary geology and oil and gas prospects in Dakota basin of North Dakota, XXVII, 1567
- Hennen, Ray V., and Metcalf, R. J., GAS, 449, 450; PROB, 413; XXV, bet. 2166 and 2167
- Yates oil pool, Pecos County, Texas, XIII, 1509
- Hennessey shale, XXIII, 1791
- in Oklahoma, X, 795; XX, 1465
- Henniger, XXVI, 1219
- Henniger, W. F., SD, 774
- occurrence of sulphur waters in Gulf Coast of Texas and Louisiana, and their significance in locating new domes, SD, 774; IX, 35
- Henning, John Lovejoy, sulphur mining in Texas, III, 242
- Henny, Gerard, CAL, 88, 206; XIII,

- (Henny)
235; XVII, 1175; XVIII, 435, 453;
XXIII, 30, 31, 43
geology of San Joaquin Valley, XI,
611
McLure shale of Coalinga region,
Fresno and Kings counties, Cali-
fornia, XIV, 403
memorial of, XXIX, 246
origin of radiolarites, and fracturing
of fractured shale in Santa Maria
basin, California, XXVII, 1622
Henrietta group in Des Moines series,
XXV, 29, 36, 42, 45, 49, 50, 55, 59,
64, 66, 69
Henry, E. U., XX, 565
Henry, J. D., X, 1241
Henry, Joseph, IX, 772
Henry, N. F. M., XXVI, 1232
Henry Mountains, XIX, 1492
intrusive masses in, XXVI, 197
Henry Mountains and Navajo Moun-
tain, structure contour maps and
cross sections, XXVI, 200
Henry pay sand, V, 420
Henry Ranch, MSC, 121, 197-202, 205,
206, 210, 212, 214, 219, 224, 225,
227, 229, 234, 236, 238, 243, 244,
250, 256, 258, 261, 268, 273, 284,
287, 288, 299, 309-311, 315, 322,
323, 325, 330, 339, 343, 345-347,
349
Henry Ranch Monterey fauna, MSC,
16
Henryetta coal, a series of anticlines,
XXII, 1581
Henryetta district, Oklahoma, some
suggestions in regard to Pennsylvan-
ian paleogeography in, VII, 50
Henryetta oil field, Oklahoma, V, 154,
284, 402; VII, 50
Henryetta series, V, 564, 580
Henryhouse graptolite zone, XX, 309
Henryhouse shale, V, 34; XXIX, 193
Henry's law, XXIV, 1532
Hensel sands, XXVI, 1815
Hensell member of Travis Peak, XXIII,
633
Hensell shale, XXIX, 1419
Hensen, V., RMS, 438
Henson, F. R. S., portable sedimentary
laboratory, XVIII, 1705
stratigraphic classification and nom-
enclature, review, XXIX, 1208
Hentschel, E., RMS, 377
Herald, Frank A., GAS, 1073; X, 1076,
1083, 1099
Herald, J. M., IV, 48
Herbert, John W., XXVI, 204
Herbert Ranch, MSC, 8
Hercules shale, MSC, 65, 130, 156, 165,
234, Fig. 14 (in pocket)
Hercules shale foraminifera, MSC, 66
Hercules shale member, MSC, 89
Hercynian age, diastrophism of, in
Tupungato area, XXVIII, 1476
Hercynian folding, GAS, 548
effect of, SD, 192; IX, 1252
Hercynian fractures, SD, 198; IX, 1258
Hercynian lines of salt domes, SD, 199;
IX, 1259
Hercynides, CD, 124
Herington dolomite, XXIII, 1054, 1060
Herington limestone, II, 75; IV, 89;
V, 568; XXI, 505, 1518, 1521;
XXII, 676
in the Nemaha Mountains region,
Kansas, STR I, 62
Heritsch, F., XXIV, 265, 275
Herminghaus gas field, XXVIII, 743
Hermit shale, Arizona, X, 828, XXIV,
621
Hermosa, RMS, 271
Hermosa formation, XXVII, 472
Colorado, type section of, XVIII,
944
Pennsylvanian, in Elk Mountains,
Gunnison County, Colorado, strati-
graphy of, XIX, 1668
Hermosan, in Utah, petroliferous, XI,
131
Upper, in Utah, XI, 123
Herndon, Harold, XVII, 656
Herndon, J. H., SD, 9; IX, 839
Herndon oil sand in Pine Island field,
Louisiana, STR II, 181
Herndon, R. M., XXIX, 1151
Herodotus, XIX, 470
Herold, C. Lathrop, MSC, 101, 162
distribution of Eocene rocks in
Santa Lucia Mountains, Cali-
fornia, XX, 491
further evidence for age of volcan-
ism, Pinnacles National Monu-
ment, California, XXI, 1341
memorial of Loxell Charles Hookway,
XXIII, 272
volcanic tufts of Santa Lucia Range
and Miocene paleogeography of
Salinas Valley, California, XXI,
1340
Herold, C. Lathrop, and Wendlandt,
E. A., résumé of development in
East Texas during 1937, XXII,
728, 1111
Herold, Stanley C., GAS, 121; XV, 193,
196, 199; XVII, 1522, 1523; XIX,
881; XX, 816
analytical principles of production of
oil, gas, and water from wells,
review, XIII, 861
criteria for determining time of ac-
cumulation under special circum-
stances, XXII, 834
Jamin action—what it is, and how it
affects production of oil and gas,
XII, 659
memorial of Kenneth Allen Johnston,
XXVII, 104
oil well drainage, review, XXVI, 1777
projection of dip angle on profile sec-
tion, XVII, 740
reviews, XXI, 1353; XXIII, 1583,
1729
survey of research opinion, XXIII,
978
Herold, Stanley C., and Fudge, Harold
L., notes on submarine geological
exploration, XVII, 442
Herold, Stanley C., and Hoots, Harold
W., XXIII, 26
natural gas resources of California,
GAS, 113
Heron-Allen, Edward, XX, 435
Heron-Allen, Edward, and Earland, A.,
MSC, 12
Heroy, William B., SBP, 7; STRAT,
565; XXV, 969; XXVII, 932;
XXVIII, 1497; XXIX, 1748
presidential address, XIX, 717
report of advertising manager for
1924, IX, 700
report of constitutional committee,
April, 1940, XXIV, 923
report of president for 1934, XIX,
727
report of secretary-treasurer for 1932,
XVII, 582; for 1933, XVIII, 689,
697
reserves in action, XXVII, 954
(Heroy)
reviews, XIV, 1358; XV, 974
rock pressure, XII, 355
twentieth annual business meeting,
Wichita, March, 1935, XIX, 725
Herradura-Tampuche syncline, PROB,
392; MEX, 172, 179
Herrick, H. N., XXI, 580, 581, 584;
XXIII, 664
experiments with magnetic torsion
balance, XXI, 581
Herrick, H. T., and May, O. E., PROB,
925
Herrick, Stephen, XXIX, 920
Herrin coal, XXIII, 1385
in Centralia-Sandoval area, Illinois,
STR II, 122, 124
in Sandoval pool, Illinois, STR II,
126, 128
Herrin coal bed No. 6, XXIII, 1512
Herrin coal No. 6, XXVI, 1591
most important coal of southern and
central Illinois, XXIII, 1391
Herring, L. B., developments and status
of oil reserves in South Texas,
1939, XXIV, 1069
developments in South Texas in
1940, XXV, 1037
developments in South Texas in 1941,
XXVI, 1000
Herrmann, E., RMS, 498
Herrmann, R., XVIII, 723, 725
Herschel, and Babbage, XIII, 592
Herschler area, Illinois, XXIII, 821
Hershey, VII, 415, 419
Hershey, H. G., XXIV, 411, 1496;
XXVI, 1587
Hershey, Lewis B., Selective Service
System bulletin, XXVI, 1555
Hershey, Oscar H., CAL, 25; XII, 112,
129, 132, 136; XVIII, 790
Hertel, F. W., GAS, 119, 162; PROB,
145
Ventura Avenue oil field, Ventura
County, California, STR II, 23;
XII, 721
Hertha limestone, V, 548; XXV, 45
in Appanoose County, Iowa, bearing
on correlation of Bain's Appanoose
beds, XXV, 70
Hertlein, Leo George, CAL, ix; XVIII,
1404; XIX, 527, 1200; XXI, 532;
XXV, 194; XXVIII, 953
Hertlein, Leo George, and Webb, J. B.,
XIX, 296, 297, 298
Hertlein, Leo George, and Webb, J. B.,
zones in Alberta shale (Benton
group) in foothills of southwestern
Alberta, XVIII, 1387
Herzberg, XIX, 329, 349; XX, 721,
722
Hess, E. L., Jr., STRAT, 239
Hess, Frank L., RMS, 215; XVI, 1355
review, VIII, 832
Hess, H. H., XXIV, 1549, 1550, 1557,
1562, 1574, 1585, 1586, 1599, 1601,
2114, 2121, 2125
Hess limestone of Leonard age, PTNM,
652; XXVI, 652
Hess limestone member, PTNM, 651;
XXVI, 651
Hesse, Curtis J., XIX, 1065
memorial of, XXIX, 1219
Hesse, J., Stenzel, H. B., and Turner,
F. E., brackish and non-marine
Miocene in southeastern Texas,
XXVIII, 977
Hesse, Richard, Allee, W. C., and
Schmidt, Karl P., XXIV, 1197;
XXVI, 1728, 1746

- Hessel, F. A., XXVII, 1176
Hessel, F. A., and Gault, H., XVII, 1256, 1258, 1259
Hesselberg, Th., RMS, 59
Hessle, Chr., RMS, 299
Heterohelidae, MSC, 20, 239
Heterostegina and Catahoula zone, XXVIII, 61
Heterostegina limestone, XXVII, 1137
Barbers Hill, GAS, 707
isopach map contoured on interval from, to Frio sand No. 1, South Cotton Lake field, Chambers County, Texas, XXV, 1918
Heterostegina sand, XXII, 755; XXV, 1985, 2007
oil produced from, at East White Point field, XXV, 1975
productive in Edna gas field, XXV, 115
Heterostegina shale, XXV, 2007
Heterostegina zone, GC, 11, 13, 14, 412, 648, 651, 654, 655, 657, 746; SBP, 336, 338-349, 415, XVII, 642, 643, XXVIII, 510; XIX, 390, 544, 550, 551, 553, 557; XXII, 819, 988, XXIII, 179, 1408; XXIV, 1815; XXV, 306, 1370, 1912; XXVII, 1104, 1113, 1136, 1141; XXVIII, 201, 1357, 1367, XXIX, 799
a part of Oligocene, XXII, 989
Amelia field, XXIII, 1644
Barbers Hill, XIV, 723
Bayou Mallet, Acadia Parish, Louisiana, XXI, 1058
Edna gas field, XXV, 107
Esperson dome, GC, 863; XVIII, 1638
Greta field, map, GC, 651; XIX, 547
Gulf Coast section, XXII, 293
Gulf Coastal region, GC, 669; XVIII, 524
Hitchcock field, STRAT, 644
Jennings field, GC, 966, 977; XIX, 1313, 1324
Louisiana, GC, 404; XVII, 635
(Oligocene) (Th), SBP, 336, 338-349, 415
Orange field, GC, 890; XX, 541
south Texas pools, XXIV, 1078
Spindletop, XXI, 480
Sugarland field, GC, 715, 724
Sulphur dome, XIV, 1085
West Columbia field, Texas, STR II, 459
West Ranch field, Jackson County, Texas, production in, XXIV, 1071
Heterotrophic bacteria, RMS, 422
Hettner, Alfred, X, 386, 402; XVII, 212, 220; XXIV, 1611, 1615; XXVI, 798, 804, 806, 808, 820, 821; XXIX, 1074, 1084, 1085, 1102, 1103, 1104
Hetzl, W. H., XXII, 23, 52
Heulandite in Colorado shale, STRAT, 284
Heusner, K., RMS, 263, 281
Heussler field, XXVI, 1093, 1094
Hewatt, Willis G., XXIV, 1167; XXVIII, 1013
Hewett, D. F., SBP, 196; XIII, 1419; XVII, 819, 1471, 1474, 1488; XX, 1203; XXIII, 130, 131, 133, 1450, 1477; XXV, 2021, 2030, 2043; XXVIII, 1377
Hewett, D. F., and Goldman, M. I., XXVI, 1701
Hewett, D. F., and Lupton, C. T., IV, 39
Hewitson, James, XXII, 1189
Hewitt, L. F., XX, 266
Hewitt field, Oklahoma, PROB, 597, 775, 776, STR II, 290, IV, 279, V, 32, 173, 326, 344, 454, XXV, 21, XXVIII, 239
Hewitt Hills at Hewitt field, Oklahoma, STR II, 294
Hewitt pool, faulting at, GAS, 585
Hewitt profile, PROB, 596
Hewitt sand series in Hewitt field, Oklahoma, STR II, 294
Hexactinellida, branching, Paleozoic and Recent, Titusvillidae, XXV, 2082
Hexane and paraffine, comparison of, XXIV, 1882
Heywood, O. W., SD, 346
Heywood Brothers, SD, 349, 350
Heywood Oil Company, SD, 412
Heywood sand, oil-bearing, XXVII, 1107
Hiatt, William N., and Tickell, Frederick G., effect of angularity of grain on porosity and permeability of unconsolidated sands, XXII, 1272
Hiatus at top of Portlandian in Chocoy well, MEX, 16
between Méndez and Tamesí, MEX, 90
between mihiolid limestone of El Abra limestone and Turonian, MEX, 39
between Tamaulipas limestone and Agua Nueva, MEX, 47
between Tanlaías and Tamesí, MEX, 103
in Upper Portlandian, MEX, 15
Hiawatha anticline, GAS, 367
Hiawatha district, PROB, 728
Hiawatha dome, Colorado and Wyoming, FOP, 58; STR II, 111; XIV, 1032; XXV, 1490
Hiawatha field, XXIII, 913; XXV, 1152, 1153
Hiawatha gas field, XXII, 1020
Hiawatha gas field and Baggs, Wyoming, anticlines between, XIX, 537
Hiawatha gas fields, GAS, 331, 370, 375
southwest Wyoming and northwest Colorado, geology of, GAS, 341
Hiawatha member of Wasatch formation, productive of gas in Powder Wash field, XXII, 1022
GAS, 351, XXII, 1030
gas in, XXII, 1039
in Vermilion Creek area, XIV, 1023
Hiawatha Oil Company, XXI, 1046
Hiawatha structure, XXIII, 913
Hickens, George, XXI, 1270
Hickey, H. N., and Kirby, J. M., developments in Rocky Mountain region, in 1938, XXIII, 903
Hickey, Maude, XXIX, 1330, 1331
Hickey, Maude, Barton, Donald C., and Ritz, C. H., XVIII, 1069; XXIII, 198, 199, 1620
Gulf Coast geosyncline, GC, 192; XVII, 1446
Hickman sand, Burbank field, Oklahoma, VIII, 766
Hickok, E. O., 4th, SBP, 356, 357
Hickok, W. O., STRAT, 538
Hickory, Pennsylvania (well 419), SBP, 349-379, 410
Hickory Grove pool, gravity of oil in, XXVII, 799
production in, XXVII, 799
Hickory sand, XXVII, 764
Hickory sandstone, III, 128, 175, 189; V, 380
Hicks dome, XXIV, 770, 965
Hidalgo, eastern, and adjacent parts of Vera Cruz, Mexico, geology of, XI, 1173
Turonian in, XXVIII, 1125
Hidalgo and Starr counties, Texas, Miocene, Pliocene, and Pleistocene formations in Rio Grande region, XXI, 491
Hidalgo anticline, XI, 1206
Hidalgo County, Texas, XXII, 525
La Blanca structure, XXI, 947 (well 404), SBP, 335-349, 410
Hidalgo-Laguna de Leche section, GC, 608; XIX, 1377
Hidalgo volcanics, XXII, 532, 540
resting on Pennsylvanian limestone in Pyramid Mountains, XXII, 539
Hidden dome, PROB, 938
Hidden Dome field, GAS, 291, 294
Hieroglyphic beds, Europe, VI, 526
Hiestand, Thomas C., GAS, 476, PROB, 762, 763; SBP, 257; XIV, 1537, 1545; XXIV, 1645; XXVIII, 175
Bryson oil field, Jack County, Texas, STRAT, 539
regional investigations, Oklahoma and Kansas, XIX, 948
studies of insoluble residues from Mississippi lime of central Kansas, XXII, 1588
Voshell field, McPherson County, Kansas, XVII, 169
Hiestand, Thomas C., and Nichols, P. B., drilling-time data in rotary practice, XXIII, 1820
Higashinaka, H., Matuyama, M., and Fujita, Y., study of structure of Suwa Basin near Kyoto, Japan, by torsion balance, XXI, 58
Higgins, D. F., epi-anticlinal faults, discussion, XI, 1233
oil and gas possibilities of Palestine and Sinai, discussion, XI, 515
Higgins, Daniel Franklin, Jr., memorial of, XIV, 819
Higgins, H. G., XXV, 375
Higgins, H. G., and Carroll, D., XXV, 382
Higgins, Patillo, SD, 548, 595; XVII, 1513; XXI, 475
Higgins Creek, California, outcrop section D, SBP, 167-194, 411
Higginsville limestone, XXV, 29, 36, 72; XXVI, 1591
Higgy, R. C., and Shipley, E. D., XX, 1123, 1124
High Bluff member, XXIX, 62
High Bridge series, Big Sinking field, STRAT, 175
High-gravity fields, California, XXVII, 865
High Island, Texas, PROB, 115; GAS, 710; SD, 14
wells drilled through overhanging cap rock or salt at, XX, 594
High Island dome, Galveston County, Texas, GC, 160, 910; XVI, 701; XVII, 1511; XX, 561
geology and geophysics showing cap rock and salt overhang of, GC, 909; XX, 560, 818
salt overhang at, GC, 161; XVII, 1512
section through, GC, 933-939
High Island field, I, 46; III, 87
High Lonesome or Iles pool, New Mex-

- (High)
ico, XXIV, 1040
High octane number, PROB, 237
High Plains Province, GAS, 385
High Plains sediment, V, 596
High radial axial pressure, genesis of oil by, XVI, 1029
High-pressure pipe, development of, XXV, 1292
High-pressure sands at Jennings dome, GC, 981; XIX, 1328
High-pressure Yates sand gas problem, East Wasson field, Yoakum County, West Texas, XXV, 1880, 2070
Highest structural point in Texas, XXVIII, 562
Highland district, San Luis Obispo County, California, CAL, 214; MSC, 67, 199, 206, 212, 223, 224, 230, 232, 233, 237, 238, 240, 243, 244, 247, 248, 251, 256, 258, 261, 264-266, 268, 269, 271, 273, 275, 284, 287, 288, 290, 291, 300, 301, 304, 308-310, 312-315, 323, 324, 326, 335, 353
Highland homocline, MSC, Fig. 6 (in pocket)
Highland Rim areas, PROB, 518
Highland Rim Plateau, XI, 916
Highland School, California, MSC, 2, 122
Highland School, California, outcrop section L, SBP, 167-194, 411
Highland School district, MSC, 22, 86, 109, 127, 128
fauna from Monterey organic shale, MSC, Fig. 14 (in pocket)
faunules from argillaceous and calcareous upper Temblor shale of, MSC, Fig. 14 (in pocket)
sections, MSC, 123
Highsmith, J. H., appraisal of oil production, review, VI, 483
Highwood Mountains, XXVII, 427
Hilbig oil field, Bastrop County, Texas, XIX, 1023
character and possible origin of producing rock in, XXI, 206
Hildeshemer Wald dome, SD, 194; IX, 1254
Hildreth, S. P., XIX, 483, 485; XXII, 428, 1093, 1094, 1095
Hildreth field, Texas, XXIX, 762
Hildreth pool, XXVIII, 835
Hilgard, Eugene W., GAS, 884; GC, 341; SD, 8, 272, 308, 312, 320, 328, 334, 343, 395, 396; IX, 838, 840; X, 256, 260, 268, 274, 276, 282; XII, 130, XIV, 869; XXVII, 637; XIX, 1647, 1650, 1651, 1652, 1653, 1659; XXI, 1270; XXVIII, 1011, 1319
Hilgardite in rock salt, XXI, 1293
Hill, IX, 1153, 1154, 1159; XI, 1185; XIX, 800; XXII, 525; XXIV, 1606
Hill and Harris, IX, 838
Hill, A. D., X, 1076, 1090, 1099
Hill, B., Northrup, John D., et al., GAS, 1089
Hill, Bruce, XVIII, 68
Hill, Dorothy, XXV, 374, 397, 402, 405
Hill, E., XXI, 340
Hill, E. G., and Rhodes, G. I., GAS, 1111
Hill, George A., Jr., XXII, 1185
Hill, H. B., XIII, 1095; XIV, 983; XIX, 813, 816
Hill, H. B., and Guthrie, R. K., XXVIII, 235
Hill, H. B., Rawlins, E. L., and Bopp, C. R., engineering report on Oklahoma City oil field, Oklahoma, review, XXI, 815
Hill, H. C., XXI, 584
Hill, H. H., SBP, 8, XIII, 1095, XVIII, 1459
Hill, John J., XXV, 1728
Hill, Mason L., CAL, 10, 29, 49, 51; SC, 67, 84, 89; XIII, 509; XX, 1613, 1630
classification of faults and thrust fault on Barranquilla-Cartagena highway, Colombia, discussion, XXVIII, 1649
graphic method for some geologic calculations, XXVI, 1155
Hill, Mason L., and Natland, M. L., abstract, XXII, 1717
Hill, Mason L., Buddenhagen, H. J., Hudson, Frank S., and Woodford, A. O., type locality of a fault, XIV, 797
Hill, Raymond A., XVIII, 134
Hill, Robert Thomas, CAL, 9, 39, 51; GAS, 654, 667; SD, 11, 13, 223; STRAT, 618, 781; I, 23, 27, 28, 29; II, 79, 145; III, 125, 303; IV, 118, 125, 128; VII, 230, 363, 612; IX, 348, 843; X, 613, 616, 1263; XI, 447, 451; XII, 1070, 1071, 1072, 1075, 1079; XIII, 519, 1327; XV, 1059; XVII, 478, 774, 776; XVIII, 1507; XIX, 1511, 1512, 1516; XX, 869; XXI, 221, 836, 840; XXII, 977, 978, 1666; XXIII, 626, 631, 632, 633, 635; XXVI, 380; XXVII, 507, 1060; XXVIII, 1078; XXIX, 176, 179, 183, 185, 1708
memorial of, XXV, 2221
theory of formation of salt domes, IX, 843
Trinity of Texas, discussion, XIII, 519
Hill, Robert T., and Macdonald, D. F., XXVI, 1649
Hill, Robert Thomas, and Vaughan, T. W., XIII, 1292; XVI, 692; XVII, 477, 478; XIX, 1513; XXIX, 1704, 1707
Hill, W., XXIV, 1577
Hill County, Texas (well 388), SBP, 292-335, 410
Hill-Harris theory, SD, 782
Hill Mississippian field, XXVIII, 837
Hill sand, XXI, 1069; XXIX, 773
Hill sandy lentil, XXIX, 1449
Hillcrest dome at Elk Hills field, California, STR II, 56
Hilldon northwest extension of Long Beach, California, XXII, 711
Hillebrand, F., XII, 909
Hillebrand, W. F., SBP, 21
Hilliard formation, SBP, 197; XXV, 1734, 1737
Hilliard shale, V, 202
Hillis, Donuil, colorimetric method of determining percentage of oil in cores, XXI, 1477
cracks produced by Long Beach, California, earthquake, XVII, 739
long shots with an alidade, XIII, 1561
Hillje area, Wharton County, Texas, XXIV, 1086
Hillje field, XXV, 1010
Hillman, F. H., VII, 613
Hills, XIV, 778
Hills, E. Sheldon, XXV, 375
(Hills)
outlines of structural geology, review 1160
physiography of Victoria, review, XXVII, 652
Hills, John M., PTNM, 534, 539, 658, 702, 706, 716, XXIII, 1550, XXIV, 29; XXV, 75; XXVI, 534, 539, 658, 702, 706, 716; XXVII, 751; XXVIII, 831, 1021
review, XXIX, 461
rhythm of Permian seas—a paleogeographic study, XXVI, 217
Hills, R. C., RMS, 550; XVI, 775; XVII, 127
Hillsdale pool, XXIII, 832
Hilseweck, Helen M., STRAT, 802
Hilseweck, William J., XXVI, 857
memorial of Hugh Moore Eley, XXVI, 1550
Walnut Bend pool, Cooke County, Texas, STRAT, 776
Hilt, Carl, PROB, 72, 89; XII, 796, 797, 800; XIX, 944; XXVII, 1199
Hilt's Law, PROB, 72, 89
carbon-ratio theory in light of, XII, 795
Himalaya mountains, cause of, CD, 160
compensation for elevation, CD, 14
immense compression involved, CD, 54
Himalayan border compared with Alps, XXIII, 1417
Himalayan geosyncline, XXVIII, 1420
Hinchey, N. S., XXV, 32, 49, 61
Hinchey, W. J., GAS, 820
Hinchman formation, CAL, 72
Hind, Henry, PROB, 13
Hind, Henry Youle, PROB, 9; XIV, 611, 612; XV, 610
Hinde, XXII, 9; XXV, 374; XXVI, 778
Hinde, George J., CAL, 89; XXVII, 115
Hinder group in North Sea area, RMS, 344
Hinds, XIII, 884
Hinds, Henry, XXV, 36, 42, 54
unconformities in Pennsylvanian, X, 1303
Hinds, Henry, and Greene, F. C., XXVIII, 1320; XIX, 1063; XXV, 31, 42, 44, 46, 50, 55, 56, 61, 70, 71
Hinds, Norman E. A., CAL, 63; XIV, 1353; XVIII, 1349; XXVI, 1816
1817
geomorphology, review, XXVII, 1019
Hinds County, Mississippi, fossils from wells in, XXIX, 1017
Hindsville limestone in Interior Highlands of Arkansas, GAS, 542
Hints to prospective geologists, I, 127
Hintze, F. F., PROB, 680, 683, 730; X, 115; XVIII, 1474
oil accumulation in relation to periods of folding, VII, 58
review of Soldier-Ferris district, IX, 363
J. S. Irwin discoverer of Gorham oil district, Kansas, discussion, XII, 443
Hintze, F. F., Jr., IX, 899
Hipparion-bearing Pontian deposits, MSC, 181
Hipparion faunas, MSC, 174
Hipparion mohavense horizons, MSC, 156
Hippin, R., Survey, Texas (well 392), SBP, 292-335, 410
Hirschfelder, J. O., XXVIII, 937
Hirschwald, Julius, VI, 417; VIII, 729,

- (Hirschwald)
731; IX, 447
Hisazumi, Hisakichi, XXVIII, 1128
Hissink, D. J., XVIII, 362, 363, 364
Histograms, RMS, 193, 310, 311, 315, 387, 511, 559, 563, 564
Historical development of structural theory of accumulation of oil and gas, PROB, 1
Historical document of interest to petroleum geologists, XXII, 1687
Historical geology, XXVIII, 1657
difficulty of using cartographic terminology in, XVIII, 374
from the regional point of view, principles of, review, XVIII, 553
of the Antillean-Caribbean region or the lands bordering the Gulf of Mexico and the Caribbean Sea, review, XX, 496
reviews, XVII, 1394, XVIII, 1550
textbook of geology, Part II, review, XVII, 1148
Historical geology and paleogeography of Mid-Continent oil district and its importance to petroleum geology, short sketch of, V, 541
Historical geology and stratigraphy of Gulf Coastal Plain in vicinity of Harris County, Texas, XXIII, 145
Historical sketch of Southwestern Association of Petroleum Geologists, I, 6
Historical summary of foraminiferal data, MSC, 20
History, depositional, of Eocene in southern Texas, XXVI, 270
of American Association of Petroleum Geologists, XIII, 153
of development and geologic relationships of Appalachian fields, XXII, 416
of earth, rhythm in, XXIX, 1035
of oil and gas development in Rocky Mountain region, XXVII, 419
of organic matter in sea, RMS, 438-441
of petroleum in its relation to temperature and pressure phenomena, PROB, 244
of sediments as revealed by organic constituents, RMS, 429
of studies of sediments on East Coast of United States, RMS, 231
History and structure of Antillean-Caribbean region, Paleogene of Barbados and its bearing on, XXIV, 1548
Hitchcock, Charles H., PROB, 8, 13, 71
Hitchcock, Edward I., I, 29; XX, 890, 896, 902
Hitchcock field, Galveston County, Texas, XXII, 741
accumulation of oil, STRAT, 651
cost of completion, STRAT, 642, 643
showing stratigraphic accumulation and structure, STRAT, 641
Hitesville field, XXVIII, 753
Hittle Arbuckle pool, XXIV, 999
Hittle pool, Cowley County, Kansas, XXIII, 799; XXIV, 1002
Hitz gas field, XXVI, 1081
Hjort, Johan, and Murray, John, XIX, 1593
Hjultström, Filip, RMS, 25, 179
transportation of detritus by moving water, RMS, 5
Hlauschek, Hans, *Aufgaben und Arbeitsweisen der Ögeologie*, review, XII, 774
(Hlauschek)
Napthen- und Methanole, ihre Geologische Verbreitung und Entstehung, review, XXI, 354
naphthene and methane oils, their geological occurrence and origin, review, XX, 1499
Hobart oil field within Amarillo-Wichita-Red River province, XXV, 17
Hobart pool, Kiowa County, Oklahoma, XXIV, 1022
Hobart pool, Rooks County, Kansas, XXVIII, 772
Hobbs, William H., SD, 34, 223; V, 557; X, 667, XII, 845; XIV, 74
theory of cause of orogeny, CD, 6
Hobbs and Monument fields, Lea County, New Mexico, hydrocarbons, XXIV, 866
mineralization, XXIV, 866
Hobbs field, Lea County, New Mexico, GAS, 430; PROB, 350, 413, 414, SBP, 285-292, 408; XVI, 51 (well 302), SBP, 285-292, 408
Hobson, XXII, 777
Hobson, G. D., calculating true thickness of a folded bed, XXVI, 1827; XXVII, 874
Hobson, Henry D., MSC, 51, 56, 72, 119, 190, 208, 216, 240, 242, 260, 290, 291, 316, 342; SC, 121; XX, 1666, 1667, 1668; XXIX, 956
Hobson, Henry D., and Cushman, J. A., MSC, 51, 72, 186, 188-191, 197, 199, 204, 216, 221, 222, 240, 242, 244, 259, 260, 291, 341
Hobson, Henry D., and Rankin, W. D., MSC, 68
Hobson, Henry D., and Schenck, Hubert G., MSC, 53
Hobson, Henry D., Schenck, Hubert G., and Klempell, R. M., MSC, 53
Hobson, Henry D., Schenck, Hubert G., and Reinhart, P. W., MSC, 53
Hobson, R. A., XXV, 386
Hockley district, section, SD, 579, 580
Hockley escarpment, a flexure scarp, XXVII, 1083
Hockley mound sand, GC, 445; XIX, 664
Hockley salt dome, Harris County, Texas, PROB, 637-639, 642, 650, 651, 655; SD, 570; I, 45, 82; VII, 297; IX, 1031
profile across, illustrating effect of differential uplift, XX, 1433
shark teeth from, SD, 577
study of development of rim syncline at, XX, 1416
sulphur waters in, SD, 775
Hockley salt shaft, Harris County, Texas, GC, 136; XV, 465
Hockley scarp in coastal southeast Texas, GC, 264; XIV, 1302; XVII, 1207
Hockleyensis zone, XXII, 754
Hocott, C. R., XXIV, 2165
Hodge, Edwin T., XXIX, 1383
native asphalts in Oregon, XI, 395
Hodge-Hunt Lbr., SD, 274
Hodgson, Mr. and Mrs. Paul, XXIII, 1446
Hodson, Floyd, XXVIII, 1643
Hodson, Floyd and Helen, short cuts in picking out and sectioning Foraminifera, X, 1173
Hodson, H., XI, 994
Hoefler, Hans, PROB, 13, 16; SBP, 2; III, 346, 352; XI, 494; XIII, 843; (Hoefler)
XVI, 776; XXII, 1097; XXIX, 1743, 1751
memorial of, VIII, 534
Hoefler, H., and Engler, C. X., 1115; XV, 443
das Erdöl, review, XV, 849, XVI, 937
Hoefler-Heimhult, Hans, das Erdöl und seine Verwandten, review, VII, 584
Hoefle field, XXVII, 776
Hoefle pool, gravity of oil in, XXVI, 1045
Hoening, A. V., XVI, 1026
Hoff, I. H. van't, SD, 119
Hoffman, A. D., and Croneis, Carey, XXV, 683
Hoffmann, C., and Gignoux, Maurice, X, 413; XVI, 1097
Hoffmann, C. R., and Hass, I. O., PROB, 997
temperature gradient in Pechelbronn oil-bearing region, Lower Alsace: its determination and relation to oil reserves, XIII, 1257
Hoffman, E. G., Jr., XXIII, 1446
Hoffmann, F., and Lang, H., XV, 616
Hoffman, John I., XIII, 1100, 1158
Hoffman, Malvin G., V, 121; XV, 1008; XXV, 288, 289, 1624
structural and magnetic processes in isostatic layer, XXIII, 1320
structural history of Billings field, Noble County, Oklahoma, interpreted in terms of isostasy, XXIV, 2006
volcanic tuffs in central Oklahoma, IX, 344
Hoffman, William, and Rinne, Frederick, XXVII, 1178
Hoffman beds, correlation of, with updip section, XXIV, 2140
Hoffman field, Duval County, Texas, XXIV, 2126
Eocene in, XXIV, 2129
geologic section, XXIV, 2129
magnetic and torsion balance used in finding anticlinal structure in vicinity of, XXIV, 2126
map showing location of, XXIV, 2127
Miocene in, XXIV, 2129
Oligocene in, XXIV, 2129
pipeline outlets for, XXIV, 2141
producing formations in, XXIV, 2132-2139
production at, XXIV, 2141
stratigraphy in, XXIV, 2128
structure in, XXIV, 2131
subsurface structure contoured on top of Miranda sand zone, XXIV, 2130
Hoffmeister, J. Edward, X, 977
Hoffmeister, William S., XXII, 1104; XXIII, 1854; XXIX, 1417
Hofker, J., MSC, 12
Hofman, H. O., and Mostowitsch, W., X, 1281; XX, 172
Hofmann, D. J., XIX, 691
Hofmann, K., XVIII, 941
Hofmann, U., RMS, 457, 459, 462, 625, 627, 628
Hog Creek shale, XXIV, 88
Hog Island, Louisiana, RMS, 169
Hogan Petroleum Company (well 189), SBP, 87-153, 406
Hogback dome, PROB, 409
Hogback field, New Mexico, PROB, 933, 936; XIII, 122; XXVII, 450
Hogbom, XX, 1396
Hogg fault, XXVI, 1447
Hogland Island in North Sea, RMS, 305
Hogshooter gas field, extent and in-

- (Hogshooter)
 terpretation of, III, 212
 Hogshooter limestone, II, 120; III, 270; V, 548; XXIII, 223; XXIV, 723
 in Dewey area, Oklahoma, STR II, 366, 370
 Hoh River area, GAS, 223, 230
 Hohl, Leonard L., GAS, 1114
 Hoing sand, Devonian in age, XXIII, 819
 productive in Plymouth-Colmar area, Illinois, XXIII, 819, XXVIII, 1524
 Hoke, C. J., XXVIII, 579
 Holarctis, CD, 143, 144
 Holarctis and Antarctic, radial dispersion from, a possible explanation of distribution of land life, CD, 138
 Holbrook area of Arizona, XXI, 1252
 Holbrook dome, Supai formation, X, 825
 Holdenville formation, Dora pool, STRAT, 413
 Olympic pool, STRAT, 459
 Holdenville limestone, I, 135
 Holdenville shale, III, 261; V, 34, 283, 400; VI, 13
 Holdhaus, Karl, XIX, 1748
 Holliday, F. A., XI, 494
 Holliday Park, XXIII, 83
 Holl, F. G., GAS, 459; XVIII, 1343
 discussion of origin of Bartlesville shoestring sands, XVIII, 1343
 memorial of John Franklin Kinkel, XXI, 691
 Holl, F. G., and Moore, R. C., STRAT, 103, 127
 Holland, RMS, 210, 211, 322, 337, 345, 347, 348; V, 27
 Holland, C. T., XXVII, 1196, 1218
 Holland, C. T., and Lawall, C. E., XXVII, 1218
 Holland, George W., XVIII, 1471
 Holland, Paul T., X, 703
 Holland, Wilbur, XXIX, 51
 Holland (Minshall) limestone, XXIII, 1385
 Holleman, A. F., XIII, 1468
 Hollenberg, dolomite, XXIII, 1058
 Holliday pool, XXIII, 849
 Hollin sandstone in Ecuador, XI, 1263, 1275
 Hollingsworth, R. V., XXV, 1250; XXVIII, 1645
 review, XXVII, 1158
 Hollingsworth, S. E., XXVI, 1232
 Hollister, Joseph S., MSC, 73, 119, 133; SBP, 92; SC, x; XX, 860; XXI, 549; XXIII, 252, 253; XXV, 195
 Hollister, Joseph S., and Ashauer, H., MSC, 75
 Hollister, Joseph S., and Reed, R. D., MSC, 158; XXI, 1139, 1141, 1142, 1143; XXII, 2; XXIII, 36; XXIV, 1936; XXV, 6, 194, 1334; XXVI, 397; XXVII, 7, 15, 121, 1338, 1372; XXVIII, 302
 structural evolution of Southern California, SC, iii; XX, 1529
 Hollow field, STRAT, 115
 Hollow pool, PROB, 766
 Holloway sand, XXII, 722
 lenticular, XXII, 722
 Holly Creek formation, XXIX, 1448
 Holly Creek zone in Arkansas, XII, 1079
 Holly field, De Soto Parish, Louisiana, XXIX, 96
 section, XXIX, 99
 Holly oil field and surrounding area, (Holly)
 contoured on base of Austin chalk, XXIX, 98
 Holly Springs formation, XXIV, 1892
 Holm, D. A., XXIII, 1753, 1787, 1782
 Holman, Bernard W., and Shepherd, St. J. R. C., dielectric mineral separation, review, VIII, 682
 Holman, Eugene, XIII, 1347; XVII, 1293; XXIX, 487
 Holman, Eugene and Campbell, R. B., XXII, 1659
 Bellevue oil field, Louisiana, VII, 645
 Holman, W. H., MSC, 77; XVIII, 788; XX, 152
 Holman, W. H., and Tarbet, L. A., XXVIII, 1781
 Holmberg, Alfred J., XXI, 67
 Holmes and Joly, XX, 1690
 Holmes, Arthur, CD, 43; VII, 478, 480; VIII, 730
 theories on orogenic disturbances, SC, 144; XX, 1690
 Holmes, A., and Lawson, R. W., XXI, 1200
 Holmes, J. A., VII, 618, 620
 Holmes, W. H., XIX, 1668
 Holmes, Willis B., SD, 469
 Holmes and Washington counties, Florida, geology of, XXVI, 1424
 Holocene (Recent), RMS, 343
Holophragma calceoides zone, XXII, 1451
Holothuria nigra, faecal pellets of, RMS, 517, 518, 520
 Holothurians, RMS, 241, 517-520; XXVI, 1196
 Holotype Canyon, XXVIII, 953
 Holser Canyon, XXVII, 869
 Holser fault, XXVI, 191
 Holston, A. A., XXVII, 1410
 discovery of oil in Bodcaw sand, Cotton Valley field, Webster Parish, Louisiana, XXII, 1603
 Holt area, Texas, XXI, 1024
 Holt pay zone, XXVI, 1026; XXVIII, 819
 Holt pay zone-lower San Andres, XXVII, 759
 Holt producing sand, XXIX, 807
 Holt zone developments, XXIX, 747
 Holtwood, RMS, 643
 Holway, XII, 132
 Holway, R. S., XXVII, 159
 Holz shale, XXV, 171
 Homann pool, XXIX, 744
 Homberg group of Mississippian of Eastern Interior basin, XXIV, 829
 Homberg paleontology, XXIV, 834
 Home Creek limestone, XXIV, 88, 90
 Cross Cut-Blake district, STRAT, 549, 551
 Seymour pool, STRAT, 762
 Home Oil Producing Company, GAS, 889
 Home sand, Turner Valley field, GAS, 45
 Home Township gas area, Montcalm County, Michigan, XXIV, 984
 Homer and Bellevue domes, Louisiana, doming due to igneous intrusions in, STR II, 707
 Homer dome, VI, 250, 252
 Homer field, PROB, 340, 417; IV, 130; V, 629, 631, 632; VI, 142, 182, 185, 186, 188, 192, 195, 196, 247, 248, 365, 477, 556
 Homer gas field, Ohio, STR I, 135; XI, 956
 Homer oil field, Claiborne Parish, Louisiana, STR II, 199
 Homer sand, second or deep, IV, 632
 Homestead Oil and Gas Company, XXIII, 854
 Hominy, PROB, 293
 Hominy sand, XI, 973
 in Osage County field, Oklahoma, STR II, 381
 Homoclinal ravines, STR II, 686
 Homoclinal structure, PROB, 197, 198, 200
 in Los Angeles basin, PROB, 212
 in Midway-Sunset field, PROB, 199, 200, 203
 in Round Mountain and Mount Poso fields, PROB, 205
 in Summerland field, PROB, 209
 Homocline, Highland, MSC, Fig. 6 (in pocket)
 Homoclines, GAS, 158, 235, 252, 1082
 pools in, PROB, 228
 Homogeneous fluids, flow of, through porous media, XXII, 1282
 Homogeneous sand reservoir, diagram illustrating, XXV, 1306
 Homogeneous sediment, uniform, con version in, XXVIII, 943
 Honda, RMS, 505
 Honda alluvial fan, XXVI, 798
 Honda beds, concretions in, XXVI, 814
 Honda district, Colombia, alluvium in, XXVI, 828
 correlation of stratigraphic nomenclatures used in, XXVI, 800
 folding in, XXVI, 829
 geology of, XXVI, 793
 location map, XXVI, 796
 references in geology of, XXVI, 836
 Tertiary stratigraphy of, XXVI, 799
 Honda fault, XXVI, 830
 Honda formation, XXIX, 531, 1080, 1101
 Honda series, XXVI, 804, 812, 817; XXIX, 1104
 correlated with Real series, XXVI, 808
 formational boundaries of, XXVI, 818
 fossil-plant locality in, XXVI, 819
 Miocene age of, XXVI, 819
 of Hettner, XXVI, 806
 redbeds of, XXVI, 815
 Honda's thermobalance, RMS, 505
 Hondo sandstone member of Chupadero in New Mexico, XXI, 850
 Honess, Charles W., XI, 447, 448; XII, 158, 163; XIII, 567, 594; XIV, 775; XV, 809, 994, 1006, 1022; XVII, 972, 979, 983, 984, 988, 1009, 1012, 1034, 1036; XX, 301, 485; XXI, 10, 11; XXIII, 1335
 reviews, XIII, 1572; XIV, 1575
 Honey Creek and Reagan formations, contact of, with igneous rocks in Arbuckle and Wichita mountains, Oklahoma, XXIII, 1094
 Honey Creek formation, XXV, 1630
 Honolulu Oil Company, XXIII, 935
 Honolulu Oil Corporation, XXV, 1897; XXVII, 481
 Honolulu Oil Corporation and Cascade Petroleum Company, XXV, 1883
 Honorary members, American Association of Petroleum Geologists, XXVIII, 439; XXIX, 303
 biographical sketches of recently elected, XX, 1265
 Hood, Forrest, XXVIII, 61
 Hoofden, Holland, RMS, 326
 Hooke, XXV, 1209
 Hooks, C. G., et al., SD, 442, 443

- Hookstiel, RMS, 198
- Hookway, Loeell Charles, memorial of, XXIII, 172
- Hooper and Arnott, XVII, 1253
- Hooper, G. W., Survey, Texas (wells 311, 321), SBP, 292-335, 408
- Hoots, Harold W., CAL, ix, 14, 69, 128, 131, 133, 140, 178, 199, 208, 217, 234; GAS, 174; MSC, 27, 39, 115, 126, 127, 129, 130, 134, 164, 195, 209, 210, 221, 224, 228, 230, 231, 236, 243, 247, 248, 250, 251, 253, 254, 260, 261, 263, 264, 267-270, 272-274, 276, 278-282, 295, 297, 298, 307, 309, 310, 312, 313, 317, 319-321, 327-329, 331, 332, 334, 336, 342-347, 350, Fig 14 (in pocket); PROB, 748; SBP, 196, SC, 44, 46, 74, 105, 106, 107, 109, 132; XI, 425; XXIII, 985, 987; XVII, 732, 734, 1013; XVIII, 472, 788, 789, 804; XX, 140, 145, 148, 150, 152, 613, 865, 1590, 1592, 1620, 1651, 1652, 1653, 1678; XXII, 1235; XXIII, 39, 251; XXIV, 1706, 1718; XXV, 884, 1166; XXVI, 165, 184, 1154, 1610; XXVII, 185; XXVIII, 1196; XXIX, 957
- additions to oil reserves in California during 1918, XXIII, 932
- discoveries and additions to oil reserves in California during 1917, XXII, 701
- heavy-mineral data at the southern end of San Joaquin Valley, XI, 369
- migration of oil in California, XX, 613
- recent discoveries and present oil supply in California, XX, 939
- samples collected by (well 35), SBP, 87-153, 403
- Hoots, Harold W., and Dobbin, C. E., and Dane, C. H., GAS, 305
- Hoots, Harold W., and Herold, Stanley C., XXIII, 26
- natural gas resources of California, GAS, 113
- Hoots, Harold W., and McCollom, C. R., Ralph Daniel Reed, honorary member, XXIII, 1884
- Hoots, Harold W., and Rankin, Wilbur D., MSC, Fig. 6 (in pocket)
- Hoots, Harold W., Baddley, E. R., and Reed, R. D., MSC, 75
- Hoots, Harold W., Blount, A. L., and Jones, P. H., determination of carbon and hydrogen in substances of bituminous or pyro-bituminous nature occurring in shales, XIX, 293
- marine oil shale, source of oil in Playa del Rey field, California, XIX, 172
- Hoots, Harold W., et al., MSC, 47
- Hoover, Herbert, XXIII, 1315
- Hoover, J. B., memorial of Otto Leatherock, XXV, 2101
- Hoover, J. W., XIII, 927
- Hoover, James Earl, memorial of, XVIII, 430
- Hoover, W. Farrin, correlation of sub-surface Devonian of Sandoval pool, Marion County, Illinois, with Devonian outcrop of southwestern Illinois, XXVIII, 1528
- self-flushing beaker brush, XXIII, (Hoover) 1244
- Hoover-Northwest pool, XXIX, 717
- Hoover sands, Oklahoma, analyses of water from, PROB, 867
- in Blackwell field, Oklahoma, STR I, 167
- in Garber field, Oklahoma, STR I, 178
- Hope field, XXIV, 987
- Hope formation, XXVI, 1046
- Hope Natural Gas Company, XXII, 178
- data on storage pools operated by, XXVIII, 1563
- storage operations, XXVIII, 1568
- Hope Oil Co., SD, 350
- Hope Producing Company, GAS, 743
- Hope Ranch, MSC, 128
- Hopkins, I, 155; X, 220, XXIV, 729
- Hopkins, Edwin Butcher, II, 136; III, 312, XIX, 1230
- memorial of, XXIV, 1851
- Hopkins, Edwin Butcher, and Wasson, H. J., geologic and economic notes on Venezuelan oil developments, XIII, 1187
- Hopkins, F. V., SD, 8, 343; IX, 170, 838
- Hopkins, Oliver B., GAS, 885; SD, 21, 29, 211, 217, 244, 247, 253, 255, 256, 258, 259, 266, 782; SBP, 297; II, 62; V, 490; VI, 329; VII, 367, 380, 694; IX, 349, 851, 862, 866; X, 3, 36, 38, 39, 45, 47, 49, 50, 51, 58; XI, 258; XII, 3, 528, XV, 506, 532; XIX, 168, 170, 1330, 1331, 1656; XXVIII, 1329
- discussion of Athabaska oil sands, XIX, 168
- memorial of J. Laurer Stauff, XVIII, 715
- Hopkins, Oliver B., and Matson, G. C., GAS, 677; IV, 117, 124, 127, 132, 135
- Hopkins, Oliver B., and Powers, Sidney, X, 859; XXI, 1272
- Hopkins, Oliver B., Powers, Sidney, and Robinson, H. M., PROB, 779; XV, 816
- Hopkins, S. J., and Chibnall, A. C., XXVII, 1182, 1187
- Hopkins, T. C., XVIII, 1137, 1139; XXVIII, 1627, 1631
- Hopkins County, Texas, XXI, 111, XXIX, 1777
- (well 375), SBP, 292-335, 409
- Hopkins field, XXIV, 986
- Hoppe-Seyler, F., IX, 729; X, 1273
- Hopper Canyon field, PROB, 756
- Horizon markers, value of gypsums, dolomites, and anhydrites as, XXI, 1566
- Horizons in section at Vicksburg, division of, GC, 344; XIX, 1654
- Horizontal and vertical intensity, simple derivation of working equations of magnetic variometers for, XII, 855
- Horizontal classification of structural units into shields, shelves, and geosynclines, XXI, 1595
- Horizontal current velocity in sea, RMS, 54
- Horizontal faulting, experiments relating to results of, XII, 715
- Horizontal faults, XXVII, 1255
- Horizontal gradients in seawater, RMS, 53
- Horizontal holes, chemicals as a means of drilling, in deeply buried oil-producing formations, XXIV, 9365
- Horizontal magnetic intensity, Brunton compass attachment for measurement of, XV, 1391
- Horizontal movement of material in mountains merely incidental to expansion and vertical uplift, CD, 185
- Horizontal movements of the searface, RMS, 129
- Horizontal porosity, XXI, 620
- Horizontal pressure variations in ocean, RMS, 63
- Horizontal shift faulting in Trinidad, continental drift theory of, XXIV, 2121
- of region of Los Bajos fault, Trinidad, theory of, XXIV, 2110
- Horizontal temperature gradient in sea, RMS, 54
- Hornady, A. C., STRAT, 661, 698
- Hornberger, J., Jr., and Plummer, F. B., XXIV, 87
- Hornblende, MEX, 148; RMS, 38, 498, 499, 608, 609, 610, 622, 627; XXVIII, 72
- Hornblende zone, XXIV, 2099
- Hornblende zone assemblage of minerals, XXIV, 2088
- Horne Valley anticline, Carbon County, Wyoming, Muddy sand productive on, XXIV, 1104
- Horner, W. L., XXV, 1312
- Hornerstown microfauna, XXIX, 891
- Hornfels in Dockum conglomerates, XXVII, 631
- Horns Corner pool, production of oil and gas at, XXVIII, 783
- Horse Creek anticline, XXVII, 855
- Horse Creek dome, Laramie County, XXVII, 478
- Horse Creek field, XXVIII, 796
- Horse Creek fold, V, 59
- Horseshoe Bayou, St. Mary Parish, Louisiana, XXII, 743; XXVIII, 1286
- Horseshoe Bayou field, electric-log cross section, XXVIII, 1288
- Horseshoe Lake sand, XXV, 116
- Horsetown Creek, CAL, 310
- Horsetown formation, CAL, 112
- faunal migration during, CAL, 302
- fossils of, CAL, 107, 109 (Kh) (Cretaceous), SBP, 96, 168-194, 414
- Horsetown group, XXVIII, 458
- Horsetown shales, PROB, 183, 184
- Horsetown, stage, CAL, 14, 99, 108, 111
- Horst at Bellevue field, Louisiana, STR II, 245
- in Austin chalk, XXVIII, 549
- Horsts between south front thrusts and Boysen fault in Wind River Canyon, XXIII, 1473
- in anticlines, XXVIII, 548
- Horsts and grabens, alternating, round Jennings dome, XXVII, 1109
- Horton, C. W., salt diffusion in Woodbine sand waters, East Texas, XXVIII, 1635
- Horton, H. M., XV, 257
- Horton series, FOP, 119; GAS, 105; XXV, 1551
- Horwitz, Leo, XV, 2; XXIV, 1432, 1459, 1461
- Hosking, L. F., XXV, 374, 380, 389
- Hoskins, Baker, Jr., memorial of, XXV, 2228
- Hoskins, Homer A., STRAT, 826; XXIV, 493; XXVII, 1221
- Hoskins, Homer A., Price, Paul H.,

- (Hoskins)
 Hare, C. E., and McCue, J. B., XXIV, 487
 Hoskins, Lucy, XX, 1051
 Hoskins Mound dome, reflections on north side of, XXVII, 59
 Hoskins Mound field, I, 44, 80
 Hoskins Mound salt dome, Brazoria County, Texas, GC, 833; XX, 155 section through, GC, 840-842; XX, 162-164
 Hoskinson, J., XVI, 552
 Hospah field, XXVII, 449
 Hosselkus limestone, CAL, 67
 Hossfeld, Paul, XVIII, 242
 Hosston anticline at Pine Island field, Louisiana, STR II, 173
 Hosston formation, XXVI, 1265, 1475; XXVII, 1230; XXVIII, 269, 277; XXIX, 1426
 correlation, XXIX, 1433
 distribution and thickness, XXIX, 1427
 equivalents of, in northern Mexico, XXIX, 1433
 in South Texas, XXIX, 1417
 in South Texas, sections, XXIX, 1428-1432
 of Neocomian age, XXIX, 1419, 1427 stratigraphic and lithologic features, XXIX, 1427
 Hosston redbeds, XXVIII, 582
 Hosterman, J. F., Tonkawa oil and gas field, Oklahoma, VIII, 284
 Hot Springs County, Wyoming, outcrop section e, SBP, 243-253, 411
 Red Springs anticline, XXVII, 450 (wells 204-206), SBP, 194-243, 406
 Hot Springs sandstone, XVIII, 1033; XXV, 1651
 Hot-water method of obtaining oil from Athabasca River tar sands, FOP, 23; XXV, 1455
 Hotchkiss, XI, 1287
 Hotchkiss, W. O., XIII, 660, 664; XVI, 1264
 story of a billion years, review, XVII, 566
 Hotchkiss superdip; a new magnetometer, XIII, 659
 Hotson oil sand in Garber field, Oklahoma, STR I, 178
 Hott pool, XXIII, 852
 Hotulke pool, XXVI, 1069
 Hough, Jack L., RMS, 634, 644, 656
 bottom-sampling apparatus, RMS, 631
 Hough's coring tube, RMS, 645, 650
 Houghton, Douglass, XXII, 662
 Houma gas area, Terrebonne Parish, XXII, 743
 Houma gas field, Louisiana, GAS, 730; II, 20; XXIX, 796
 House, T. R., XVI, 1099
 Houston, Sam, XVII, 1294, 1332
 Houston and Leon counties, Texas, Hurricane lentil in, XXIV, 1666-1667
 sections of lower Landrum member exposed in, XXIV, 1672-1675
 Houston and Pasadena areas, average daily pumpage in, XXVII, 1093
 Houston area, analyses of water from wells in, XXVII, 1099
 map showing location of observation wells in relation to oil and gas fields, XXIX, 255
 Pliocene and Pleistocene in, XXIX, 269
 Houston County, Texas, Navarro Crossing field, XXII, 1600
 Houston district, chemical character of ground water in, XXVII, 1098
 fresh water in deep sands in, XXVII, 1100
 hydrographs of water levels in wells in, XXVII, 1095, 1096
 investigation of ground water available for, XXIX, 254
 Miocene in, XXVII, 1085
 Pleistocene in, XXVII, 1085
 Pliocene in, XXVII, 1085
 Texas, ground water and relation of geology to its occurrence in, XXVII, 1081
 Houston Geological Society, XXIV, 1074
 student awards, XXIV, 2019, 2020; XXV, 1606
 subjects selected for special study groups, XXIV, 363
 Houston Geological Society study group, datum planes for contouring Gulf Coast region, XXIII, 1404
 electrical well logging, XXIII, 1287
 interpretation of geophysics, XXIII, 1272
 multiple-oil-zone completion, XXIII, 1275
 problem of well spacing, XXVI, 100
 report of, XXIV, 363, 372, 374, 376
 Houston Geological Society Study Groups, organization of, XXIII, 1715
 Houston group in Gulf Coastal Plain, XXIII, 188
 Houston Gulf Gas Company, XXV, 119
 Houston Oil Company, GAS, 700; SD, 498
 of Texas, SD, 498; XXII, 1185; XXV, 1969
 Houston Pipe Line Company, GAS, 703, 727; GC, 627; XVII, 823
 Houston Salt Dome basin, XXVI, 1443
 Houston Water Company, XXVII, 1082
 Houx limestone, XXV, 36, 37, 42, 69, 72
 Hovey anticline, PTNM, 646, 758; XXVI, 646, 758
 Hovey dome, XXII, 1439
 Hovey Hills, accumulation below unconformity in, PROB, 801
 Hovig, P., XXI, 1133
 Howard, XVII, 828
 Howard, C. A., GAS, 609
 Howard, C. D., XXIV, 486
 Howard, Oscar, Company (well 159), SBP, 87-153, 405
 Howard, W. V., GAS, 813; PROB, 249, 316, 367, 370, 373, 382; XIV, 711, 712; XV, 1295; XVII, 565; XX, 1390; XXVIII, 702; XXIX, 1165
 accumulation of oil and gas in limestone, PROB, 365
 carrier beds and oil accumulation, discussion, XVI, 260
 classification of limestone reservoirs, XII, 1153
 geology in war and peace, discussion, XXVI, 1844
 reservoir rocks of Persian oil fields and other limestone reservoirs, discussion, XVII, 563
 reviews, XIII, 691; XXIV, 883
 Howard, W. V., and Claypool, C. B., method of examining calcareous well cuttings, XII, 1147
 Howard, W. V., and David, Max W., XXIV, 1973
 development of porosity in limestones, XX, 1389
 Howard, W. V., and Love, W. W., PROB, 360, 368
 Howard, W. V., and Murray, A. N., GAS, 81
 Howard area, XXVII, 837
 Howard County anticline, XXV, 77
 Howard field, New York, XXIX, 668
 Howard limestone, GAS, 467
 at Anson pool, GAS, 477
 Howard pool, XXIV, 42
 Howchin, W., XXV, 1219
 Howe, Henry V., GC, 437; MSC, 177, 179; SD, 273, 287; X, 221; XVII, 614, 622, 1446; XIX, 656, 657, 1152, 1660; XXII, 293, 294, 998, 1413; XXIII, 151, 182, 198, 199, 1394, 1553; XXIV, 381; XXV, 1230, 1374, 1376; XXVII, 1136; XXVIII, 903, 1358; XXIX, 25, 26, 42, 1308
 Many Salt dome, Sabine Parish, Louisiana, IX, 170
 memorial of Karl Etienne Young, XX, 1150
 neglected Gulf Coast Tertiary microfossils, XXVI, 1188
 Tertiary stratigraphy of Louisiana, GC, 383; XVII, 613
 Howe, Henry V., and Garrett, Julius B., Jr., XXIV, 1893; XXV, 735, 738; XXIX, 53, 62, 64
 Howe, Henry V., and McGurt, James H., XXIV, 456; XXV, 275; XXVIII, 981
 Howe, Henry V., and Moresi, Cyril K., XVII, 652; XVIII, 1069; XXI, 1270, XXVII, 1123, 1125, 1127, 1133, 1139, 1140; XXVIII, 1305
 geology of Iberia Parish, Louisiana, review, XVI, 425
 Howe, Henry V., and Russell, Richard J., XXIII, 204
 Howe, Henry V., and Wallace, W. E., GC, 399; XVII, 629
 Howe, Henry V., Russell, Richard J., McGurt, James H., Craft, Ben C., and Stephenson, Morton B., reports on geology of Cameron and Vermillion parishes, review, XX, 838
 Howe, James V., memorial of, X, 1188
 Howe, M. A., RMS, 286
 Howe Oil and Gas Company, Colony U-4515 (well 433), Kentland U-4518 (well 432), Swift U-4520 (well 434), SBP, 349-379, 410
 Howell, B. F., XIV, 1071; XXIII, 1068; XXIX, 886
 Howell, F. S., MEX, 150
 Howell, J. V., PROB, 310, 323; VIII, 323; XII, 999; XIV, 623; XV, 597, 598, 610; XVII, 549, 808, 812; XXI, 1551; XXVI, 56; XXVII, 1265
 discussion of Rich's theory of oil accumulation in Kansas, XVII, 808
 historical development of structural theory of accumulation of oil and gas, PROB, 1
 how old is petroleum geology? XIV, 607
 notes on pre-Permian Paleozoics of Wichita Mountain area, VI, 413
 progress reports on geology of Alaska Highway, review, XXVIII, 1655

- (Howell)
 report of committee for publication for 1942, XXVII, 701
 report of committee for publication for 1943, XXVIII, 665
 report of committee for publication for 1944, XXIX, 607
 reviews, XII, 773; XIV, 523, XVIII, 1549; XXIX, 1669
 silicified shell fragments as an indication of unconformity, XV, 1103
 Howell, Lynn G., radioactivity of soil gases, XVIII, 63, 273
 Howell, W. F., GAS, 269, PROB, 348, 692; STRAT, 273; XXI, 1245
 Kevin-Sunburst field, Toole County, Montana, STR II, 254
 Howell anticline in Michigan fields, GAS, 794
 Howells, W. C., XXVII, 90
 Howells Ridge formation, XXII, 529, 533, 540
 Howells Wells syncline, XXII, 539
 Howeth, XVII, 516
 Hoxbar formation, VI, opp. 6, 7; XXV, 1667
 Oklahoma, correction to stratigraphy of, discussion, XVIII, 1083
 Hoy oil sand in Garber field, Oklahoma, STR I, 178
 Hradil, G., SBP, 2
 Hsiangchi coal series, XXV, 2062
 Hsiangchi formation, Jurassic, XXVIII, 1437
 Hsi-chin, Ho, X, 1098
 Hsieh, C. Y., IX, 1297
 Huacanqui sandstone, XXI, 1348
 Hualde dome at East Coyote field, GAS, 207
 Huaname region, V, 596
 Huang, XXIV, 280
 Huanglung limestone, XXIV, 270
 Huapache monoclinical fold, XXI, 839, 862
 Huasna, MSC, 156
 Huasna Creek, MSC, 75, 111, 166, 167
 Huasna-Cuyama district, MSC, 155
 Huasna district, CAL, 89, 90, 217, 310; MSC, 128, 155
 Huasna River, MSC, 119
 Huasna River area, MSC, 133
 Huasna-San Luis Obispo district, MSC, 165
 Huasna syncline, MSC, 166
 Huasteca area of eastern Hidalgo, northern Puebla, and northern Veracruz, Neocomian and Aptian in, XXVIII, 1128
 Huasteca formation, MEX, 35, 97, 107, 108, 124, 126, 130, 156, 210, Figs. 10, 12 (in pocket)
 at Cerro Azul, MEX, 131
 at Paso Comales, MEX, 125, 131
 at San Gerónimo, MEX, 131
 at Topila, MEX, 131
 at Toteco, MEX, 131
 at Zacamixtle, MEX, 131
 thickness of, MEX, 131
 Huasteca Petroleum Company, GAS, 1003
 Huasteca region, Lias of, MEX, 10, 11
 Huyacocotla, MEX, 9, 11, 12, 22, 24
 Hubach, E., XVII, 212, 215, 216, 220; XXVI, 808; XXIX, 1085, 1088, 1090, 1091, 1132, 1133
 Hubbard, XXIV, 499
 Hubbard, G. H., XVII, 233
 Hubbard, George D., quantitative
 versus qualitative studies in geology, XIII, 239
 Hubbard, W. E., GAS, 385; V, 33; XIII, 594; XVII, 877, XXII, 1441
 subsurface structure map of Hewitt field, Oklahoma, STR II, 296
 Hubbard, W. E., and Thompson, W. C., GAS, 589
 geology and oil fields of Archer County, Texas, X, 457
 relation of accumulation to structure in the oil fields of Archer County, Texas, STR I, 421
 Hubbard, Texas (well 388), SBP, 292-335, 410
 Hubbert, M. King, XXVII, 52
 distinguished lecture tour, XXIX, 474
 graphic solution of strike and dip from two angular components, discussion, XV, 283
 strength of the earth, XXIX, 1630
 theory of ground-water motion, review, XXV, 1418
 Hubbert, M. King, and Melton, Frank A., gravity anomalies and petroleum exploration by gravitational pendulum, XII, 889
 Huber, H., MEX, 50, 157
 Huber-Montana Corporation, XXIV, 1107
 Hubley, M. D., Patterson pool, Kearny County, Kansas, XXVI, 400
 Hubman, Carl W., XXIX, 1070, 1124, 1126
 Huckleberry Hill, MSC, 36
 Huddleston pool, XXV, 1079
 Hudegens, Clyde E., XXVII, 1570, 1574
 Hudleston, W. H., XXV, 374
 Hudnall and Pirtle, STRAT, 548
 map showing relation of surface structure to production in Smith-Ellis field, Texas, STR II, 558
 Hudnall, James, VIII, 154
 Hudnall, J. S., GAS, 932
 Hudnall, J. S., and Browning, I., GAS, 924
 Hudnall, J. S., and Theis, C. V., GAS, 933
 Hudson, XI, 1283
 Hudson, Frank S., CAL, 21, 95; VIII, 789; XIII, 493
 occurrence of oil in basalt in southwestern Washington, XI, 87
 South Mountain field, VIII, 810
 Hudson, Frank S., and Craig, E. K., geologic age of Modelo formation, California, XIII, 509
 Hudson, Frank S., and Taliaferro, N. L., XI, 1283, 1287; XIII, 1123
 an interesting example of a survey of a deep bore hole, X, 774
 calcium chloride waters from certain oil fields in Ventura County, California, IX, 1071
 Hudson, Frank S., and White, G. H., XXVI, 1615
 thrust faulting and coarse clastics in Temblor Range, California, XXV, 1327
 Hudson, Frank S., Buddenhagen, H. J., Hill, Mason L., and Woodford, A. O., type locality of a fault, XIV, 797
 Hudson, Frank S., Taliaferro, N. L., and Craddock, W. N., oil fields of Ventura County, California, VIII, 789
 Hudson, O. M., GAS, 609, 624
 Hudson, R. G. S., and Dixon, E. E. L., XVIII, 1005
 Hudson or Lander anticline, XIII, 1286
 Hudson Bay, RMS, 227
 Hudson Bay and James Bay region, FOP, 107, XXV, 1539
 map, FOP, 108; XXV, 1540
 references on oil prospects in, FOP, 109; XXV, 1541
 Hudson dome, XXV, 148
 Hudson River group, XXII, 94
 Hudson's Bay Marland Viking well No. 1, geologic log, GAS, 50
 Hueco Bolson, XXIV, 159
 Hueco escarpment, V, 331, XIII, 960
 Hueco formation, XXIII, 1677
 Hueco limestone, PTNM, 556, XXIV, 165, 270; XXVI, 557, 563
 fossils of, PTNM, 563, XXVI, 563
 in Hueco Mountains, terminology on, PTNM, 557; XXVI, 557
 in Sierra Diablo, terminology on, PTNM, 557; XXVI, 557
 of Wolfcamp series, unconformities below and above, in Baylor Mountains, Sierra Diablo area, sections, PTNM, 562; XXVI, 562
 unconformable with Bone Spring limestone on Victorio and Babb flexures, PTNM, 630, XXVI, 630
 Hueco Mountains, XIII, 905, 910
 Huejutla (Hidalgo), Chicontepec at, MEX, 99
 Hueneme, CAL, 270
 Hueneme Submarine Canyon, California, RMS, 267
 Huerfueño Creek, MSC, 122
 Huey, A. S., XXVII, 184; XXVIII, 472; XXIX, 956
 Huffington, Roy M., XXVIII, 832
 Huffington, Roy M., and Albritton C. C., Jr., XXVI, 1016
 Huffman, H. H., and Parks, G. S., XXVIII, 931
 Hughes and Bryant, XXI, 345
 Hughes, C. Don, VIII, 323, 332, 339; XXI, 1551
 graphic arrangement of a symposium on petroleum discovery methods, XXVI, 1410
 Hughes, D. C., XVIII, 788
 Hughes, Donald D., CAL, 229; MSC, 5, 51, 71, 108, Fig. 14 (in pocket); SC, 48, opp. 98; XII, 113, XVIII, 435, 1568; XX, 132, 145, 1594; XXIII, 251; XXV, 194, 1235; XXVII, 1364
 Hughes, Donald D., and Goudkoff, Paul P., MSC, 50, 243, 247, 248, 253, 261, 264, 267, 270, 273, 276, 279, 282, 298, 307, 319, 320, 328, 342, 344, 350; XVIII, 460
 Hughes, Donald D., and Laiming, Boris, MSC, 195, 230, 268, 269, 273, 309, 310, 313, Fig. 14 (in pocket); XVIII, 470, 472
 Hughes, Donald D., and Rankin, W. D., MSC, 28
 Hughes, Donald D., Goudkoff, Paul P., and Laiming, Boris, MSC, 39; XVIII, 460
 Hughes, Donald D., Rankin, Wilbur D., and Goudkoff, Paul P., MSC, 247, 250, 254, 267, 270, 272, 273, 320, Fig. 14 (in pocket)
 Hughes, J. K., et al., XXIII, 892
 Hughes, Margaret Moore, MSC, 5
 Hughes, Richard, XIV, 1537
 granite wells in central Oklahoma, V, 421

- (Hughes)
International Petroleum Exposition, VIII, 102
Hughes, R. V., SBP, 6; XXI, 1378; XXV, 1933
Hughes, Urban B., PROB, 636; XIX, 1148; XXVII, 990
developments in Mississippi in 1940, XXV, 1016
developments in southeastern United States in 1941, XXVI, 991
developments in southeastern United States in 1943, XXVIII, 801
shallow salt-type structure in Permian of north-central Texas, XVI, 577
Hughes, Urban B., Harbison, Robert R., *et al.*, surface formations in Mississippi, XXIV, 2033
Hughes, V. H., V, 64, 70, 71
Hughes and Okfuskee counties, Oklahoma, Olympic pool, STRAT, 456; XXII, 1579
Hughes Estate, XXI, 994
Hughes plunger lift used at Conroe field, GC, 830, XX, 777
Hughes River development in Ritchie County, West Virginia, in 1844, XXII, 1095
Hugoton and Texas Panhandle fields, present limits of gas production of, XXIII, 1055
Hugoton area, economic history of, XXIII, 1056
origin and migration of gas in, XXIII, 1065
Hugoton field, Kansas, XXIV, 1782; XXV, 1687
map showing lines of equal rock pressure in, XXIV, 1799
Hugoton field, relative porosity and permeability of producing formations of, as indicated by gas withdrawals and pressure decline, XXIV, 1798
withdrawals, pressure, and acreage data, XXIV, 1800
Hugoton gas area, electrical prospecting at, XIX, 67, 68
Hugoton gas district, GAS, 385, 412; PROB, 576; XVII, 902
Hugoton gas field, Grant, Haskell, Morton, Stevens, and Seward counties, Kansas, and Texas County, Oklahoma, STRAT, 78, 90
accumulation of gas, STRAT, 96
reserves, STRAT, 103
Hugoton gas field of southwestern Kansas, geology of, XXIII, 1054
Chase group in, XXIII, 1060
chemical analysis of gas of, XXIII, 1067
correlations of, with Texas Panhandle gas fields, XXIII, 1065
Cretaceous in, XXIII, 1058
cross section of, showing red clastics west of present gas-producing area, XXIII, 1059
gas reserves in, XXIII, 1061
geology pertaining to occurrence of natural gas in, XXIII, 1058
Permian in, XXIII, 1058
regional stratigraphy in, XXIII, 1058
reservoir rocks in, XXIII, 1058
stratigraphy of, from type section in south Grant County, Kansas, XXIII, 1057
withdrawals from, XXIII, 1062
Huguenin, E., GAS, 119, 175, 177; XII, 519
Huizachal Cañon, MEX, 13
Huizachal Rancho, MEX, 13, 14
Hulah sandstone, XXIV, 730
Huleatt, W. P., IX, 164
Hulin, Carlton D., CAL, vii, 39, 41, 96, 176, 200, 201, 204, 243; SC, 72, 77; XIV, 1353; XX, 1618, 1619, 1620; XXIII, 521
Hull, A. K., XXV, 856
Hull, A. W., RMS, 617
Hull, Cordell, XXVI, 1207
Hull, Edward, XI, 148; XX, 890, 896, 897
Hull, Joseph Poyer Deyo, GAS, ix; GC, 384; SD, 273, 297; X, 221, 245; XIII, 168; XVII, 614; XX, 390; XXV, 1204
Bellevue pool, Louisiana, VI, 247
discovery of Nigger Creek oil pool, Limestone County, Texas, X, 997
El Dorado oil field in Arkansas not on an anticline, discussion, VI, 479
guide notes on Midway in southwestern Arkansas, IX, 167
Haynesville pool, V, 629
notes on stratigraphy of producing sands in northern Louisiana and southern Arkansas, VII, 362
plans for compilation of Louisiana-Arkansas geology, VIII, 350
Prothro salt dome, Bienville Parish, Louisiana, IX, 904
reviews, VII, 198; XII, 874, 1117, 1118; XIII, 1572
Webster Parish gas fields, Louisiana, VI, 251
wildcat wells in south-central Arkansas stop short of deep oil sands, discussion, VI, 477
Hull, Joseph Poyer Deyo, and Spooner, William Calvin, review of oil and gas pools in north Louisiana territory, VI, 179, 259
Hull-Debye-Sherrer powder method of crystal analysis by X-ray diffraction, XXI, 1334
Hull dome, PROB, 673; GC, 159
effect of character of rim syncline on production at, XX, 1422
salt overhang at, GC, 160; XVII, 1511
Hull field, Texas, PROB, 899, 900; GAS, 705; V, 333
Oligocene production at, GC, 11; XVIII, 510
Hull salt dome, XVII, 1510
Hull-Silk oil field, Archer County, Texas, STRAT, 661
accumulation of oil, STRAT, 673
cost of completion, STRAT, 678-679
Strawn beds productive in, XXV, 1677
Hull-Silk pool, XXIII, 845, 852; XXV, 1066
Humber River on North Sea, RMS, 334
Humble Company first to discover foraminifera in Gulf Coast of Texas, XXV, 1222
Humble deep test, Apache Mountains, Culberson County, Texas, XXIX, 280
Humble dome, Texas, PROB, 671; GAS, 705
cap-rock production at, GC, 3; XVIII, 502
effect of character of rim syncline on production at, XX, 1422
flank production at, GC, 6; XVIII, 505
Jackson production at, GC, 14; Huizachal Cañon, MEX, 13
Humble field, Texas, XXIX, 789
Humble Oil and Refining Company, GAS, 450, 683, 700, 724, 726, 727; GC, 708, 710, 790, 885; SBP, 7; SD, 358, 529, 551, 564, 606, 611, 617, 620, 621, 623, 639, 646, 651, 652, 656, 675, 677, 719, 721, 727, 730-733, 735, 737, 740, 741, 757; XVII, 1491; XX, 536, 737; XXII, 1659; XXIII, 856, 891, 1617, 1638; XXIV, 435, 476, 480, 1064; XXVI, 989; XXVIII, 804; XXIX, 481, 744, 794
Alexander 1 (well 340), Armstrong 1 (well 326), Bouillion 1 (well 408), Clemens 1 (well 318), Crim 1 (well 335), Fuller 6 (well 337), Glover 3 (well 341), Guerrero 3 (well 405), Kohler 50A (well 403), Lasater 1A (well 325), Lindley 1 (well 389), Louisiana State Land 1 (well 409), Mackey 1 (well 312), McGaffrey 1 (well 373), Mullikan 7 (well 338), Rydolph 1 (well 402), Shelton 1 (well 310), Smith, I. D., 2 (well 313), Smith, Lizzie, 2 (well 372), Turner 2, 6 (wells 339, 339a), Woodburn 1 (well 400), SBP, 292-349, 408-410
analysis of crude oil from Nacatoch sand in Bellevue field, Louisiana, STR II, 249
Humble Oil Company, XXVII, 939
Humble oil field, Texas, I, 60; III, 87, 321
Oligocene production at, GC, 11; XVIII, 510
Humble Pipe Line Company, GC, 627, XVII, 823; XX, 778; XXIII, 1665; XXV, 629
Humble pool, flank production in, XX, 526
Humboldt basin, MSC, 2, 136, 180
Humboldt County, California, MSC, 26, 119, 135, 168, 193, 196, 211, 212, 223, 230-232, 240, 243, 249, 251, 256, 258, 260, 264, 266, 273, 274, 288, 289, 299, 301, 320, 324, 328, 330, 333, 335
Cretaceous in, probably Franciscan, CAL, 99
Franciscan limestone in, CAL, 82, 99
outcrop section A, SBP, 167-194, 411
Pliocene in, CAL, 234, 243, 246, 251
submarine gorges along coast of, CAL, 268
(well 1), SBP, 87-153, 403
Humboldt district, PROB, 183
Humboldt Embayment, FOP, 32; XXV, 1464
Humboldt fault, XXIV, 1005
Hume, XI, 243
Hume and Mrazec, X, 438
Hume, George S., GAS, 15, 41, 42, 260; PROB, 74; STRAT, 273, 285; XI, 28, 515; XV, 493; XVI, 789; XVIII, 1390, 1392, 1397, 1398, 1402, 1414, 1423, 1428, 1441, 1444; XIX, 156, 166, 170, 295, 296, 1429, 1467; XXII, 1142, 1145, 1146, 1150; XXIV, 1620, 1622; XXVI, 343, 345; XXIX, 1166, 1615
developments in Canada in 1944, XXIX, 654

- (Hume)
 discussion of Athabaska oil sands, XIX, 166
 discussion of Turner Valley gas and oil field, XVIII, 1444
 oil and gas in Western Canada, review, XVIII, 551
 petroleum developments in Canada in 1943, XXVIII, 864
 stratigraphy and oil prospects of Alberta, Canada, discussion, XI, 515
 Hume, George S., and Evans, C. S., XVI, 792
 Hume, George S., and Hage, C. O., XXIX, 1608
 Hume, George S., and Link, T. A., Canol investigations in Mackenzie River area, Northwest Territories and Yukon, review, XXIX, 1669
 Hume, George S., and McLearn, F. H., stratigraphy and oil prospects of Alberta, Canada, XI, 237
 Hume, George S., and Warren, P. S., XXIX, 1608
 Hume, W. F., XI, 144, 148; XVI, 1063; XX, 890
 Hume, W. F., and Barron, T., XXII, 1218
 Humic acid origin of asphalt, V, 75
 Humic acid producing swamps, location of, along old shore lines, XIV, 1467
 Humic-acid theory of origin of oil, XXI, 1249
 Humic acids, PROB, 45, 56
 a source for oil, PROB, 374
 origin of, PROB, 43
 relation to origin of petroleum, XIV, 1466
 Humic black shales, XXIII, 1179
 strata associated with, mostly of continental origin, XXIII, 1180
 Humic substances, relation of, to glauconitization, RMS, 510
 Humid regions, clays of, RMS, 483
 Hummel, Carl Bernard, memorial of VII, 715
 Hummel, J. N., XIV, 1165, 1166; XXI, 1264, 1277, 1291; XIX, 44
 Hummel, K., RMS, 507; XX, 1492, 1571, 1590
 Humphrey, Wm. E., XXVIII, 1079, 1151, 1153
 Humphreys and Abbot, XIV, 876; XXIII, 1200, 2114
 Humphreys, Colonel, XXIX, 482
 Humphreys, R. E., IX, 1143
 Humphreys, W. J., XIV, 1281
 Humphreys Oil Company, Jones 1 (well 392), Stafford 1 (well 352), SBP, 292-335, 409, 410
 Humphreys sand, Hardin field, STRAT, 568
 Humus, RMS, 266, 392
 effect of, in mechanical analyses, RMS, 538
 marine, of Baltic, RMS, 303, 307
 Humus content of sediments, RMS, 380, 381
 Humus soil, RMS, 266; XXV, 2171
Humussubstanzen bei der Verwitterung, die Rolle der, review, XVI, 219
 Hundred-Foot sand, PROB, 845, 846
 Huner, J., Jr., XXIX, 25, 43
 Huner, J., Jr., and Russell, R. J., XXVIII, 1250
 Hungary, production from Budafapuszta field in 1937, XXIII, 966
 tectonics and paleogeography of basin system of, XVIII, 925
 Hunsrück shales, Germany, RMS, 203
 Hunsrückschiefer black shales, XXIII, 1183
 Hunt, XX, 1396
 Hunt, Charles B., XXIX, 1687
 new interpretation of some laccolithic mountains and its possible bearing on structural traps for oil and gas, XXVI, 197
 Hunt, Edwin H., STRAT, 327, 331, 332, 368, X, 1230, 1239, 1249
 developments in Rocky Mountain region in 1937, XXII, 677
 Hunt, T. Sterry, PROB, 3, 4, 6, 8, 12, 13, 16, 71, 254, 310, 850, IX, 1081; XIV, 610; XV, 598, 600, 605, 606, 607, 608, 610; XVII, 549; XIX, 489, 498; XXII, 1097, XXIX, 657, 1739
 Hunt, T. Sterry, and Andrews, E. B., XIX, 499
 Hunt, W. H., XXII, 1338, 1367
 Hunt, Walter F., SD, 469, 710; IX, 730; XXII, 1307
 Hunt County, Texas, XXVIII, 850 (wells 376, 377), SBP, 292-335, 409
 Hunt Oil Company, XXIII, 891
 Hunter, Aubrey, STRAT, 661
 Hunter, C., SBP, 357
 Hunter, Coleman D., XXII, 1183; XXVI, 35
 natural gas in eastern Kentucky, GAS, 915
 Hunter, Coleman D., and Munyon, A. C., XXV, 807
 Hunter, H. M., GAS, 2; XV, 1171, 1176
 Hunter, H. M., and Slipper, S. E., stratigraphy of Foremost, Pakowki, and Milk River formations of southern plains of Alberta, ALTA, 53, XV, 1181
 Hunter, J. C., Plummer, F. B., and Timmerman, E. H., XXIV, 2164
 Hunter pool, XXVIII, 772
 Hunter pool, XXVIII, 772
 Hunter River district, New South Wales, geological sketch map of, XXIV, 637
 Hunter Valley thrust fault, XVIII, 1587
 Huntersville chert, XXII, 181; XXVI, 1127
 productive in Pennsylvania, XXII, 175
 Huntington, Ellsworth, and Goldthwait, J. W., XXIII, 140
 Huntington Beach, SC, 114; XX, 1660
 Huntington Beach area, XII, 640
 Huntington Beach oil field, Orange County, California, GAS, 188; PROB, 220, 229, 750, 974, 976, 977, 985, 995; V, 458, 624; VI, 303; VIII, 16, 41
 geology of, XVIII, 327
 review, VI, 389 (wells 93 and 94), SBP, 87-153
 Huntington Beach Townsite pool, PROB, 221
 Huntington-Pittsburgh syncline, GAS, 993
 production in, XXV, 797
 Huntley and Mason, X, 387
 Huntley, Charles Stirling, memorial of, X, 1322
 Huntley, L. G., MEX, 32, 143, 165; XI, 494, 1187, 1188, 1194, 1207, 1211; XIII, 439, XV, 533; XVI, 726, 804; XIX, 163; XXII, 1145
 discussion on difficulties of tectonic classification, XIII, 439
 (Huntley)
 geological features illustrated by models, VIII, 89
 Sabine Uplift, VII, 179
 Huntley, L. G., and Johnson, Roswell, H., GAS, 1016, 1019; VII, 621; VIII, 719; XI, 698
 Huntley, L. H., VII, 606
 Huntley, Louis Crow, graphic model of Tepetate-Chinampa pool in Mexican fields, V, 677
 Huntley, Stirling, GAS, 1008
 Hunton, post-, uplift unconformity in Bend Arch district, GAS, 626
 Hunton and Wilcox waters in Oklahoma, analyses of, PROB, 860
 Hunton arch, PROB, 576, 587, XIII, 574
 relation to pools of Seminole district, XXVII, 894
 Hunton dolomite, XXVI, 1083
 Hunton formation, XXIV, 1997
 in Kansas, XVI, 490
 in Pearson and St. Louis area, Oklahoma, STR II, 347
 in Seminole district, Oklahoma, STR II, 316, 329, 330, 331
 Oklahoma, V, 122; VI, 6, 161, 423; X, 141; XX, 1096
 productive in Forest City basin, XXV, 1646
 productive in Greater Seminole district, XXV, 1646
 productive in Nebraska, XXV, 1646
 productive in Okfuskee, Pontotoc, and Lincoln counties, Oklahoma, XXV, 1646
 productive in Sedgwick, McPherson, Harvey, Reno, and Rice counties, central Kansas, XXV, 1646
 Hunton group, XXIX, 193
 (Sh) (Silurian and Devonian), SBP, 260, 261-280, 415
 Hunton high, XXIII, 229
 Hunton lime at Fitts pool, XXIII, 824
 Hunton limestone, PROB, 293, 356, 766, 859; XXI, 1008; XXII, 1561; XXIII, 230, 831; XXV, 1100, 1110, 1641; XXVI, 1069; XXVIII, 780
 Fitts pool, Chimneyhill member of, XX, 957
 Jesse pool, contour map, XXII, 1571
 Nikkel pool, STRAT, 109, 113
 oil in, FOP, 84; XXV, 1516
 production in Oklahoma, review, VI, 161
 productive in Burtron field, XXIV, 1795
 productive in Jesse pool, XXII, 1566, 1577
 productive in Keokuk pool, XXIII, 231
 productive in Oklahoma and Kansas, XXV, 1645
 so-called, of southern McPherson and northwest Harvey counties, Kansas, age of, discussion, XVIII, 266
 Hunton sand, XXIX, 715
 Hunton-Tishomingo fold, XVIII, 583
 Hunton-Tishomingo uplift, XXV, 1, 3, 7, 1650, 1662, 1670
 Hunton-Tishomingo uplift and Amarillo-Vichita-Red River uplift comparable with Franciscan complex of California, XXV, 7
 Hunton unconformity at Keokuk pool, XXIII, 236
 Huntsville field, Alabama, GAS, 872
 Hupp, J. E., STRAT, 327; XXIII, 479; XXIX, 1265

- Hupp, J. E., and Bartram, John G.,
PROB, 692, XXVII, 434
subsurface structure of some unsymmetrical anticlines of Rocky Mountains, XIII, 1275
- Hupp, J. E., and McCourt, J. H.,
STRAT, 334, 337
- Hurd, C. D., XVII, 1254
- Hurghada field, Egypt, X, 438
- Hurlbut and Brown, Page 1 (well 314),
SBP, 292-335, 408
- Hurlbut, C. S., Jr., XXI, 1296
- Huron field, XXVIII, 743
- Huronian age, V, 375
- Hurricane Cliffs, XXIII, 122, 138
- Hurricane Cliffs fault block in St. George district, Utah, XXIII, 137
- Hurricane fault, XXIII, 139, 140
the dominant structural feature of southwestern Utah and northwestern Arizona, XXIII, 125
- Hurricane lentil, guide fossils of, XXIV, 1669
in Leon and Houston counties, Texas, XXIV, 1666-1667
- Hurricanes, RMS, 290
- Hurst, William, and Schilthuis, R. J.,
XIX, 882
- Hurt, E. E., XXIII, 147; XXVII, 20
- Hussakof, L., SD, 577; IX, 1038
- Hussey, PROB, 533
- Hussey, Russell C., historical geology, review, XXVIII, 1657
- Hussey, Russell C., Bergquist, S. G., and Kelly, W. A., occasional papers on geology of Michigan, review, XXI, 1597
- Hutcheson, R. B., MSC, 68; XXIX, 957
- Hutchings, W. M., X, 1038; XI, 363
- Hutchinson, L. L., VII, 620
- Hutchinson, N. M., XXI, 33
- Hutchinson, W. Spencer, and Breitenstein, August J., GAS, 1148
- Hutchinson County, Texas, XXIII, 985
central, type section of C-zone dolomite of, XXIII, 1023
columnar section of Big lime in western Dial pool, XXIII, 1024
columnar section of Borger pool, XXIII, 1020
stratigraphy in, XXIII, 1016
structural geology, XXIII, 1016
subsurface geologic map of, XXIII, 1018
western, fossiliferous cherty limestone in, XXIII, 1021
zonal changes in, XXIII, 1023
- Hutchison, A. G., XXII, 1105; XXIII, 1243; XXIV, 1550, 1562, 1618, 2111, 2125
- Hutchison, A. G., and Terpstra, G. R. J., XXIII, 1242
- Hutchison, L. L., I, 32, 134
- Hutson, E. B., XV, 1293; XIX, 691; XXVIII, 39; XXIX, 1417
- Hutson, E. B., and Shearer, H. K.,
XVII, 616
Dixie oil pool, Caddo Parish, Louisiana, XIV, 743
- Hutton, C. Osborne, some igneous rocks from New Plymouth area, review, XXIX, 1048
- Hutton, Frank, RMS, 281
- Hutton, John, XXIX, 1630
- Hutton-Curry and Smith-Ellis pools, Texas, STR II, 562
- Huygen, XIV, 187
- Huygen's principle, XXVIII, 615
- Hviid, Niels, XVIII, 731
- Hwang Ho River, RMS, 225
- Hyannis, Grant County, Nebraska, XXI, 996
- Hyatt, A., XXIV, 1165, 1175
- Hyatt, Don L., III, 72; XXII, 1564, 1566
preliminary report on Fitts pool, Pontotoc County, Oklahoma, XX, 951
- Hyde, C. E., X, 667
- Hyde, Henry C., XII, 1110
- Hyde, J. E., XIII, 533
- Hyde Production Company, SD, 618, 623, 726, 628
- Hydra sounding machine, RMS, 644, 647
- Hydrargillite, RMS, 627
- Hydrated ions, RMS, 457
- Hydration, RMS, 460, 536, 538, 543
effect of, on properties of clays, RMS, 482
mechanics of, XXI, 1488
of adsorbed cations, RMS, 535
of calcium ions, RMS, 478
of clays, RMS, 478
of halloysite, RMS, 470, 471
of minerals, RMS, 505, 511
of particles, effect of, on settling velocity, RMS, 543
of sodium ions, RMS, 478
of zeolites, XXI, 1488
order of, in clays, RMS, 535, 536
- Hydration and solution of calcium sulphate of Ochoa series, XXVIII, 1624
- Hydraulic compression testing machine, XXVI, 291
- Hydraulic coring apparatus, RMS, 657, 658
- Hydraulic head, PROB, 256
in Northern fields, MEX, 171
in Southern fields, MEX, 209
- Hydraulic mean depth, RMS, 6
- Hydraulic theories of oil and gas accumulation, XXIV, 116
- Hydraulic theory, XIII, 145
of accumulation, PROB, 254, 256, 259, 274, 279, 301, 305, 344, 374, 410; difficulties, PROB, 306
- Hydraulic theory of oil migration and accumulation by means of downward circulation of water, IX, 1143
further notes on, VII, 213
- Hydraulic water, PROB, 255
- Hydrobia beds, MSC, 175
- Hydrocarbon, MEX, 207
- Hydrocarbon constituents of commercial natural gas, GAS, 1074
- Hydrocarbon content of natural gas in Japan, XI, 189
of Oriskany gas, variation in, XXII, 1162
- Hydrocarbon fluids, application of reserve estimates of, XXVIII, 630
- Hydrocarbon gas, GAS, 369, 370, 372, 377, 381
- Hydrocarbon gases from Oriskany sandstone, composition of, XXII, 264
source materials of oil and gas fields, XXIV, 496
- Hydrocarbon halo found by analyses of near-surface soil, XXIV, 1404
- Hydrocarbon halos, XXIV, 1429
- Hydrocarbon isomers, XXV, 1169
- Hydrocarbon origin at Powder Wash, XXII, 1043
- Hydrocarbon-oxidizing bacteria, effect of sodium chloride on, XXVII, 1187
experimental methods of study of, (Hydrocarbon)
XXVII, 1176
salinity requirements for experiments on, XXVII, 1186
temperature requirements for experiments on, XXVII, 1186
Winkler technique in experimenting on, XXVII, 1176
- Hydrocarbons, alpha-particle bombardment of, XXVIII, 937
aromatic, PROB, 184
as related to bacteria, RMS, 422
at depth, experimental data showing concentrations of, XXIV, 868
bacterial genesis of, from fatty acids, discussion, XV, 703
Cedar Lake field, Texas, XXIV, 862
Coles Levee area, California, XXIV, 870
conversion of, by dehydrogenation, hydrogenation, cracking, and condensation, XXIV, 1885
decomposition and conversion of, XXIV, 1883
direct synthesis of higher from lower, VIII, 830
extraterrestrial, and petroleum genesis, XIX, 900
from fatty acids, bacterial genesis of, XV, 441
from hydrogenated Trinidad asphalt, XIX, 1875
in Gondwana rocks of Southern Brazil, XIX, 1784
indigenous to Hiawatha member of Wasatch formation at Powder Wash, XXII, 1040
kinds of, attacked by bacteria, XXVII, 1178
La Rosa field, Texas, XXIV, 867
liquid, PROB, 261
local origin of, PROB, 834
methods of removal from sulphur-free natural gases, GAS, 1123
minéraux, premières recherches sur les, dans les états du Levant sous mandat Français, review, XIX, 1706
Monument and Hobbs fields, New Mexico, XXIV, 866
of Uinta basin of Utah and Colorado, XXVIII, 341
presence determined by time relations of deformation, GAS, 1079
saturated, XXVIII, 937
solid, in soils, PROB, 35, 42
source of, found in Oriskany, XXI, 1589
standard constants of the lighter, GAS, 1149
unsaturated, XXVIII, 938
unsaturated, and hydrogen as reaction products, XXVIII, 947
Villa Nova field, frequency of occurrence of, XXVI, 28
- Hydrocarbons and oil, origin of, PROB, 42
- Hydrochloric acid, RMS, 435, 468; SBP, 36
for acidizing oil wells produced from New Mexico potash salts, XXV, 154
- Hydrodynamic relations, RMS, 23
- Hydrodynamic upthrust, RMS, 12
- Hydrodynamics as a basis for computing currents, RMS, 102
- Hydrogen, PROB, 38, 39; RMS, 422, 429, 445
as a reaction product of hydrocarbon bombardment, XXVIII, 947

- (Hydrogen)
 evolved during analyses of many cuttings and cores, XXIV, 1416
 heavy isotopes of, RMS, 67
 in gas in Michigan fields, GAS, 808
 in sea water, RMS, 143
 suggested natural source of: hydrogenation of oil, XXIV, 1475
 Hydrogen and carbon in substances of bituminous or pyro-bituminous nature occurring in shales, determination of, XIX, 293
 Hydrogen acceptors, RMS, 419
 Hydrogen clays, RMS, 538
 Hydrogen ion, RMS, 144, 455, 459, 463, 482, 483, 535, 538, 540
 in base exchange, RMS, 458, 462
 Hydrogen ion concentration, RMS, 146, 147, 317, 419, 423, 458, 489
 of sea water, RMS, 146, 150
 effect of, on clay minerals, RMS, 486
 relation of, to solubility of carbonates, RMS, 292
 Hydrogen montmorillonites, RMS, 478
 Hydrogen peroxide, SBP, 66
 as a dispersing agent, RMS, 539
 Hydrogen sulphide, GAS, 52, 451, 452, 456, 457, 695, 706-709, 839, 909, 1000, 1004, 1058, 1067, 1069-1072, 1075; RMS, 71, 151, 170, 287, 421-424, 444, 447, 448, 450; XXVI, 33
 bacterial reduction theory of derivation of, SD, 710
 bleaching action on ferric oxide, X, 310
 concentration, PROB, 922
 effect on lake sediments, XXV, 845
 from proteins, RMS, 424
 gas seepages, MEX, 157
 in basins, RMS, 96, 98, 99
 in East Indies, RMS, 351, 354
 in fords, RMS, 100
 in Gulf Coast domes, derivation of, SD, 708
 Hydrogenated jet and hydrogenated protoproduct, comparison of, XXIV, 1875
 Hydrogenated protoproduct and hydrogenated jet, comparison of, XXIV, 1875
 Hydrogenation, XXVIII, 939
 of natural Trinidad asphalt, XXIV, 1873
 of oil; suggested natural source of hydrogen, XXIV, 1475
 Hydrogenation and methylation, XXIV, 1888
 Hydrogenation and origin of oil, PROB, 99, 235
 Hydrogenation products from Trinidad asphalts, XXIV, 1874
 Hydrogenic shingle on beaches of Great Salt Lake, XXII, 1387
 Hydrographers, RMS, 221
 Hydrographic charts of North Sea, RMS, 327
 Hydrographs of wells in Bammel area, XXIX, 275, 276
 Hydrography in typical land-locked basins, RMS, 357-369
 of Great Salt Lake, XXII, 1316
 of North Sea, RMS, 327
 Hydrology, XXVI, 1538
 Section of, of American Geophysical Union, XXVI, 856
 Hydrolysis, PROB, 270, 452; RMS, 458, 485
 of plant and animal residues in sea water by anaerobic fermentation, PROB, 44
 Hydrometer, RMS, 597
 Hydrometer methods, RMS, 550-552
 Hydromica, RMS, 467
 relation of, to glauconite, RMS, 507
 Hydrostatic conditions, anticlinal occurrence of oil influenced by, STR II, 679
 Hydrostatic criteria for oil occurrence, XI, 699
 Hydrostatic head, PROB, 281, 934
 an important factor in production at Yates field, Texas, STR II, 679
 correlation of pressure of wells with, XII, 361
 Hydrostatic pressure, PROB, 833; RMS, 62, 110, 112
 effect of, on physical properties in ocean, RMS, 60
 of suma on sal, CD, 185
 Hydrostatic uplift, RMS, 550
 Hydrosulphurous waters in oil regions, XVII, 53
 Hydrothermal alteration, RMS, 484
 Hydrothermal origin of clays, RMS, 485
 Hydrotrillite, RMS, 200
 Hydrous aluminum silicates, RMS, 484
 Hydroxide, RMS, 474, 485, 486
 of alkalis, RMS, 485
 Hydroxide ions, RMS, 462, 463, 477, 535
 in sea water, RMS, 144
 Hygiene formation in Rocky Mountain area, XXI, 909
 Hygiene group, marine, of Colorado and Wyoming, XXI, 1267
 of northeastern Colorado, XVII, 429
 Hygiene sandstone, Greasewood field, STRAT, 25, 28
 Hyolithids, XXV, 127
 Hyperamminidae, MSC, 185
 Hyperammininae, MSC, 185
 Hyperthene, RMS, 38, 610; XXII, 560
 Hypothesis of land-bridges and subsidence, CD, 140
- I
- Iancoulesco, Aurel P., petroleum industry of Roumania, review, XII, 1039
 Iatan-East Howard field, XXVII, 759
 Iatan limestone, V, 65
 Iberia Parish, Louisiana, PROB, 636
 Jefferson Island salt dome, GC, 983
 Iberia Parish salt dome, typical, GC, 996; XIX, 1615
 Ibox field, PROB, 600, 605
 Ibox pool, XXIII, 848
 Ice, RMS, 221
 in Carboniferous, CD, 11
 in Miocene, CD, 41
 in Permian, CD, 17
 in Pliocene, CD, 45
 influence of, on composition of sea water, RMS, 52
 rafting, RMS, 402
 Ice advances in Chilean Andes, RMS, 411
 Ice age, conditions during, XXIX, 1314
 Permian, in Australia, unity of, XXV, 407
 Ice caps, Pleistocene of North Sea, RMS, 343
 Ice-dammed lake in Baltic, RMS, 229, 307, 312
 Ice freezing and thawing, effect of, on currents, RMS, 118
 Ice sheet, RMS, 242
 Ice sheets, comparison with continental crust sheets, CD, 160
 Ice shove, RMS, 214
 Icebergs, RMS, 402
 Iceland, RMS, 208
 Ickes, XVIII, 1460
 Ickes, Eugene Law, CAL, 167; V, 464; IX, 137; XI, 1299, 1302; XVI, 135; XXVIII, 435; XXI, 584, 611; XXIII, 664; XXVIII, 1377
 bibliography of, XXV, 1963
 determination of formation thicknesses by method of graphical integration, IX, 451
 estimation of probable value of wild-cat land, XX, 1055
 formulas for calculating stratigraphic thickness exposed between two dips, XVIII, 139
 memorial of, XXV, 1962
 origin of faults in Creek and Osage counties, Oklahoma, discussion, X, 727
 Ickes, Harold L., XXVII, 932, 938; XXVIII, 1502
 Ichtyol, review of publication on industry in England, VI, 384
 Ichtyol compound, PROB, 184
 Idaho, PROB, 165, 167, 169; GAS, 222, 231, 232, 236, 238; CAL, 1
 Green River formation, VIII, 663
 Jurassic in, XXI, 721, 722, 729
 Middle Jurassic in, XXIX, 1019
 Mississippian limestone in, PROB, 158
 Montpelier Quadrangle in, XXI, 721
 oil in, VI, 472
 oil reserves, VI, 44
 Permian sections from Malta, to Rattlesnake Hills, Wyoming, XXIV, 630
 Permian sections from Park City, Utah, to Phosphoria Gulch, XXIV, 627
 petroleum possibilities in southeastern, review, VII, 197
 thrust faults, X, 106
 Washington, eastern Oregon, and northern Utah, natural gas in, GAS, 221
 Idaho and Oregon, nitrogen in, GAS, 1059
 Idaho Bureau of Mines and Geology, GAS, 221
 Idaho formation, GAS, 233, 234
 Iddings, Arthur, and Olsson, A. A., XXIV, 1588; XXIX, 536
 geology of northwest Peru, XII, 1
 Iddings, J. P., VII, 542
 Ideal lease, Healdton field, Oklahoma, XXVIII, 239
 Iden, Christian, XVIII, 1632, 1640
 Identification of formations in drilling, VIII, 645
 of rock types on radioactivity logs, XXV, 1775
 Idiogeosyncline of Umbgrove, XXI, 555
 Idolo Island, MEX, 36, Fig. 12 (in pocket)
 Igneous and metamorphic rocks, minor occurrences of oil, gas, and bitumen with, XVI, 837
 nature and origin of occurrences of oil, gas, and bitumen in, XVI, 719
 symposium on occurrence of petroleum in, XVI, 717
 Igneous and sedimentary rocks, relative radioactivities of, XXIX, 1482
 Igneous activity at Jackson, XVII, 49
 Triassic, in Mendoza, XXVIII, 1476
 Igneous dikes in Mendoza province, Argentina, XII, 700
 Igneous dykes and plugs, influences on oil accumulation, MEX, 154

- Igneous intrusions, PROB, 75, 80, 395; MEX, 27, 28, 215, 217, Fig. 32 (in pocket)
domes formed by, STR II, 681
effect on porosity of limestone in wells, MEX, 156, 215
in Homer and Bellevue domes, Louisiana, doming due to, STR II, 707
in oil-field structure, rôle of, STR II, 707
in San Carlos Mountains, XXVIII, 318
in Tow Creek anticline, Colorado, doming due to, STR II, 707
oil in cavities of, VII, 288
Tertiary, in Rocky Mountains, XXVII, 433
Igneous intrusives in Silver City area, Kansas, XVII, 1268
Igneous rock at Richland field, GAS, 781
from Furbero well, MEX, 148
Igneous rock units, chemical composition, XXIII, 1084
mineral and textural characters, XXIII, 1084
mode of occurrence, XXIII, 1084
Igneous rocks, RMS, 211; XXIII, 1074
Belgian Congo, V, 670
contact of Honey Creek and Reagan formations with, in Arbuckle and Wichita mountains, Oklahoma, XXIII, 1094
Cuba, II, 144
diamond drilling in, V, 388
Franciscan, XXVII, 145
from deep wells in West Texas, XXIX, 1028
in Coastal Plain of Texas, oil fields in, XVI, 741
in eastern Mexico, MEX, 35, 143-151, Fig. 12 (in pocket)
in Mexico, oil associated with, XVI, 799
in St. George district, Utah, XXIII, 126
in Urals, XXI, 1452
intruded into Cretaceous limestones in Sierra San Carlos, MEX, 145
Kansas, IV, 183
Montana, V, 269; VI, 147
New Mexico, IV, 77
of Cuba, oil in, XVI, 809
of Franciscan formation, XXVII, 1343
Oklahoma, V, 121
outcrop of basic, in Kansas, IV, 183
some, from New Plymouth area, XXIX, 1048
Texas, III, 84, 125; IV, 121; V, 92, 512, 657
Igneous rocks and the depths of the earth, review, XVIII, 151
Igneous section in the trans-Pecos, sequence in stratigraphy of, XXII, 1435
Igneous sill on Hartsel anticline, Colorado, XXI, 989
Ignition loss, RMS, 432, 433
of tidal muds, RMS, 200
Ignition test for determining organic content of sediments, XI, 1228
Ihlseng, M. C., STR II, 77
Iki, T., XI, 197
Iles, Moffat, and Thornburg domes, Colorado, comparison, STR II, 105
Iles, Moffat, and Thornburg region, Colorado, section, STR II, 107
Iles dome, Colorado, STR II, 93-102; PROB, 343, 688, 946
(Iles)
an anticline, STR II, 676
Iles field, Colorado, GAS, 369; XXV, 1158; XXVIII, 791
(well 233), SBP, 194-243), 407
s formation, XXII, 1028
(lower Mesaverde), XXII, 1028
Illawarra coal field, XVII, 1099
Illing, XV, 612; XXII, 777
Illing, Vincent Charles, PROB, 371; STRAT, 310, 311; VIII, 158; IX, 1001; XIII, 594; XX, 280, 281; XXI, 234, 242, 243; XXIV, 1564
geology of Naparima region of Trinidad (British West Indies), review, XII, 1118
rôle of stratigraphy in oil discovery, XXIX, 872
Illinoian glacial stage, CAL, 268
Illinois, PROB, 431, 541, 561, 567, RMS, 45, 219, 466, 488, 489
areal geology of, XXI, 774
beds of Chester series of Mississippian, most widely productive beds in, XXIV, 853
Brown pool, STR II, 130
Calmar field, STRAT, 869
Centralia district, STR II, 120, 124, 129
Chester (Upper Mississippian) series in, XXIII, 812
Cisne field, XXII, 73
Clay City field, XXII, 73
correlation of radioactivity logs in Cordes pool, Washington County, XXV, 1788
correlation of subsurface Devonian of Sandoval pool, Marion County, with Devonian outcrop of southwestern Illinois, XXVIII, 1528
correlation chart of surface to top of Ste. Genevieve in, XXII, 77
counties notable for oil and gas production, XXIV, 853
Crawford and Lawrence County fields, STRAT, 869
crude oil production in, XXIV, 961
deep testing in, XXVI, 1092
Devonian in, XXIII, 812, 1357; XXV, 672, 1116; XXVII, 818; XXVIII, 751
Devonian and Ordovician in, XXVI, 1088
Devonian structure map, XXV, 1118
discovery gas field of, XXII, 1533
distribution of producing areas, map, XXIII, 1354
dry tests in 1944, XXIX, 689
example of accumulation due to lenticularity of producing formation, STR II, 700
exploration for oil in, XXI, 782
exploratory drilling in 1941, XXVI, 1087
exploratory methods used in 1942, XXVII, 816
Flat Rock, Birds, and Parker fields, STRAT, 869
Fuller's earth deposit at Olmstead, review, VI, 155
geologic features revealed by new drilling in 1941, XXVI, 1089
geological data obtained from new drilling in, XXII, 649
geological distribution of discoveries in 1941, XXVI, 1089
geological source of oil in, XXVII, 817
geology of Waterloo area, V, 94
(Illinois)
Glen Ridge anticline and Junction City dome, STR II, 125
Harrisburg No. 5 coal of, XXIII, 1390
history of oil production and development in, XXIV, 959
important deep tests in 1940, XXV, 1121
important deep tests in 1941, XXVI, 1090
Indiana, and Kentucky, production and value of natural gas in, GAS, 816
Indiana, and Kentucky, production of natural gas and natural-gas gasoline in, GAS, 819
Illinois, Indiana, and western Kentucky, correlation of minable coals of, XXIII, 1374
Mississippian in, XXIV, 770
Illinois, Iowa (Lower Mississippian) series in, XXIII, 812
Junction City pool, STR II, 130
Illinois, Kentucky, and Missouri, Cretaceous and Tertiary sediments of, XIV, 845
Illinois, Langewisch-Kuester pool, STR II, 130
Louden pool, XXIV, 961
lower Mississippian in, XXIV, 225
map of new Devonian oil pools in, XXIV, 964
map of oil and gas fields of, XXIV, 962
map of structural axes in, XXI, 778
map showing important deep tests completed in 1940, XXV, 1120
map showing old and new oil and gas fields in, XXIII, 808
Martinsville field, STR II, 130
McClosky limestone of Ste. Genevieve formation productive in Basin fields in, XXIII, 1495
Meramec limestones productive of oil in, XXIV, 853
middle Devonian in, XXV, 679
Middle Devonian subsurface formations in, XXVIII, 1519
minable coals in, XXIII, 1379
Mississippian in, XXIII, 807, 815, 1355; XXVI, 1087; XXVII, 818; XXVIII, 751; XXIX, 687
Mississippian in Basin fields, XXIII, 1505
Mississippian in Martinsville field, STR II, 130
Mississippian and Devonian in, XXIII, 812
Mississippian folding in, XXIII, 1359
natural gas in Eastern Interior coal basin, GAS, 813
new pools discovered in 1944, XXIX, 687
new Trenton field in, IV, 43
Noble field, XXII, 73
North Casey field, STRAT, 869
northern, Cambrian inlier in, XXIII, 1561
oil and gas producing strata in, XXIII, 812
oil and gas prospects in parts of Coles, Edgar, Clark, Champaign, and Douglas counties, V, 95
oil developments of 1922 in, VII, 78
oil-field waters, X, 1290
oil produced in, largely from lower part of Chester series below top of Cypress sandstone and from upper

(Illinois)

part of Ste. Genevieve formation, XXIV, 219
 oil producing counties in, XXII, 73
 oil production in 1942, estimated by geological systems, XXVII, 819
 Onondagan in, XXV, 679
 Ordovician in, XXIII, 812; XXV, 1116; XXVII, 818; XXVIII, 751
 Oriskanian in, XXV, 674
 Pennsylvanian in, XXIII, 812, 1355, 1496; XXIV, 209; XXV, 1116; XXVII, 818; XXVIII, 751; XXIX, 687
 Pennsylvanian in Centralia-Sandoval area, STR II, 122, 128
 Pennsylvanian in Martinsville field, STR II, 130, 132
 Pennsylvanian production in 1942, XXVII, 818
 Pleistocene in, XXIII, 812
 producing horizon in Wabash County, XI, 991
 production of oil and gas in, XXIV, 853
 production data, July, 1939, Basin fields, XXIII, 1496
 productive counties in, XXIX, 688
 recent development in, with discussion of producing formations below McClosky sand, XXIII, 807
 recent petroleum development in, XXII, 649
 relation between carbon ratios and oil and gas, PROB, 74
 results of deep testing in, during 1940, XXV, 1119
 review of, for 1920, V, 107
 reviews, V, 107; VI, 387
 Rosiclare-Fredonia contact in and adjacent to Hardin and Pope counties, XXIX, 1654
 Ste. Genevieve formation in, XXIII, 1502
 Salem oil field, Marion County, XXIII, 1352
 Salem pool, XXIV, 961
 Sandoval pool, STR II, 127, 129
 Silurian in, XXIII, 812
 soils, RMS, 486
 some structural and stratigraphic features affecting relative amounts of oil production in, V, 311
 source beds in, PROB, 59
 south-central, petrology of Bethel sandstone of, XXVIII, 63
 southeastern, geology of Basin fields in, XXIII, 1493
 southeastern, map showing pre-Pennsylvanian areal geology in, XXIII, 1494
 southeastern, recent oil discoveries in, XXII, 71
 southern, Silurian in, XXVI, 3
 southwestern, western Tennessee, and southeastern Missouri, sections of lower Devonian in, XXV, 677
 stratigraphic distribution of new pools and extensions discovered in 1942, XXVII, 818
 subsurface geology of Chester series in, XXIV, 209
 subsurface geology of Iowa (lower Mississippian) series in, XXIV, 225
 subsurface structure of, XXIV, 965
 sulphate-reducing bacteria from oil-field waters in, X, 1289
 well logs showing Middle Devonian

(Illinois)

sections in, XXVIII, 1525
 western, map showing distribution of outcropping Mississippian rocks in, XXIV, 768
 western, and southern Iowa, correlation of Pennsylvanian beds in, XXVI, 1586
 wildcats drilled in 1940, XXV, 1114
 Illinois and Indiana, correlation of Chester of, XXII, 268
 lateral variation in Chester sandstones producing oil and gas in lower Wabash River area, with special reference to New Harmony field, XXVI, 1594
 Illinois and Iowa, interbasin Pennsylvanian correlations, XXVI, 1585
 Illinois and Kentucky, analyses of natural gas from, GAS, 838
 Chester correlation in, XXII, 272
 Illinois and Michigan basins, columnar sections for, showing oil and gas production, XXI, 786
 Illinois and Missouri, Osgood-Laurel horizons in, XXVI, 6
 Illinois and Missouri sections of Devonian, correlations, XXV, 691
 Illinois basin, STR II, 116; XXI, 771; XXIII, 1495; XXVIII, 71
 central, isopach map of Chester series, XXIII, 1358
 central portion of; subsurface contour map on base of Pennsylvanian system, XXI, 783
 counties of, XXVII, 816
 cross section of Chester of, XXV, 871
 cross sections of, XXI, 773
 description of formations of Chester series in, XXIV, 209
 Devonian oil pools in western part of, XXIV, 966
 Devonian outcrops surrounding, XXVIII, 1519
 Devonian production in, XXIV, 965
 discovery of new oil in 1937, XXI, 784
 eastern part of cross section of, XXV, 877
 land masses which furnished sediments to, XXVIII, 112
 lithologic descriptions and thicknesses of stratigraphic units of Iowa series in, XXIV, 227-228
 lower Mississippian in, XXII, 655
 map of, showing oil and gas fields and structural trends, XXII, 652
 map of southeastern portion of, XXII, 72
 Pennsylvanian in, XXII, 655
 Pennsylvanian-Mississippian unconformity in, XXV, 874
 position of Bethel in Mississippian-Pennsylvanian sequence of events in, XXVIII, 120
 regional structural geology of, XXIII, 1357
 section across, XXII, 654
 stratigraphy in, XXIII, 1496; XXVIII, 65
 subsurface contour map, XXIV, 963; XXV, 1118
 Tennessee lobe of, XXVII, 1041
 Tennessee lobe of, section, XXVII, 1056
 uplift of borders at end of Paleozoic era, XXI, 775
 wells in, XXI, 785
 wells used in cross section of, XXV, 882

(Illinois)

western part of cross section of, XXV, 872
 zones of regional structural influence, XXIII, 1360
 Illinois basin and Eastern Interior basin map, XXVII, 815
 Illinois Basin area, correlation of Middle Devonian outcrops of, XXVIII, 1520
 Illinois basin fields, graphic section and lithology of Chester and Ste. Genevieve in, XXIII, 1497
 pre-Mississippian in, XXIII, 1505
 structure in, XXIII, 1505
 Illinois basin region, pools of, in region of updip wedging-out of sands, XXVII, 892
 Illinois coal basin, significant uncertainties in Pennsylvanian correlation in, XXIII, 1507
 uncertainties in correlation and identification of some of McLeansboro limestones and the interpretation of the sedimentary history of, XXIII, 1524
 Illinois core data, XXV, 870
 Illinois developments in 1942, XXVII, 815
 Illinois fields, GAS, 533, 813-834, 837
 on La Salle anticline, XXII, 73
 Illinois formations correlated with Chester of Kentucky, XXII, 271, 275, 280-283
 Illinois Geological Survey, GAS, 814, 823, 824, 826, 827, 830; XXIII, 1353
 Illinois-Indiana coal basin, STR II, 117; PROB, 537
 Illinois-Iowa correlations of Pennsylvanian strata, XXVI, 1587
 Illinois maps and sections, list of, XXII, 435
 Illinois nomenclature of coal seams, XXIII, 1375
 Illinois oil and gas fields, map of, XXI, 778
 Illinois oil fields, V, 87, 94, 336, VI, 153
 influence of faulting in, review, V, 107
 sulphate-reducing bacteria in soils and waters of, XIV, 153
 Illinois oil pools, new producing formations in 1943, XXVIII, 753
 Illinois oil reserves, VI, 14
 Illinois operations, drilling time important in, XXIII, 1821
 Illinois region, three typical oil fields, STR II, 115
 Illinois River sections of Osage, XXIII, 335
 Illinois security law, IV, 169
 Illinois State Geological Survey, RMS, 466
 Quarter-Centennial, XIV, 806
 Illinois state security laws, IV, 169
 Illinois valley, Coal Measures section in, XXIII, 1381
 Illinois wildcat wells, distribution of, XXVI, 1088; XXVII, 816
 "Illite," RMS, 457, 467-490
 "Illite" minerals, influence of, on clays, RMS, 480, 481
 Illuminating oils, refractive indices of, XXI, 1469
 Illustration, scientific, XXII, 500
 Ilmen anticline, XXI, 1459
 Ilmenite, RMS, 37, 38, 212, 602, 609; XXVIII, 78
 quantity of, in a shale, RMS, 509
 Ilmenite and magnetite, XXII, 560

- Ilse salt dome, Germany, XIV, 1167
 Imagination, controlled, in applied geology, XXIX, 862
 relation to oil finding, XXIX, 861
 Imamura, A., XX, 860
 Imbrication, XXVI, 1717
 Imbt, Robert F., STRAT, 802
 experiments with lights, shadows, and contours, and the resulting shadowgraphic contour maps, XXV, 2161
 memorial of Morgan Evan Roberts, XXVI, 513
 Imbt, Robert F., and Applin, Paul L., subsurface geology of Sewell-Edleman area, Young County, Texas, XXVI, 204
 Imbt, W. C., review, XXIX, 1521
 Zenith pool, Stafford County, Kansas, STRAT, 139
 Imholz, H. W., STRAT, 545
 Noodle Creek pool, Jones County, Texas, STRAT, 698
 Imlay, Ralph W., XX, 417, 429; XXI, 1207; XXV, 1031, 1696; XXVI, 1495; XXVII, 262, 1230, 1233; XXVIII, 7, 11, 33, 276, 305, 327, 579, 592, 594, 599, 610, 612; XXIX, 842, 1263, 1265, 1276, 1277, 1280, 1281, 1297, 1434
 Cretaceous formations of Central America and Mexico, XXVIII, 1077
 evidence for upper Jurassic landmass in eastern Mexico, XXVII, 524
 Jurassic formations of Gulf region, XXVII, 1407
 Lower Cretaceous and Jurassic formations of southern Arkansas, review, XXV, 329
 occurrence of Middle Jurassic rocks in Western Interior of United States, XXIX, 1019
 subsurface Lower Cretaceous formations of South Texas, XXIX, 1416
 Imlay, Ralph W., and Williams, J. S., late Paleozoic age of Morehouse formation of northeastern Louisiana, XXVI, 1672
 Imlay, Ralph W., Cobban, W. A., and Reeside, John B., Jr., type section of Ellis formation, Jurassic, of Montana, XXIX, 451
 Impact, effect of, on rock fragments in streams, RMS, 38, 41, 43
 Imperial formation, CAL, 190, 237, 238, 246, 254, 302
 Imperial Oil Company, GAS, 40
 Imperial University, Sendai, Japan, RMS, 503
 Imperial Valley, California, CAL, 1, 22, 301, 309; FOP, 35; RMS, 643; XXV, 1467
 references on, FOP, 36; XXV, 1468
 Impermeability of rocks, effect on closure, MEX, 191, 196
 Impervious cover, PROB, 8, 10
 Importance of geological data in acidizing of wells, XXI, 616
 Imports, German, of petroleum, 1938, XXV, 368
 Italian, of petroleum, 1938, XXV, 369
 of petroleum into the United Kingdom, 1938, XXV, 367
 Imports and exports of crude oil and its products in 1935, relation of, XXI, 188
 Impregnating porous materials to facilitate pore studies, method of, XXI, (Impregnating)
 259
 Improved method of handling microfilm copy, XXV, 2068
 Improvements within established fields in Louisiana during 1940, XXV, 1014
 Inami, K., X, 1105, 1110, 1111
 Inclusions, PROB, 639, 640, 642
 in Bethel sandstone, XXVIII, 89
 in dolomite, RMS, 385
 in minerals, RMS, 601, 603, 604, 608
 Incoalcification equations, XXIV, 1872
 Increase in oil production in Illinois from March 1, 1938, to March 1, 1939, XXIII, 807
 Indaw field, Burma, XI, 567
 Independence field, New York, XXIX, 668
 Independence Islands, RMS, 188, 189, 192
 Independence Township, Pennsylvania (well 418), SBP, 349-379, 410
 Independent Oil and Gas Company, GAS, 386, 542, 572; XXIII, 1056
 Independent variable in statistical studies of sediment, RMS, 60, 560, 561, 573, 574, 580, 586
 Index of refraction, evaluation of petroleum in oil sands by its, XXI, 1464
 of an oil a good criterion of its commercial quality, XXI, 1464
 Index to probable oil resources, geology of New Mexico an, IV, 95
 Index charts, correlation of sands by means of, XXI, 1325
 Index determinations, routine, microscope eclipse plate for, XXII, 1278
 Index numbers in mineral frequencies, RMS, 611-613
 India, PROB, 18; RMS, 225
 natural gas and oil in, XVIII, 283
 Permian in, IX, 1269
 stratigraphy, IX, 1273
 Triassic of, CAL, 67
 India and adjacent countries, oil fields of, XVIII, 284
 Indian Bayou field, XXVIII, 275
 Indian Creek, MSC, 122
 Indian Creek anticline, Utah, XI, 377
 Indian Creek area, XXIX, 683
 Indian Creek gas field, GAS, 945
 Indian Ocean, RMS, 51, 54, 88, 142, 350, 412, 413
 deep-sea sediments of, RMS, 396
 references on, RMS, 407
 Indian Ocean rift, CD, 39
 Indian Peninsula and Ceylon, XXIII, 105
 Indian red shale, V, 492
 Indian Territory Illuminating Oil Company, GAS, 525; XIV, 1517; XVI, 991; XXI, 34, 997, 1008; XXIII, 1694, 1833; XXIV, 1023
 (well 290), SBP, 255-285, 408
 Indian Village field, Louisiana, XXIX, 795
 Indiana, PROB, 17, 521, 545, 562; GAS, 813-825, 828, 834, 836-838, 840, 843
 crude-oil production in 1942, XXVII, 819
 developments in 1944, XXIX, 691
 Francisco pool, STR II, 138
 gas production in, XXVII, 819
 geological map of, IX, 320
 geological time scale, IX, 321
 Hamilton in, XXV, 687
 Indiana, Illinois, and western Kentucky, correlation of minable coals (Indiana)
 of, XXIII, 1374
 Mississippian in, XXIV, 770
 Indiana, map showing distribution of outcropping Mississippian rocks in, XXIV, 843
 minable coals in, XXIII, 1379
 Mississippian in, XXVI, 1093
 natural gas in Eastern Interior Coal basin, GAS, 813
 New Albany shale of, review, VII, 85
 oil in Ordovician, VI, 374
 oil and gas in, V, 105
 oil and gas fields of southwestern, GAS, 828
 oil and gas production during 1940, XXV, 1122
 oil and gas prospecting and drilling during 1940, XXV, 1122
 oil possibilities, IX, 324
 oil reserves, VI, 44
 oil shales of, review, V, 108
 Petersburg or Alum Cave Coal V of, XXIII, 1390
 pipe-line proration in, XXV, 1123
 producing formations in Mississippian of, XXIV, 854
 production in 1941, XXVI, 1093
 production in 1943, XXVIII, 751, 758
 production in 1944, XXIX, 691
 production of oil in, IX, 317
 reviews, VI, 383; VII, 85
 source beds in, PROB, 59
 Indiana, southern, Coal Measures in, XXIII, 1385
 Onondaga and Hamilton in, XXV, 684
 and Kentucky, Devonian in, XXV, 686
 Indiana, southwestern, developments in 1927, XI, 991
 developments in 1940, XXV, 1120
 developments in 1941, XXVI, 1092
 developments in 1943, XXVIII, 757
 oil and gas developments in, XXIV, 968
 structural features of West Franklin formation of, XIII, 1301
 surface and subsurface structure of
 Tri-County field, XIV, 423
 Tri-County oil field of, XI, 601
 Sullivan and Greene counties, standard section for Indiana Coal Measures, XXIII, 1385
 Sullivan County pools, STRAT, 870
 Trenton field, STRAT, 870
 Tri-County field, STRAT, 870; STR I, 23
 Vigo and Clay counties, Ashley's original type section for Indiana coal fields, XXIII, 1387
 Indiana and Illinois, correlation of Chester of, XXII, 268
 lateral variation in Chester sandstones producing oil and gas in lower Wabash River area, with special reference to New Harmony field, XXVI, 1594
 Indiana and Kentucky, paleontology of Borden group in, XXIV, 807
 Indiana and Ohio, Lima-Indiana district, GAS, 843
 Indiana County field, GAS, 952
 Indiana developments in 1942, XXVII, 818
 Indiana fields, GAS, 844
 Indiana Geological Survey, GAS, 814, 823, 824, 828

- Indiana maps and sections, list of, XXII, 446
- Indiana nomenclature of coal seams, XXIII, 1375
- Indiana No. 5 coal in Francisco pool, Indiana, STR II, 139
- Indiana-Ohio, cross section, XXII, 1542-1543
- Indiana Southwest Gas Corporation, GAS, 813, 820, 823, 824
- Indianaite, RMS, 484
- Indians, mound-building, RMS, 159, 160, 171, 172
- Indications of oil, surface, XXIV, 860
- Indicator bed, MSC, 71
- Indicators, use of, in bacterial studies, RMS, 419
- Indices of refraction of some clay minerals, variations of, with different immersion liquids, RMS, 469
- Indidura formation, XXVIII, 322, 1099, 1102, 1156, 1160
- lower, Albian or Cenomanian fossils in, XXVIII, 1164
- middle, fauna of Eagle Ford ammonites in, XXVIII, 1164
- of Sierra Mojada area, Turonian fossils in, XXVIII, 1170
- Indigenous character of normal Gulf Coast crude, evidence for, PROB, 134
- Indigenous origin of oil, PROB, 676, 677
- in McMurray sands, theory of, XXII, 1140
- Indigoes, use of, in bacterial studies, RMS, 419
- Indio, CAL, 23; SD, 256
- Indio formation, GC, 597; XXIV, 1894
- along Rio Grande, GC, 598; XIX, 1367
- increase in thickness toward south in northern Mexico, GC, 599; XIX, 1368
- Indio-Midway unconformity, GC, 597; XIX, 1366
- Indo-Pacific, MSC, 102, 170
- Indo-Pacific province, MSC, 169
- Induced porosity, PROB, 380, 382, 385, 388, 391, 396
- in limestone in Southern fields, MEX, 207, 208
- of rocks, Northern fields, MEX, 165-168
- Induction method of geo-electric investigation, XIV, 1165
- Induration anomalies, XXIV, 1412
- Indus River, RMS, 225
- Industrial demand for petroleum, increases in, XXV, 1266
- Industrial Farm Products Research of Department of Agriculture, SBP, 7
- Industrial gas markets, GAS, 1133, 1135
- Industrial specialists, national defense positions open for, XXV, 1833
- Infantas fault, Colombia, Eocene sandstones on east side of, XXIX, 1112
- Infantas oil field, XXIX, 1099, 1107
- Infantas structure, Colombia, section, XXIX, 1111
- Infiltration of surface waters, PROB, 838
- Infiltration tunnel, XXIV, 751
- Influence of Antarctic bottom current, RMS, 404
- of connate water on permeability of sands in oil, XXII, 1248
- of ocean currents on size distribution of sediments, RMS, 387
- (Influence)
- of waves on sediments, RMS, 336
- of variations in rock density upon observed gravity values, XXIII, 202
- Information regarding the Army Specialist Corps, XXVI, 1300
- Infra-red light, RMS, 83
- Infrantic deposits, XXIV, 1168
- Infusoria and Polythalamia in Tertiary, MSC, 21
- Ingalls, Walter Renton, GAS, 1148, SD, 468
- Ingersoll Creek dome, XX, 1174
- Ingerson, Earl T., XXIV, 156
- Ingham, W. I., XIII, 63; XVI, 385, XIX, 1230
- Dora oil pool, Seminole County, Oklahoma, STRAT, 408, XXIII, 692
- Ingles, Mary, XXII, 1088
- Ingleside Terrace, GC, 212, 216, XVII, 914, 919
- caliche forming in, GC, 576, XVII, 514
- development of, GC, 222, XVII, 926
- flat, clay dunes on, GC, 228
- lagoon, map showing abandoned Lake Copano, GC, 215, XVII, 917
- Inglewood, SC, 114; XX, 1660
- Inglewood deeper zone, XXV, 1163
- Inglewood fault, PROB, 216, SC, 129; XX, 1675
- Inglewood field, California, GAS, 173-177; PROB, 216, 749, 968; SBP, 87-153, 404; XII, 638
- (wells 52, 53), SBP, 87-153, 404
- Inglewood-Newport uplift, CAL, 47
- Inglewood northwest extension, XXVI, 1149
- Inglis, XI, 739
- Inglis, Harry, XV, 1227
- Ingolf Expedition, RMS, 388
- Ingomar gas field, production at, XXVIII, 792
- Ingram Creek section, XXIX, 984, 990
- Cretaceous in, XXIX, 987
- Ingramian stage, XXIX, 987
- lower, XXIX, 986
- upper, XXIX, 985
- upper and lower, XXIX, 1005
- Iniskin Bay field, Alaska Peninsula region, structure in, POP, 10; XXV, 1442
- Initial dip, RMS, 4
- Initial dips peripheral to resurrected hills, review, XII, 1171
- Initiation of geosynclines and geobasins, XXIII, 207
- Injun sand, PROB, 460
- in Ohio, XI, 1028
- Inland basins, deposition of black muds in, XXIII, 1184
- Inland Gas Corporation, GAS, 942
- Inland seas, RMS, 37
- composition of water of, RMS, 143
- organic content of sediments in, RMS, 447
- Inman pool, XXV, 1116
- Inner crystal swelling, RMS, 461, 462
- Inoceramus beds, Europe, VI, 526
- Inoceramus formation, II, 81
- Inoceramus labialis zone, XVIII, 1410
- Inoceramus prism coquina, XXVIII, 527
- Inola limestone, STRAT, 443; XXIV, 1997
- Inorganic analyses of ground waters and soils, XXIV, 1406
- Inorganic constituents of sediments, (Inorganic)
- effect of, XXVIII, 946
- Inscho pool, Oklahoma, STR I, 211, 217; PROB, 763, XI, 938
- Insect wing in mid-Atlantic sediments, RMS, 379
- Insects, CAL, 287
- Insley, H., RMS, 485
- Insolation, solar, RMS, 58
- Insoluble residue, character of, XXVI, 1719, in limestone, MEX, 42; XX, 1411
- Insoluble-residue analysis from Madison group in Kevin-Sunburst field, XXVI, 329
- Insoluble-residue characteristics from sections of Madison group, XXVI, 330
- Insoluble-residue material and thin sections of Grand Tower limestone, photomicrographs of, XXVI, bet. 1704 and 1705
- Insoluble Residue Study Group, Midland, Texas, XXV, 318
- Insoluble residue types, classification of, as applied to Ellenburger formation, XXVI, 1400
- Insoluble residues, XXIV, 1656
- as basis for subsurface correlations of Iowa series, XXIV, 236
- as guide in stratigraphic studies, review, XIV, 640
- classification of, XX, 1091
- correlations of subsurface rocks by use of, XXIX, 424
- from beds above and below Ellenburger, XXIV, 71
- from Ellenburger of West Texas, correlations of, with those of Missouri, XXVI, 1404
- from Fredonia member, XXIV, 231
- from Mississippi line of central Kansas, studies of, XXII, 1588
- history of work on, XX, 1087
- method employed in analysis of limestone or dolomite by means of, XXI, 321
- of Brentwood limestone, XXIV, 428
- of clays in limestone, RMS, 488
- of Dundee and Detroit River (upper Monroe) formations of central Michigan, XXI, 317
- of Ellenburger formation, XXVI, 1399
- of Hale formation, XXIV, 426
- of Kessler limestone, XXIV, 430
- of Pitkin formation, character of, XXIV, 415
- of rock salt from Gulf Coast localities, XXI, 1269
- of samples of Stones River group, XXIV, 1648
- of Tully limestone, New York, isopleth map of, RMS, 611
- references on, XXI, 331
- study of, XXVI, 1701
- typical, from Madison limestones, XXVI, bet. 328 and 329
- use of, for correlation in Oklahoma, XX, 1086
- used in dividing Mississippi lime into zones, XXII, 1591
- zones and formations identified by, XX, 1096
- Insoluble residues and stratigraphy of Madison group of Mississippian of Montana, XXVI, 305
- Insolubles in Great Salt Lake, relation of magnesium to, XXII, 1347
- Institute of Petroleum, Annual Reviews

- (Institute)
 of Petroleum Technology, Vol. 4, review, XXIII, 1729
 Vol. 5, review, XXV, 327
 Vol. 6, review, XXVI, 286
 Institute of Petroleum, oil shale and cannel coal, review, XXIV, 388
 Instrumentation and techniques of existing methods of geophysical prospecting, XXV, 1261
 Integral method of geo-electric investigation, XIV, 1165
 Integration and cooperation of geological, geophysical, and paleontological sciences, need for, XXVIII, 907
 Intelligence officers and interpreters of aerial photographs in Air Corps, change in applications for, XXVI, 1695
 Intensity of evaporation, RMS, 88
 of radiation with X-ray figures, RMS, 617, 626
 of reducing power of sediments, RMS, 418, 419
 of transport in streams, RMS, 18
 of turbulence in streams, RMS, 28
 Inter-basin movements in Wind River Canyon area, XXIII, 1479
 Interbasin Pennsylvanian correlations, Illinois and Iowa, XXVI, 1585
 Interbedded anhydrite and salt, SD, 755
 Intercontinental drift, CD, 36, 67
 Interesting wildcat wells drilled in north Louisiana, 1942, XXVIII, 554
 Interests in a proved and producing oil and gas property as security for loans, XXVI, 1286
 Interfacial tension between water and silica and between oil and silica, differences in, XXIV, 2165
 vertical cross section of oil-sand core in which water has been treated with chemical to reduce, XXIV, 2177
 Interference of wells, PROB, 384
 Interference cone, RMS, 617
 Interference figures, RMS, 622
 obtained by X-ray of minerals, RMS, 617, 618
 of carbonates, RMS, 624
 of metahalloysite, RMS, 625
 of minerals, spacing and intensity of, RMS, 620
 Interference lines, RMS, 618, 622, 626
 Interfingering between two Wasatch members by Tipton shale tongue (lower Green River formation), XXII, 1024
 of dolomitic limestone with gypsum, XXVI, 87
 of Permian formations, XXI, 1559
 of streams on delta, RMS, 173
 Inter-glacial stages, RMS, 155, 390-393, 405, 410
 dust falls in, RMS, 501
 in North Sea, RMS, 331, 343
 Interior of earth, CD, 10, 14, 16, 30, 163
 conditions in, XXIII, 1321
 Interior Basin, Eastern, developments in 1941, XXVI, 1086
 Interior constitution of earth, CD, 14
 Interior Highlands of Arkansas, natural gas in, GAS, 533
 Interior salt domes of Louisiana, SD, 269; X, 217
 of Texas, SD, 209
 of Texas and Louisiana, geology, X, 6
 three new, in northeast Louisiana, XXIV, 483
 Intermediate current in Indian Ocean, RMS, 403
 Intermediate liner, XXV, 1894
 Intermediate zone in Gulf Coast, XXIV, 1084
 oil and gas from, in Texas and Louisiana, XXIII, 877
 Intermont basins and troughs of western Venezuela and of Colombia, XXIX, 526
 Intermontane basin, diagram, XXV, 140
 Internal boundaries of ocean, RMS, 121, 124
 Internal constitution of earth, XXV, 172
 Internal frictional force, RMS, 119
 International and Great Northern Survey, Texas (well 373), SBP, 292-335, 409
 International Boundary, Border-Red Coulee field, STRAT, 270
 oil seepages in Belt series of Rocky Mountains near, XVI, 786
 International formula for computing theoretical values of gravity at sea-level, XXI, 337
 International Geological Congress, MSC, 88, 90, 92; XI, 208; XIX, 1831; XXIV, 280
 announcements of fourteenth, X, 201
 fifteenth session, review, XV, 479
 sixteenth, United States of America, 1932, XIV, 1365; XVII, 1139
 sixteenth, United States of America, 1932, review, XX, 1375
 seventeenth, Moscow, July-August, 1937, XX, 1521; XXII, 119, 362, 1365
 eighteenth, London, July-August, 1940, XXII, 1299
 meeting of petroleum section of, VII, 187
 International Petroleum Company, GAS, 1002
 International Petroleum Exposition, VIII, 102
 International relations, oil in, XXV, 353
 International Union for Geodesy and Geophysics at Edinburgh, RMS, 28
 Washington, D. C., September, 1939, XXII, 1615
Internationaler Geologen und Mineralogen Kalender, XXI, 273
 review, XVII, 198
 Interpretation, new, of some laccolithic mountains and its possible bearing on structural traps for oil and gas, XXVI, 197
 of ancient sediments by analogy with recent, RMS, 359
 of cable-tool drilling logs, XXVII, 997
 of formation content by use of electrical diagrams, XXIII, 1306
 of geophysics, XXIII, 1272
 of local structural development in Mid-Continent areas associated with deposits of petroleum, PROB, 581
 of meaning of results of oil exploration, the chief function of the future petroleum geologist, XXIV, 1396
 of mechanical analyses, RMS, 558-591
 of mineral variations in sediments, RMS, 611-613
 of petrologic features of sediments, RMS, 592-614
 (Interpretation
 of sediments of Indian Ocean, RMS, 401-405
 of size distributions in terms of environment, RMS, 582, 590
 Interpretation and extent of Hogshooter gas field, III, 212
 Interpreters of aerial photographs and intelligence officers in the Air Corps, change in applications for, XXVI, 1695
 Interrelations of folds of Osage County, Oklahoma, IV, 151
 Interrelationship of geology and geophysics, XXI, 197
 Intersecting thrust and tear faults, XXV, 2185
 Interstate Natural Gas Company, GAS, 771
 Interstitial fluids, influence on seismic velocity, XXV, 1350
 Interstitial waters, RMS, 260, 444
 Invertebrates in sea, chemical position of, RMS, 442
 Interval of sampling, SBP, 13, 403, 412
 Interval interpretations, Refugio field, XXII, 1203
 Intra-basin movements in Wind River Canyon area, XXIII, 1481
 Intrabathyal sediments, XXIV, 1168
 Intracontinental deformation, CD, 67, 69
 Intra-formational folding, STR II, 705
 Intra-formational salt domes, STR II, 705
 Intra-Mississippian deformation of Eastern Interior basin, XXIV, 850
 Intramontane Permian salt basin, Germany, XVI, 1148
 Introduction to Cretaceous of California, XXVII, 249
 to geology, XXII, 1288
 to physical geology, XXV, 2212
 to symposium on geophysics, XV, 1309
 Introductory discussion of reservoir performance of limestone formations, XXIX, 461
 Intruders, XXVIII, 966
 Intrusions, GAS, 95, 99, 234
 at Homer field, Louisiana, STR II, 221
 effect on oil accumulation, XVI, 805
 in Tertiary rocks, MEX, 149
 in Upper Jurassic and Cretaceous rocks, MEX, 149
 in Wichita uplift, XIV, 39
 of basic igneous rock in fluorspar district of Illinois and Kentucky, XXI, 781
 of olivine basalt in Alamo-El Barco syndine at Tampalache, MEX, 147, 179
 of quartz diorites in northwestern Curaçao, XXIV, 1570
 Intrusive dykes, plugs, sills, MEX, 143, 148-151, 206, Figs. 12 and 22 (in pocket)
 Intrusive masses in Henry Mountains, XXVI, 197
 Intrusive nature of salt stocks, Avery and Weeks Islands, SD, 392
 Intrusive origin of Gulf Coast salt domes, SD, 358; XX, 170
 Intrusive rocks, granitic, in Tejon Quadrangle, XXI, 213
 Intrusive water in producing oil and gas wells, indication of, by chemical analysis, XXIV, 1319

- Intrusives in Davis Mountains, XXII, 1438
 of Paraná Basin, XX, 1223
 Inverness Ridge, MSC, 119, 123
 Invertebrate fauna from clay beds near Burkeville, Texas, stratigraphic value of, XXVIII, 997
 Invertebrate faunas, post-Eocene marine, MSC, 173
 Invertebrate fossils from Orinda Formation, MSC, 157, 167
 Invertebrate paleontology of southern plains of Alberta, ALTA, 155; XV, 1283
 Invertebrate trails prominent in Western Australia sequence from Wooramel to Kennedy sandstone, XXV, 384
 Invertebrates, MSC, 171, 173
 Miocene and Pliocene, MSC, 67
 Relizian and Luisian, MSC, 172
 Investigation of law of flow under low gradients, XX, 705
 of materials and conditions in relation to engineering projects, XXVI, 1801
 of source beds of petroleum, references on, SBP, 8
 of subsurface subdivisions of north-central Texas, objectives of, XXIX, 414
 statistical, of effects of structure upon oil and gas production in Osage, III, 407
 Invincible Oil Co., SD, 611
 Inyan Kara group, Osage field, STRAT, 851
 Inyo County, California, outcrop section V, SBP, 167-194, 411
 Inyo Range, CAL, 24, 26, 27, 42, 60-62, 65-67, 69, 310
 Iodides, RMS, 61
 Iodine, PROB, 241; RMS, 61, 149, 435
 in sea water, RMS, 143
 Iodine number, RMS, 424; SBP, 42
 Iola formation, XXIV, 726
 Iola limestone useful in seeking sand bodies in Cherokee shale, XXII, 831
 Ione formation, CAL, 124, 127, 128, 131-133, 141, 142, 144, 277, 294, 310
 Ione sediments of California, RMS, 484
 Ionic concentration, effect of, on sea water, RMS, 70
 equivalent, in sea water, RMS, 65
 in sea water, RMS, 64, 65, 144
 Ionization, calculation of, XXVIII, 936
 ratio of reaction velocity to, XXVIII, 936
 Ionization chamber, advantages of, over a Geiger counter in well logging, XXV, 1780
 Ionizing energy, XXIX, 11
 Ions, RMS, 74, 454, 534
 activities of, RMS, 455
 conditions for replaceability of, RMS, 461
 Iowa, PROB, 275, 541
 Cambrian in, XXV, 1634
 concentration of Ordovician waters in, PROB, 277
 cross section of upper Des Moines and lower Missouri series from Jackson County, Missouri, to Appanoose County, XXV, 26
 deep wells of, review, XIV, 523
 Des Moines series in Appanoose County, XXV, 69
 section, XXV, 62
 (Iowa)
 developments in 1939, XXIV, 1009
 developments in 1942, XXVII, 811
 developments in 1944, XXIX, 706
 Devonian in, XXIV, 1496; XXV, 1645
 Kansas City group in Missouri series in, XXV, 70
 log of wildcat well, Union County, XXIV, 1495
 (Lower Mississippian) series in Illinois, XXIII, 812
 subsurface geology of, XXIV, 225
 Iowa, Mississippian in, XXIV, 1496; XXV, 1656
 Missouri series in Appanoose County, section, XXV, 62
 Missouri series in central and northern Appanoose County, section, XXV, 66
 northeast, Ordovician in, XXV, 1639
 northeast, uppermost Cambrian in, XXV, 1632
 oil reserves, VI, 44
 Ordovician in, XXIV, 1497
 Pennsylvanian in, XXIV, 1496; XXV, 1113
 Permian in, XXV, 1687
 Pleistocene in, XXIV, 1496
 Silurian in, XXIV, 1497; XXV, 1645
 southern, and northern Missouri, map, XXV, 24
 southern, and western Illinois, correlation of Pennsylvanian beds in, XXVI, 1586
 Traverse of upper Des Moines and lower Missouri series from Jackson County, Missouri, to Appanoose County, XXV, 23
 western, eastern Wyoming, and Williston basin, correlation of formations in, XXVI, 1583
 Iowa and Cameron Meadows, two new coastal Louisiana fields, XVI, 255
 Iowa and Illinois, interbasin Pennsylvanian correlations, XXVI, 1585
 Iowa and Missouri, developments in 1943, XXVIII, 772
 Mississippian in, XXI, 1158
 Pennsylvanian in, XXV, 1675
 stratigraphy of northern extension of Burlington limestone in, XXI, 1158
 Iowa dome, discovery by torsion balance method, XIX, 20
 Iowa field, Louisiana, GAS, 732
 Louisiana (well 406), SBP, 335-349, 410
 Iowa Geological Survey, XXV, 25
 Iowa series, XXIV, 777
 geologic cross section of, from Randolph County, Illinois, to Sullivan County, Indiana, XXIV, 226
 in Illinois, discussion of, XXIV, 236
 in Illinois, references on, XXIV, 236
 in Illinois, isopach map of, XXIV, 234
 lithologic descriptions and thicknesses of stratigraphic units of, in Illinois basin, XXIV, 227-228
 thickness of 2000 feet in Gallatin County, Illinois, XXIV, 233
 Iowa wildcats, 1941, XXVI, 1082
 Iowan, CAL, 268
 Iowan-Chesterian boundary, XXIX, 1149
 Ipswich, Massachusetts, RMS, 239
 Iran, Eocene in, XXIII, 960
 Oligocene in, XXIII, 960
 Iran developments during 1938, XXIII, 960
 Iran exports of petroleum, 1938, XXV, 366
 Iran fields, production at, XXVIII, 919
 Iraneous, XX, 900
 Iranian (Persian) salt-dome area, comparison with Emba salt-dome region, U.S.S.R., XXIII, 514
 Iraq, exports of crude petroleum, 1938, XXV, 365
gisement pétroliers de, review, XVIII, 381
 Jurassic in, XXIII, 962
 Miocene in, XXIII, 962
 oil possibilities in, XV, 643
 production in, XXIII, 962
 Upper Cretaceous in, XXIII, 962
 water supplies in, XXIV, 751
 Iraq fields, production at, XXVIII, 919
 Iraq Geological Department, XXIV, 751, 753
 Iraq Petroleum Company, XXIV, 751
 Iratf shales, XXIX, 556
 Iratf formation (Permian), oil shales of, XXI, 120
 Iratf oil, genesis of, XIX, 1791
 Irby, and Mangles, XX, 886
 Ireland, Hubert Andrew, XVIII, 1138; XIX, 513, 515, XXIV, 1659
 petroliferous iron ore of Pennsylvanian age in eastern Ohio, XXVIII, 1051
 use of insoluble residues for correlation in Oklahoma, XX, 1086
 Ireland, RMS, 225, 227
 Ireland and Newfoundland, geological relations between, CD, 131
 separated during Pleistocene time, CD, 129
 Irina beds, XXIV, 261
 Irina limestone, XXIV, 253
 Irisarri, A. de M., XXVI, 808; XXIX, 1071
 Irish sand, V, 406
 Irma-Fabyan district, Alberta, VII, 154
 Irma fault, part of an extensive fault system, STR I, 10
 Irma field, Arkansas, STR I, 1; PROB, 345
 Ribstone Creek formation in, GAS 25
 Irma graben, XIV, 838
 Iron, RMS, 394, 429, 456
 anti-cathode, RMS, 621
 beidellite, RMS, 471
 citrate, RMS, 511
 content of subsurface layers of sediments, RMS, 393
 in Atlantic Ocean, RMS, 384
 in clay minerals, RMS, 471
 in glauconite, RMS, 504
 in sea water, RMS, 148
 in sedimentary rocks, XII, 904
 in tidal deposits, RMS, 200
 organic, relation of, to glauconitization, RMS, 511
 quantity of, in muds, RMS, 510
 reduced, RMS, 289, 419
 replacing aluminum, RMS, 472
 Iron and aluminum precipitates, effect on acidizing, XXI, 626
 Iron-bearing carbonate, XXVIII, 74
 Iron Creek field, Dakota water in, XXIV, 1265
 Iron Mountain uplift, XXV, 90
 Iron ore, petroliferous, of Pennsylvanian age in eastern Ohio, XXVIII, 1051
 Iron oxide, RMS, 382, 498, 593

- (Iron)
 in shale, RMS, 509
 Iron oxide coatings of eolian detritus, RMS, 498-502
 Iron oxide zones, XXVI, 45
 Iron oxides, XXVIII, 78
 in zeolite-opal rock, XXV, 293
 Iron rays, in X-ray studies, RMS, 621
 Iron sulphide, RMS, 4, 151
 effect of, on oxidation factor, SBP, 57
 in Atlantic sediments, RMS, 385
 in relation to glauconite, RMS, 503
 in tidal muds, RMS, 200
 magnetic, of Pliocene of Ventura Basin, California, XXI, 627
 Irondoquoit dolomite, GAS, 63, 79
 Ironstone in Eocene, MEX, 98
 in Jurassic, MEX, 7, 10
 in New Providence formation, XXIV, 796
 Ironstone concretions, XXVI, 355
 in Temporal beds, MEX, 110
 Irrawadi River, RMS, 225
 Irvin pool, Jones County, Texas, XXIII, 855
 Irvine, Robert, X, 1276
 Irvine, Robert, and Murray, John, XIV, 141; XX, 173; XXVI, 849, 851; PROB, 911
 Irvine, Estill County, Kentucky, Corniferous at, XXVIII, 531
 bibliography on, XXVIII, 539
 section near, XXVIII, 537
 Irvine area, Frontier water in, XXIV, 1250
 Irvine-Big Sinking oil field, PROB, 518
 Irvine fault zone, PROB, 518
 Irvine field, Kentucky, VI, 36, 387
 Silurian in, STRAT, 187
 Irvine oil field, Estill County, Kentucky, unexposed Silurian section and producing zone of, XXII, 1447
 Irvine-Paint Creek fault in eastern coal field, Kentucky, GAS, 926; STR I, 75, 78
 Irvine-Paint Creek fault and uplift, XI, 478, 482
 Irvine-Paint Creek uplift, XXV, 822
 in eastern coal field, Kentucky, STR I, 87
 Irvine-Paint Creek zone in Kentucky, GAS, 924
 Irvine pool, Estill and Powell counties, Kentucky, XXVIII, 539
 chart showing correlation of drill cores, XXII, 1450
 Irvine sand, PROB, 509; IV, 307
 Irving, E. M., XXV, 194
 Irving, J. D., VII, 619; XXV, 1750
 Irwin, John S., GAS, 305, 321; PROB, 343, 344, 409, 722; STRAT, 337, 339; VIII, 68; IX, 1070; XI, 45, 856, 864; XII, 443; XIII, 1254; XV, 1217; XVI, 770; XX, 63; XXV, 2188, XXVII, 455
 faulting in Rocky Mountain region X, 105
 oil and gas fields of Lost Soldier district, Wyoming, STR II, 636
 oil and gas possibilities of eastern Alberta, VII, 147
 preservation of oil during erosion of reservoir rocks, discussion, XVII, 1271
 stratigraphic correlation and nomenclature in plains of southern Alberta, ALTA, 1; XV, 1129
- Irwin, W. H., XXVI, 1826
 Irwin River and Northwest Basin, correlation of Permo-Carboniferous of, XX, 1052
 Irwin River district, Western Australia, XXV, 376
 Irwin River-North-West correlation, XXV, 389
 Isaacs, Elizabeth, XIV, 1537
 Isabella County pool, Michigan, GAS, 805
 Iselin, C. O'D., RMS, 235, 236, 652, 653, 662
 Iselin bottom sampler, RMS, 652
 Isenberger, N. P., and Lounsbury, D. E., memorial of Donald Frost Newell, XXIX, 1368
 Isham, Robert M., VI, 440
 Ishimbaevo field, XXIII, 497
 in Bashkir Steppes in Russia, XXI, 1078
 Kungurian limestone productive in, XXIII, 957
 Ishimbaevo oil field, Bashkirje Province, U.S.S.R., geological section through, XXIII, 498
 fusulines of, XXIV, 253
Tristictites zone in, XXIV, 245
 Iskine shallow salt dome, XXIII, 496
 Isla Margarita, XXIV, 1565
 Island in Permian sea, XVII, 1391
 Island arcs, RMS, 159
 Islands, RMS, 246
 Islay Island, CAL, 165
 Islay member of Mannville formation, XXIX, 1614
 Isleta, carbon dioxide gases in, GAS, 1004
 Isleta pool, MEX, 49, 64, 164, 177, 178, 201
 production from, MEX, 179
 temperatures of salt-water at, MEX, 228
 Isobar, RMS, 122, 123
 Isobar map, Turner Valley, GAS, 50
 Isobar maps, interpretation of, RMS, 115, 116
 Isobar surface, RMS, 109-125
 slope of, RMS, 111, 117
 Isobars, GAS, 1023, 1024
 Isobaths, dynamic, RMS, 117
 Isobaths in Sunda Straits, XXII, 64
 Isocarb map, method of construction, XI, 488
 of Arkansas-Oklahoma coal field, XIX, 938
 of eastern coal field, Kentucky, STR I, 85
 of eastern Oklahoma, XII, 814
 of north-central Texas, XII, 813
 of Pennsylvania, XIX, 860
 Isocarb maps for Mid-Continent, Illinois, and Appalachian oil fields, XII, 810
 Isocarbs, PROB, 75, 90; XI, 291
 composite of all seams, map of West Virginia showing, XXVII, 1201
 effects of thrust faults on, PROB, 89
 in Ozark region, XI, 294
 Isocarbs and oil fields, relation between, in Appalachian region, XXII, 426
 Isoclinal, overturned, and recumbent folds in Van Horn region, Texas, XXIV, 151
 Isoclines, MEX, 159
 Iso-con map for Mississippi lime water, PROB, 862
 for Ordovician waters, XIV, 1215
 Isoelectric point of soil colloids, RMS, 486
- Isogam contours in Suwa Basin, XIX, 61
 Isogeothermal map of Salt Creek, Natrona County, Wyoming, PROB, 1003
 Isogeothermal surfaces in relation to structure, PROB, 1004
 Isotherms, XXIII, 1324
 turned down during loading of a geosyncline and arched up during erosion of a mountain system, XXIII, 1324
 Isohaline salt lakes, RMS, 357
 Isohalines in sea, RMS, 104, 362
 Isolines in sea, RMS, 125
 Isometric butane lines for inert free Oriskany gas, XXII, 1169
 Isometric carbon dioxide lines for Oriskany gas, XXII, 1176
 Isometric ethane lines for inert free Oriskany gas, XXII, 1167
 Isometric heptane lines for inert free Oriskany gas, XXII, 1172
 Isometric hexane lines for inert free Oriskany gas, XXII, 1171
 Isometric initial open flow lines, Oriskany gas, XXII, 1163
 Isometric methane lines for inert free Oriskany gas, XXII, 1166
 Isometric nitrogen lines for Appalachian gas and oil region, map showing, XXII, 1181
 for Oriskany gas, XXII, 1174
 Isometric octane and higher lines for inert free Oriskany gas, XXII, 1173
 Isometric pentane lines for inert free Oriskany gas, XXII, 1170
 Isometric perspective block diagrams of East White Point field, XXV, 1995, 1996, 1998-2003
 Isometric propane lines for inert free Oriskany gas, XXII, 1168
 Isonville field, GAS, 944
 Isopach and structural studies of Cretaceous system in Nebraska, wells used in, XXVI, 1519
 Isopach map contoured on interval from *Heterostegina* limestone to Frio sand No. 1, South Cotton Lake field, Chambers County, Texas, XXV, 1918
 Elk City field, GAS, 496, 497
 Esperson dome, GC, 870; XXVIII, 1645
 Glenn pool, Oklahoma, STR I, 239
 La Rosa field, Refugio County, Texas, showing interval from top of Greta sand to top of 5,900-foot sand, XXV, 310
 of Benton group in Nebraska, XXVI, 1526
 of Bossier formation, XXVIII, 584
 of Chattanooga shale-Pencil Cave interval, central Tennessee, XXVII, 1053
 of Chester series below Pennsylvanian system, XXIV, 220
 of Chester series of central Illinois basin, XXIII, 1358
 of Cretaceous system in Nebraska, XXVI, 1529
 of Dakota group in Nebraska, XXVI, 1525
 of Hamilton group, XXI, 312
 of interval from top of Jackson to top of cap rock at Clay Creek dome, GC, 775; XX, 86
 of Iowa series in Illinois, XXIV, 234
 of Madison group showing thickness subsequent to late Paleozoic and

(Isopach)

- early Mesozoic erosion, XXVI, 306
of Michigan useful in search for new oil fields, XXIV, 2160
of Minnelusa formation, XXVI, 1574
of New Providence shale in central Tennessee, XX, 1074
of Niobrara formation in Nebraska, XXVI, 1527
of Payton pool, XXVI, 1636, 1640, 1644
of Pennsylvanian and Mississippian formations, XXVI, 1575
of Pierre shale in Nebraska, XXVI, 1528
of Schuler formation, XXVIII, 596
of southwestern Michigan showing Coldwater Red Rock to Traverse limestone interval, and type log for southwestern Michigan, XXIV, 2152
of Upper Cretaceous formations, PROB, 686
of Wheat pool, XX, 790
showing interval between top of Midway lime and top of Navarro formation, in North Currie structure, Texas, STR I, 329
- Isopach maps, East White Point and White Point fields, XXV, 1980, 1982, 1984, 1986, 1988, 1990, 1992
Eola field, XXV, 1387-1390
Greenwich pool, XXIII, 650, 651
North Cowden field, Ector County, Texas, XXV, 613, 614
Refugio field, XXII, 1202-1209, 1211, 1212
Rocky Mountains, SBP, 202
Saxet field, XXIV, 1823, 1824, 1825
Upper Cretaceous formations in Rocky Mountain area, SBP, 202
- Isopachous lines, thinning of Devonian in Appalachian region shown by, XXII, 425
- Isopachous maps, XXIX, 429
useful in presenting evidence of warping, epeirogenic movements, XXIX, 431
- Isopachous studies in Michigan, bibliography on, XXIV, 2162
of Ellsworth to Traverse limestone section of southwestern Michigan, XXIV, 2150
- Isopachs, GAS, 70, 73; IX, 890
of Grimsby formation, GAS, 78
- Isopleth, RMS, 187, 192
- Isopleth maps, RMS, 178, 179, 187, 194, 587, 590; SBP, 201
Appalachians, SBP, 352, 360
California, SBP, 108, 134, 142
central California, SBP, 134, 142
East Texas, SBP, 300, 302, 310, 320
Gulf Coast, SBP, 342, 343
Los Angeles Basin, SBP, 108
Mid-Continent, SBP, 265, 271
of insoluble residue content of Tully limestone, New York, RMS, 611
of organic carbon in sediments in Barataria Bay, RMS, 190
Rocky Mountains, SBP, 202, 210, 212-217
- Isopycnals, RMS, 122, 123
in basins, RMS, 98
- Isorganic chart of Lake Pontchartrain and Lake Maurepas, XXIII, 18
of sediments of Lake Pontchartrain, XXIII, 17
- Isosalinity contours of Woodbine sand waters, East Texas, XXVIII, 1636
- Isosalinity lines, regional, GC, 292;

(Isosalinity)

- view, XXIX, 339
- regional, for Pleistocene water sands of Corpus Christi area, GC, 276; XIX, 325
- Isosalinity lines and structural contours for Woodbine of East Texas, XIX, 320
- Isostasy, CD, 10, 12, 19, 28; XVIII, 15; XXIII, 1324
principle of, XXIX, 1635
principle and theory of, XII, 1163
review, XII, 218
structural history of Billings field, Noble County, Oklahoma, interpreted in terms of, XXIV, 2006
theory of, XXIII, 1325
- Isostatic and free-air anomalies, gravity gradients as indicated by, XXI, 338
- Isostatic adjustments, cause, CD, 73
- Isostatic anomalies in earth's crust continually being produced and adjusted, XXIII, 1325
- Isostatic changes and differential adjustments between mountain and basin blocks, XXVI, 1807
- Isostatic compensation, CD, 13
in Rocky Mountain region, XVII, 141
of salt core, GC, 30; XVII, 1035
- Isostatic down-building, theory of salt-dome formation by, XVIII, 1176
- Isostatic effect of Alps, XVIII, 80
- Isostatic equilibrium, CD, 13, 188
- Isostatic layer, structural and magnetic processes in, XXIII, 1320
- Iso-textural chart of sediments of Lake Pontchartrain, XXIII, 15
- Iso-textural-hydrographic chart of Lake Pontchartrain and Lake Maurepas, XXIII, 4-5
- Isothermal contours in Santa Fe Springs area, XIV, 1000
- Isothermal surface, conformity with structure in Long Beach field, XIV, 1010
in Long Beach area, XIV, 1002
in Torrance field, XIV, 1005
upward trend toward southeast in Santa Fe Springs field, XIV, 1010
- Isothermal surfaces over buried ridges in north-central Texas, XVI, 413
- Isotherms, flattening of, below a peak, XIV, 1005
fusion, for granite in South Africa, CD, 32
- Iso-Thv and iso-nitrogen lines for Big Injun gas, XXII, 1178
- Iso-Thv lines for Appalachian gas and oil region, map showing, XXII, 1179
for inert free Oriskany gas, XXII, 1165
- Isotopes, heavy, of hydrogen and oxygen, RMS, 67
- Isotropism, RMS, 604
- Israelsky, Merle C., GAS, 741, 749, 751, 752; MEX, 134, 135, 139; XIII, 1073; XIV, 434; XXV, 104, 1969, 2006, 2007; XXVII, 1136, 1411
Coastal Plain stratigraphic nomenclature, discussion, XVII, 1535
cores from deep well at Rodessa, Caddo Parish, Louisiana, XXII, 764
correlation of Brownstown formation of Arkansas, XIII, 683
notes on Frío, XXIV, 376
notes on some foraminifera from Marysville Buttes, California, re-

(Israelsky)

- view, XXIV, 2051
- reviews, XIX, 571; XXV, 761, XXVII, 1269
- tentative foraminiferal zonation of subsurface Claiborne of Texas and Louisiana, GC, 425, XIX, 689
- Issatchenko, B. L., PROB, 914, RMS, 423; X, 1278; XIV, 143
- Istebna sandstone, Europe, VI, 526
- Isthmus of Tehuantepec, review, VI, 60
salt domes, SD, 3, 4, 209, X, 1
- Isthmus of Tehuantepec province, PROB, 633, 634, 648
- Itaituba, Brazil, wells near, XXIX, 544
- Italian East Africa, oil possibilities in, XXI, 293
- Italian imports of petroleum, 1938, XXV, 369
- Italo Petroleum Corporation, XXIII, 909
- Italy, MSC, 172, 175
problems of oil supply, XXV, 369
western, search for oil in Parma district, XVI, 1152
- Itararé series, XIX, 1728
- Iuka East pool, XXVII, 809
- Iuka North pool, XXVIII, 770
- Ivan pool, Stephens County, Texas, STR II, 478
- Ivanov, A. P., XXIV, 249, 258, 297, 1130
- Ivanova, I., XXIV, 249
- Ivey pool, XXIII, 856
- Ivy, John S., GAS, 741, 1023, 1073, XV, 1371
- Ivy area, Texas, gravity of oil in, XXI, 1022
- Ivyton dome on Paint Creek uplift, GAS, 927
- Ixhuatlán field, GAS, 1008
- Izberbash oil field, Dagestan, Russia, XXI, 1076

J

- J-shaped distributions, RMS, 582
- Jablonski, E., XV, 2
- Jacalitos, MSC, 25, Fig. 14 (in pocket)
in Kreyenhagen Hills unconformable with Santa Margarita (Reef Ridge), XXIII, 34
type, MSC, 156
- Jacalitos-Etchegoin series, SC, 61; 1607
- Jacalitos field, XXVII, 870
gravity of oil at, XXVI, 1145
production at, XXVI, 1145
- Jacalitos formation, CAL, 244, 250, 254, 310; MSC, 157, 237, 249, 255, 262, 278, 285; SC, 63; XX, 1609; XXIII, 32
- Coalinga district, CAL, 235, 236, 279
correlation chart, CAL, 214, 249, 303
fossils of, CAL, 250
in columnar section, CAL, 232, 242
in stratigraphic classification, CAL, 236, 248, 250
- Kettleman Hills, GAS, 129; XVIII, 1570
- Jacalitos member, MSC, 168, 174
- Jacalitos sandstone, MSC, Fig. 14 (in pocket)
- Jack, R. Logan, X, 1124; XI, 75
- Jack County, Texas, XXI, 1023; XXVI, 1045
- Bryson oil field, STRAT, 539
development, XXVII, 776
developments during 1940, XXV, 1068
- Jack Creek and Asuncion formations,

- (Jack)
correlations, XXVIII, 510
Upper Cretaceous, in Santa Lucia Range, map showing distribution of, XXVIII, 470
- Jack Creek formation, XXVIII, 469
age and thickness of, XXVIII, 482
distribution, XXVIII, 475
lithologic character of, XXVIII, 477
relation of, to older and younger rocks, XXVIII, 479
- Jack Creek shales and Asuncion sandstones, typical exposures of, XXVIII, 491
- Jack Creek silty shales, XXVIII, 480
- Jackfork and Stanley formations of Ouachita geosyncline, Arkansas and Oklahoma, age of, as indicated by plants, XVIII, 1010
- Jackfork formation, III, 149, 263; V, 549, 679
- Jackfork group, XXII, 853, 856
of Ouachita Mountains, XXII, 878
- Jackfork sandstone, XVIII, 1036
fossils from, XVIII, 989
in Oklahoma, XI, 1320
- Jacksboro formation, III, 138
- Jacksboro tear fault, XVIII, 1587
- Jackson, G. W., XVII, 1460, 1480
- Jackson, R. T., MEX, 138, XXV, 1225
- Jackson, W. Brantley, XIX, 1536
- Jackson, Colorado, outcrop sections f, m, n, SBP, 243-255, 411
(well 236), SBP, 194-243, 407
- Jackson, Mississippi, PROB, 520
correlation of formations at, XVII, 40
deepest rocks at, discussion, XXII, 927
- pre-Tertiary rocks from deep wells at, XVII, 38
- Jackson, Roane, and Calhoun counties, West Virginia, Gay-Spencer-Richardson oil and gas trend, STRAT, 806
- Jackson and Catahoula sands, GC, 471; XVII, 1294
- Jackson and Monroe gas rock, map of Mississippi showing areas underlain by, XXVIII, 31
- Jackson age of Fayette sandstone, GC, 473; XVII, 1297
of lower beds of Catahoula formation in Texas, GC, 537; XVII, 535
- Jackson anticline, XVII, 42; XXIII, 1073
- Jackson black shale, PROB, 133, 134
- Jackson Bryozoa, XXIX, 921, 922, 924
- Jackson-Claiborne contact, XXVIII, 59
- Jackson-Claiborne outcrop contact, GC, 429; XIX, 693
- Jackson clay, I, 35, 73, 155; III, 312; V, 224; VI, 180
- Jackson County, Missouri, cross section of upper Des Moines and lower Missouri series from, to Appanoose County, Iowa, XXV, 26
- Des Moines series in, section, XXV, 28
effective porosity of gas fields in, XXV, 1405
- Missouri series in, section, XXV, 28
- Traverse of upper Des Moines and lower Missouri series from, to Appanoose County, Iowa, XXV, 23
- Jackson County, Texas, XXVI, 1005
Edna gas field, XXV, 104
West Ranch oil field, XXVIII, 197
- Jackson crude oil, PROB, 111
- Jackson dome, XXVIII, 29, 34, 45, 53, 56, 1318
- Jackson Eocene from borings at Greenville, Mississippi, XXIII, 1393
generalized outcrop of, XXIII, 1395
marine fauna of, XXIV, 2131
of Clarke and Wayne counties, Mississippi, Garland Creek-Shubuta bridge section of, XXI, 80
of eastern Mississippi, micro-paleontologic analysis of, XXI, 80
of Mississippi, MSC, 179
of Mississippi, foraminiferal check list from, XXI, 82
section showing position of, and thickness of Recent alluvium, in each boring at Greenville, Mississippi, XXIII, 1396
- Jackson Eocene sediment, variation from carbonaceous clays to silty, or sandy, glauconite-bearing clays, XXIII, 1395
- Jackson fault, XXVIII, 59, 1318
- Jackson fauna, Bola field, XXV, 1374
- Jackson field, Mississippi, PROB, 780
gas production, XXVI, 998
- Jackson foraminifera, GC, 473; XVII, 1297; XXIX, 905
Hockley dome, SD, 590
Texas, VIII, 443; X, 154
- Jackson formation, Covington County, Mississippi, GC, 374; XIX, 1153
Damon Mound, Texas, IX, 527
definition of Cocoa sand member of, XVII, 1387
dip of, toward axis of Arkansas syncline, XXIII, 1403
Edna gas field, XXV, 112
equivalent in Mexico, MEX, 98, 112, 131
- Esperson dome, GC, 863; XXVIII, 1638
- Gulf Coastal Plain, MSC, 102, 177; XXV, 2012
- Hockley dome, Texas, IX, 1050
in La Blanca structure, Hidalgo County, Texas, XXI, 948
- Laredo district, Texas, XXI, 1427
producing sands in, XXI, 1428
- Jackson formation, Louisiana, GC, 399; XVII, 629
- Mirando district, Texas, PROB, 403
- Mississippi, GAS, 882
- Raccoon Bend field, GC, 688; XVII, 1472
- Refugio field, Texas, XXII, 1194
- section across Duval County, Texas, XXI, 1434-1435
- south Texas, XXII, 750
- Texas, GC, 471; IX, 111; XVII, 1294; XXIII, 1629
- Texas Gulf Coast, XXIII, 1615
- Urania field, Louisiana, STR I, 93
- Jackson formations, columnar sections from Atascosa County, Texas, to Louisiana, GC, 506; XVII, 1330
- Texas, classification chart, GC, 475; XXVIII, 1298
- Jackson gas field, Hinds and Rankin counties, Mississippi, FOP, 152; GAS, 881; PROB, 579; XXV, 1584; XXVIII, 45
- Mississippi, structure, XVII, 43
- Jackson gas field and the State deep test well, XXII, 1286
- Jackson gas rock, a reef-type deposit, XXVIII, 45
electrical log correlation showing position of, XXVIII, 54
- Jackson group, GC, 530; XVII, 528; XXVIII, 56
classification of, GC, 478; XVII, 1302
- (Jackson)
eastern Mississippi, faunas of, XXI, 92
(Eocene), SBP, 337
- Gulf Coastal Plain, XXI, 80; XXIII, 161
- Louisiana, GC, 398; XVII, 629
- northern Mexico, GC, 607; XIX, 1376
- of formations in Texas with notes on Frio and Vicksburg, GC, 470, XVII, 1293
- south Arkansas, XXII, 981
- Texas, MSC, 179
- Jackson heaving-shale zone, XXIII, 216
- Jackson Lake, Colorado (well 239), SBP, 194-243, 407
- Jackson mollusks, XXIX, 922
- Jackson production, XV, 786
- Gulf Coast domes, GC, 14; XXVIII, 513
- Humble dome, XVIII, 513
- Jackson sand, Hull dome, GAS, 705
- Humble dome, GAS, 706
- North Dayton, GAS, 709
- Raccoon Bend, GAS, 723
- Jackson sands, GC, 471; XVII, 1294
- Jackson sandstone, Esperson dome, GAS, 728
- Jackson section along Rio Grande, GC, 617; XIX, 1386
- Jackson sedimentation, XXI, 1432
- Jackson series, XXII, 819
Government Wells field, GC, 636; XIX, 1136
- Jackson species, check list of, GC, 495-498; XVII, 1319-1321
- Jackson structure, GAS, 882, 886, 888
- Jackson time, paleogeographic map for, Gulf Coastal Plain, XXIII, 166
- Jackson Township, Pennsylvania (well 417), SBP, 349-379, 410
- Jackson trend, XXII, 737, 738
developments along, XXI, 1054
- Jackson Wash fault, great stratigraphic displacement of, XXIII, 133
- Jackson-Yegua trend, XXIII, 865; XXIX, 783
important production from, in south Texas, 1938-1939, XXIII, 861
- Jackson zone in south Texas, XXII, 754
- Jacksonian deposits, XXIX, 897
- Jacksonville Embayment, Texas, highest Taylor chalk in, XIV, 322
- Jacksonville gas field, Illinois, GAS, 832, 833, 834; PROB, 561; XXIII, 818
gas and oil produced from Mississippian limestone in, XXIII, 818
production from Salem formation in, XXIV, 232
- Jacob, C. E., XXVII, 1091; XXIX, 274
- Jacob staff, XXVII, 220
- Jacob's Well, western Clark County, Kansas, typical sink-hole near Big Basin, XXIII, 1814
- Jacque Mountain limestone, XXVI, 1385, 1389
- Jacque Mountain limestone member, fossils of, XXVI, 1388
- Jade Bay, RMS, 195, 197, 199, 201, 334, 335, 337
- Jager, Eric H., pre-Cretaceous topography of western Edwards Plateau, Texas, XXVI, 380
- Jagger, T. A., Jr., XIV, 622; XX, 1330, 1332
- Jagger Bend limestone, XXIV, 42
- Jahn, Alfredo, XI, 993; XIX, 774, 775; XXIII, 1854

- Jahn, J. J., VI, 530
 Jahn, John R., logarithmic stadia rod for topographic work and area measurements, review, XI, 93
 Jahn, Theo. L., RMS, 67
 Jahns, Richard H., stratigraphy of easternmost Ventura basin, California, review, XXIV, 1841
Jahrbuch des Deutschen Nationalen Komitees für die Internationalen Bohrkongresse, review, XVI, 946
 Jakhelln, Anton, RMS, 116
 Jakosky, J. J., XXII, 492
 exploration geophysics, reviews, XXIV, 2186, XXV, 170
 Jakosky, J. J., Dreyer, R. M., and Wilson, Clyde H., geophysical investigations in Tri-State zinc and lead mining district, XXVII, 86
 Jalama Creek, California, MSC, 119
 outcrop section M, SBP, 167-194, 410
 Jalisco, rudistid-bearing limestone in, XXVIII, 1122
 Turonian in, XXVIII, 1122
 Jamaica, MSC, 20
 foraminifera from, MSC, 12
 James, Bela, STRAT, 698
 James, J. R., Fitzgerald, P. E., and Austin, Ray L., laboratory and field observations of effect of acidizing oil reservoirs composed of sands, XXV, 850
 James, Preston E., XXIX, 1071
 James Bay and Hudson Bay region, FOP, 107; XXV, 1539
 James limestone, XXII, 970; XXIX, 1447
 James pool, XXIII, 853
 James River-Hampton Roads area, structural geology of, XXIX, 85
 James zone, XXIII, 290
 Jamesburg Quadrangle, MSC, 101
 Jameson, P. M., XXIV, 1679
 Jameson pool, V, 290
 Jamn, XII, 659, 662
 Jamn, J., XV, 196
 Jamn action, XV, 196
 what it is, and how it affects production of oil and gas, XII, 659
 Jamn effect in oil production, XVII, 1521
 discussion, XVIII, 547
 Jamna sandstone, XXI, 1189
 Boryslaw field, XVIII, 897
 Europe, VI, 526
 Polish fields, XV, 21
 Schodnica field, Poland, XV, 23
 Janet gas field, GAS, 946
 Janicke, T., RMS, 148
 Japan, GAS, 1061; MSC, 20, 169, 170; PROB, 18; RMS, 115, 117, 503-512, 522
 analyses of natural gases in, XI, 189, 190, 192-195
 forests of, CAL, 115
 helium content of gases in, XI, 196
 largest user of oil in Pacific area, XXV, 357
 marine kerogen shales from oil fields of, a contribution to study of origin of petroleum, review, VII, 83
 oil prospecting on Sakhalin Island by, in 1919-1925, X, 1163
 petroleum resources of, XVIII, 908
 Plankton and allied Protozoa of, MSC, 12
 policy of United States with regard to exports of petroleum to, XXV, (Japan)
 358
 review, VI, 260
 sedimentary natural gases from oil and coal fields of, with special reference to their geologic occurrence, XI, 187
 study of structure of Suwa Basin near Kyoto, by torsion balance, XIX, 58, 305
 Japan and European countries, uses of oil in, XXV, 353
 Japan Sea, RMS, 504
 Japan waters, RMS, 362
 Japanese archipelago, oil production in, IX, 1099
 Japanese Islands, Paleozoic formations of, XXV, 767
 Japanese journals needed, XXVIII, 168
 Japhet fault, XXVI, 1447
 west-east section through West Columbia field near, in southeast producing area, XXVI, 1448
 Japhet lease and West Columbia oil field, Texas, production curves, STR II, 468
 Jardin, MEX, opp. 31, 114, 220, Fig. 22 (in pocket)
 Jartas dome, carbon dioxide in, GAS, 1065
 Jars, used in boring wells for salt, XXII, 1091
 Jarvis, P. W., IX, 1001
 Jaslo district, Poland, XVII, 1088
 Jasper in Dockum conglomerates, XXVII, 629
 Jasper field, New York, XXIX, 668
 Jaumave synclinal valley, Upper Santonian shales lying on El Abra limestone, MEX, 62
 Java, V, 428
 Cretaceous folding in, XXII, 28
 gravity research in, XXII, 50
 oil production, XXVIII, 1446
 south, and west Sumatra, geanticline of, XXII, 45
 Tertiary in, XXVIII, 1446
 Java and Sumatra, Netherlands East Indies, Miocene foraminifera from, XXVIII, 1758
 Java geanticline, Miocene strata in, XXVIII, 1446
 Java Sea, RMS, 349, 350
 Jaworski, Erich, XXVII, 1517
 Jay Em, important dry well in Wyoming, XXI, 996
 Jdanov, M. A., XXIX, 1748
 Jean Flourin device for orienting cores, XIV, 566
 Jeans, J. H., XV, 1383
 Jebel Usdum, Palestine, XX, 895
 rock salt on coast of, XX, 896, 898
 Jeems Bayou high at Pine Island field, Louisiana, STR II, 174
 Jefferson, Franklin, Marion, and Saline counties, Illinois, wildcats in, XXII, 653
 Jefferson, Mark S. W., XXIII, 1205
 Jefferson and Leavenworth counties, Kansas, McLouth gas and oil field, XXVI, 133
 Jefferson County, Texas, Amelia oil field, XXIII, 1635
 Big Hill salt dome, SD, 497
 geochemical log, dry hole, about 3,500 feet outside present limits of production, Lovell's Lake oil field, XXIV, 1424
 Spindletop oil field, XXI, 475
 Spindletop salt dome and oil field, (Jefferson)
 SD, 478
 topographic map of Spindletop field, XXI, 479
 Upper Cretaceous chalk in cap rock of McFaddin Beach salt dome, XXIII, 339
 Jefferson County field, GAS, 952
 Jefferson Davis County, Mississippi, fossils from wells in, XXIX, 1017
 Jefferson district, West Virginia (well 428), SBP, 349-379, 410
 Jefferson dolomite, XXVI, 331
 Jefferson formation, XXV, 1733
 in Alberta, ALTA, 24; XV, 1152
 thrust fault in, XXV, 1736
 Jefferson Island, SD, 23, 358-361, IX, 758
 Jefferson Island dome, XXIII, 883
 sections, GC, 989, 997, 998, 1002, 1004, 1006-1008, XIX, 1608, 1616, 1617, 1621, 1623-1625
 Jefferson Island salt dome, Iberia Parish, Louisiana, GC, 983; XIX, 1602
 Jefferson Lake Oil Company, GC, 992, 1015, 1021; XIX, 1611, 1634, 1640
 Jefferson limestone, FOP, 42; XXV, 1474
 in Kevin-Sunburst field, Montana, STR II, 260
 theories on formation of, XXV, 1736
 Jefferson Parish, Louisiana, Barataria field, XXV, 322
 Jeffersonville limestone, XXV, 686; XXVIII, 531
 Jeffrey, and Thiessen, Reinhart, VI, 340
 Jeffrey, E. C., X, 869, XIV, 1293
 Jeffreys, RMS, 14, 81; V, 464; XI, 1188; XII, 402
 Jeffreys, G., MEX, 58-60, 68, 100, 143, 208, 209; VII, 606
 computation of forces charged with moving the Americas westward, CD, 151
 estimation of rise in temperature with subsidence, XIX, 111
 Jeffreys, Harold, CD, 9, 13, 22, 29; XVIII, 14, 15, XIX, 111; XXIII, 1322, 1323, 1324; XXIV, 2115; XXV, 172, XXVII, 56; XXIX, 1486
 Jeffries, G., IX, 137
 Jelm formation, XXV, 887, 888; XXVIII, 1198
 stratigraphic section, XXVIII, 1203
 Jena fritted filter, SBP, 50
 Jenkins, XXIX, 960
 Jenkins, H. L., STRAT, 165
 Jenkins, J. H., XIII, 594
 memorial of James V. Howe, X, 1188
 Jenkins, Olaf P., CAL, 149, 153, 276; SBP, 92; STRAT, I; XIV, 1325; XVII, 82; XVIII, 435, 469, 471; XIX, 1196, 1198, 1201, 1203; XXI, 270, XXVII, 112; XXVIII, 955, 966; XXIX, 957
 abstract, XXII, 1714, 1717
 development of geological survey by California State Division of Mines, XIV, 1352
 introduction to Cretaceous of California, XXVII, 249
 sandstone dikes as conduits for oil migration through shales, XIV, 411
 test-pit exploration in coastal plain of Sumatra, XIV, 1439
 Jenkins, Olaf P., et al., geologic formations and economic development

- (Jenkins)
of oil and gas fields of California, review, XXVII, 1393
- Jenkins clay, II, 74
- Nescatunga gypsum bed in, XXIII, 1794
- Jenney, W. P., PROB, 908
- Jenney, W. P., and Newton, Henry, XXI, 717
- Jennings, D. S., RMS, 547, 548
- Jennings, P. H., XXIII, 283, XXV, 738
- Jennings area, XV, 764
- Jennings district, contour map drawn on top of salt sand, XXVII, 1108 map, XXVII, 1105 sections, XXVII, 1106, 1110, 1112, 1114, 1119 type log, XXVII, 1103
- Jennings dome, Acadia Parish, Louisiana, GC, 963; PROB, 667; XIX, 1310 accumulation of oil at, XXVII, 1121 effect of faulting on accumulation of oil and gas at close of *Marginalina* time, XXVII, 1121 elliptical salt core of, XXVII, 1107 evidence of major flank faulting at, XXI, 1059 geology and geophysics of southeast flank of, with special reference to overhang, GC, 961; XIX, 1308 mineralized Miocene sand section, XXVII, 1116 Miocene super-cap rock production at, GC, 3; XVII, 504 southeast flank of, sections, GC, 972-975, 978; XIX, 1319-1322, 1325
- Jennings field, Acadia Parish, Louisiana, XXIX, 1568 cap rock over salt at, XXVII, 1117 structure of, XXVII, 1107 subsurface study of, XXVII, 1102
- Jennings gas field, Texas, STR 1, 406
- Jennings oil field, Acadia Parish, Louisiana, GAS, 718; SD, 398; V, 120, 131, 333, 625; X, 72
- Jennings salt plug, XXVII, 1120
- Jenny, Hans, RMS, 456, 457, 461, 462, 463, 535, 538
- Jenny, W. P., electric and electromagnetic prospecting for oil, XIV, 1199 magnetic vector study of Kentucky and southern Michigan, XVIII, 97 magnetic vector study of regional and local geologic structure in principal oil states, XVI, 1177
- Jensen, A. C., XXII, 1405, 1408
- Jensen, H. I., XI, 57, 63, 66
- Jensen, Joseph, GAS, 119; PROB, 839 California oil-field waters, PROB, 953 study of present California oil situation (1923), VIII, 1
- Jensen, Joseph, and Robertson, Glenn D., PROB, 750 development in southern California since 1925, XII, 625 new development problems and their solution in southern California oil fields, VIII, 135
- Jensen, M. K., XVI, 959
- Jensen, O., PROB, 40
- Jensen, P. B., RMS, 436
- Jensen, P. F., research bearing on theory of continental drift, CD, 101
- Jensen, T., XIX, 773
- Jeppsen, G. L., XXII, 106; XXV, 2040, 2042
- Jervia, William H., XXIII, 1394
- Jessamine dome, GAS, 844, 854, 924; PROB, 515, 517
- (Jessamine)
Kentucky, XXII, 1541, 1546, XXIII, 1847; XXIX, 684
- Jesse and Fitts pools, map showing location of, in Coal and Pontotoc counties, Oklahoma, XXII, 1561
- Jesse pool, Pontotoc and Coal counties, Oklahoma, XXI, 1009; XXII, 1560 contour maps, XXII, 1570, 1571, 1572 cross section, showing complicated fault zone, XXII, 1576 cross section, showing position of producing horizons, XXII, 1575 development of, XXII, 1560 geologic section of, XXII, 1562 map showing important producing zones, XXII, 1574 oil production from, XXII, 1573 production from, XXII, 1578 wells in, XXII, 1560, 1561, 1563, 1564
- Jessen, F. W., GC, 134; XVIII, 545; XXVI, 865
- Jetzler, H., XXII, 30
- Jewel and North Texas Oil Company, SD, 229
- Jewell, W. B., XX, 808, 1163; XXVI, 11; XXVII, 1041
- Jewett, John Mark, XXIV, 723; XXV, 25, 32, 38; XXVI, 1587; XXIX, 167 stratigraphy of Marmaton group, Pennsylvanian, in Kansas, review, XXIX, 1521
- Jewett, John Mark, and Moore, Raymond C., XXV, 37
- Jewett, John Mark, and Oakes, Malcolm C., upper Desmoinesian and lower Missourian rocks in north-eastern Oklahoma and southeastern Kansas, XXVII, 632
- Jewett and Freeman silt, faunules from, MSC, Fig. 14 (in pocket)
- Jewett silt, Edison field, STRAT, 4 Kern Front field, STRAT, 12
- Jewett zone, XXIX, 650
- Jigsaw puzzle of relations of continents, CD, 108
- Jiguli district, XXIII, 957
- Jillson, E. L., XV, 211
- Jillson, Willard Rouse, GAS, 813, 825, 829, 927; XIII, 352; XIV, 857; XVI, 232, 243; XXIII, 1837; XXIV, 1644, 1660; XXV, 2048; XXVII, 1042 geological problems in recovery of oil and gas in Kentucky, IV, 303 natural gas in eastern Kentucky, review, XXI, 1352 natural gas sands of eastern Kentucky, review, XV, 90 oil shales of Kentucky, abstract, V, 100 preliminary report on oil shales of Kentucky, review, V, 522 St. Peter sandstone in Kentucky, review, XXIII, 107
- Jim Hogg County, Texas, large gas well in, VIII, 676
- Jim Ned shale, XXIV, 42, 96
- Jim Wells County, Texas, Ben Bolt field, XXIII, 1237
- Magnolia City field, XXIII, 1238
- Jiménez (Tamaulipas), MEX, 54, 249
- Joachimsthal, temperature gradients at, PROB, 997
- Joaquin, Texas, XXII, 732
- Joaquin area, Texas, XXIII, 893
- Joaquin field, Shelby County, Texas, XXIV, 1066; XXV, 1086; XXVI, 1054, XXVII, 787
- Joaquin Ridge, CAL, 55; SC, 53, 65, XX, 1599, 1611
- Joaquin Ridge anticline, SC, 67; XX, 1613
- Joaquin Ridge area, SC, 84; XX, 1630
- Joaquin Ridge sandstone, XXIX, 989
- Joaquin Valley, SC, 13; XX, 1559
- Jochamowitz, Alberto, XXIX, 512
- Joe's Lake, Tyler County, Texas, typical Wilcox oil field, XXIV, 708
- Joe's Lake area, Tyler County, Texas, Wilcox sand productive in, XXIII, 877; XXIV, 707
- Joe's Lake field, reserves at, XXIV, 707
- Joes River beds, Barbados, XXIV, 1572 unconformable on Scotland sediments, XXIV, 1576
- Joffé, GC, 84; XXVIII, 1180
- Johannsen, Albert, IX, 344; XXIII, 1325; XXIV, 661
- Johannsen system of quantitative mineralogical classification, XXIX, 1028
- John Day Basin, XXIX, 1387
- John Day beds, XXIX, 1387 upper, MSC, 153
- John O'Groats, Scotland, RMS, 212
- John Ray not John Wray, discussion, XIII, 1077
- John Ray dome, GAS, 386, 394; XXIII, 1029
- John Wray dome, VII, 238
- Johns, W. S., XXIII, 1353
- Johns Valley, XXII, 853 sylvan shale in, XIX, 1694, 1847
- Johns Valley shale, XVIII, 1028, 1037; XXIX, 200 erratic boulders in, XVIII, 992
- Johnson, X, 1033; XI, 956; XV, 374
- Johnson, Bert L., MSC, 6
- Johnson, Bertrand L., and Jones, L. M., bibliography of foreign petroleum resources, VII, 593, 698; IX, 815, 911
- Johnson, Bertrand L., Jones, L. M., and McShea, M. F., bibliography of foreign petroleum resources, VII, 593, 698; VIII, 251, 352, 678, 834; IX, 368, 672
- Johnson, C. D., and Shoenfelt, C. E., GAS, 1056
- Johnson, Curtis H., XX, 818; XXIII, 683, 684, 685 new mathematical and stereographic net solutions to problem of two tilts—with applications to core orientation, XXIII, 663 nomographic solution for apparent dip in vertical section not perpendicular to strike, XX, 816
- Johnson, Douglas W., RMS, 207, 212, 213, 238, 239; SD, 401; STRAT, 819, 820; XII, 600, 609; XIII, 484; XVII, 488, 912, 915, 919, 928, 930; XXI, 115 editor, *Journal of Geomorphology*, review, XXII, 502 origin of the Carolina Bays, discussion, XXVII, 1008 origin of the Carolina Bays, review, XXVII, 654, 874 stream sculpture on Atlantic slope, study in evolution of Appalachian rivers, review, XVI, 267 studies in scientific method, review, XXII, 502
- Johnson, Douglas W., and Pratt,

- (Johnson)
Wallace E. XI, 730, 887; XIX, 823
Johnson, E. E., VII, 384
Johnson, E. L., GC, 557; XVII, 492, 495, 498
stratigraphy of Oakville, Lagarto, and Reynosa formations, between Nueces and Guadalupe rivers, Texas, XVII, 523
Johnson, Earl, XI, 375
Johnson, F. A., XIV, 1353
Johnson, F. H., XXVII, 1176, 1181, 1184, 1187, 1188
Johnson, Floyd L., SC, 61, XX, 1607
Johnson, Floyd L., and Barbat, W. F., MSC, 68, 237, 249, 258, 261, 268, 318, Fig. 14 (in pocket); XVII, 1170; XX, 1607; XXIII, 26, 29, 31, 32, 34, 37, 39, 44; XXV, 250
Johnson, G. Duncan, SBP, 6, XXII, 1105, XXV, 2022
Johnson, H. A., and Thomas, B. W., GAS, 937
Johnson, Harry R., SC, vii, 77; VII, 606; X, 710, 711; XIII, 154, XX, 1533, 1623, XXVI, 1610, XXVII, 301; XXIX, 981
memorial of Eugene Crittenden Templeton, XVII, 752
Johnson, Harry R., and Arnold, Ralph, MSC, 55, 107, 108, Fig. 14 (in pocket); VIII, 75, XI, 617, XIII, 220; XVII, 1176; XXVIII, 485; XX, 1623; XXV, 194, 1329, 1335, 1341; XXVI, 1610; XXVII, 206, 1364, 1372
Johnson, Harry R., and Barbat, W. F., XVII, 1175
Johnson, Harry R., and Huntley, L. H., VII, 621
Johnson, Harry R., and Warren, Van Court, XVI, 350
Johnson, Harry R., Huntley, L. H., and Somers, business of oil production, review, VII, 453
Johnson, Helgi, Newfoundland, FOP, 126; XXV, 1558
Johnson, Hiram W., IV, 17
Johnson, J., and Adams, L. H., VIII, 731
Johnson, J. Harlan, PTNM, 598, 605, 606; XV, 1100; XVI, 868; XVII, 110, 144, 353, 363, 430, XXVIII, 535, 536, 1411; XIX, 982, 995; XXIV, 171; XXVI, 598, 605, 606, 1395; XXVII, 752; XXVIII, 1017, 1019
algal reefs in Cretaceous Austin chalk of Terlingua district, Brewster County, Texas, XXVIII, 123
origin of Sangre de Cristo conglomerates, Colorado, XIII, 177
paleontology, petroleum, and the search for oil, XXVIII, 902
Permian algal reef in South Park, Colorado, XVII, 863
résumé of Paleozoic stratigraphy of Colorado, review, XXIX, 1356
stratigraphy of northeastern and east-central parts of South Park, Colorado, XIX, 1339
unconformity in Colorado group in eastern Colorado, XIV, 789
Johnson, J. Harlan, and Aurand, Harry A., preliminary contribution to Benton paleogeography of eastern Colorado, XIII, 850
Johnson, J. Harlan, and Brainerd, A. E., Mississippian of Colorado, XVIII, 531
Johnson, J. Harlan, and Lovering, T. S., XVIII, 533, XIX, 974, 1009; XXVI, 1377
meaning of unconformities in stratigraphy of central Colorado, XVII, 353
Johnson, John, Allen, E. T., and Crenshaw, S. H., X, 1282
Johnson, John, Allen, E. T., Crenshaw, S. H., and Larsen, Esper S., PROB, 909
Johnson, Julia F., XXIX, 51
Johnson, L. C., XIII, 1336, 1338, 1339; XXII, 1659
Johnson, L. C., and Crider, A. F., GC, 388; XVII, 618
Johnson, L. C., and Smith, Eugene A., XXVII, 596
Johnson, L. C., Smith, E. A., and Langdon, D. W., Jr., XXII, 1655
Johnson, M. Melville, GAS, 221
Johnson, Meredith E., XXIX, 889, 891, 892
new oil pool at Tidioute and gas pools near Corry and Meadville, Pennsylvania, review, VII, 304
new oil pool at Tidioute, review, VII, 304
Johnson, Norris, XXVIII, 1777
Johnson, Norwood P., *et al.* (well 419), SBP, 349-379, 410
Johnson, Paul R., GAS, 483
Johnson, Roswell Hill, III, 154, 157; IV, 189, 318, V, 467; VI, 43; VII, 622; VIII, 717; X, 747; XII, 598, XIII, 677; XXV, 1872
cementation process in sandstone, IV, 33
decline curve methods, III, 421
distribution of underground salt water and its relation to accumulation of oil and gas, II, 172
flowing wells in Pennsylvania, V, 88
oil reserve in Teapot dome, Wyoming, VIII, 101
time factor in accumulation of oil and gas, V, 475
Johnson, Roswell Hill, and Foster, Alden W., barrel costs *versus* well-day costs, IV, 299
Johnson, Roswell Hill, and Gardescu, I. L., effect of stratigraphic variation on folding, V, 481
Johnson, Roswell H., and Huntley, L. G., GAS, 1016, 1019; VIII, 719; XI, 698
Johnson, Roswell H., and Morgan, L. C., GAS, 1017; XII, 1095
critical examination of equal pound loss method of estimating gas reserves, X, 901
Johnson, T. W., STRAT, 625
Johnson, T. W., and Berwald, W. B., GAS, 1017, 1018, 1025, 1048, 1052, 1113
Johnson, W. D., XVIII, 1499
Johnson and Lafayette counties, Missouri, Des Moines series in, section, XXV, 33
Missouri series in, section, XXV, 33
Johnson County, Kentucky, XXVI, 1131
(well 431), SBP, 349-379, 410
Johnson County, Wyoming, Billy Creek gas field, GAS, 297
Johnson Creek fault in eastern Kentucky, GAS, 924, 926
Johnson field, Indiana, XXVI, 1094
Johnson pool, Kansas, GAS, 482
Johnson pool, Texas, XXVI, 1049
Johnsonville pool, XXVI, 1089, XXIX, 690
Johnston and Frear, XXII, 1326
Johnston, A. W., XIII, 594
Johnston, H. F., STRAT, 846
Johnston, J., RMS, 285, SD, 23, XIV, 709
Johnston, J., and Niggl, P., XIII, 361
Johnston, J. K., XXV, 2158
Johnston, John, and Adams, L. N., IX, 853, XIV, 1345
Johnston, John, and Williamson, E. D., XVIII, 1235
Johnston, John, Merwin, H. E., and Williamson, E. D., XXII, 1368, 1375
Johnston, Kenneth Allen, memorial of, XXVII, 104
Johnston, L. A., XVIII, 1133, 1158
Johnston, Lois, STRAT, 802
Johnston, W. A., XVI, 789
Johnston, W. D., Jr., PROB, 1010
Johnston, W. D., Jr., and Cloos, E., XX, 67
Johnston sandy zone, Hardin field, STRAT, 567
Joiner, C. M., XVII, 759, 761, 785
discoverer of East Texas field, STRAT, 601
Joiner, C. M., *et al.* (well 345), SBP, 292-335, 409
Joiner, Dad, XXVII, 933
Joins formation, XXV, 651, 659, 666; XXIX, 191
Joint planes, PROB, 386, 492
in Olean conglomerate at Rock City, New York, STR II, 276
Jointed limestones, PROB, 397
Jointed pinnacles, RMS, 334
Joining in limestones as seen from the air, XII, 861
Joints, PROB, 207, 509
effect on permeability, MEX, 165, 168, 170, 171, 234
or fissures, migration via, PROB, 182
system of, at site of Grand Coulee Dam, XXVI, 1812
Joleaud, L., XVII, 214
Jolly, XIV, 5
Jolly balance-mercury method and Melcher's paraffine method, comparison of volumes determined by, XIV, 5
Jolly-Patton field, XIX, 518
Joly, and Holmes, XX, 1690
Joly, John, PROB, 1005; XI, 46; XVIII, 34, XXI, 1200; XXIV, 1531
continental movement, CD, 88
opinion regarding isostasy, CD, 12
orogenic conceptions, CD, 6, 10, 52, 151, 152
support of periodicity of geological phenomena, CD, 48, 52, 94
surface history of the earth, review, XII, 452
theories on orogenic disturbances, SC, 144; XX, 1690
theory of continental drift, CD, 34, 42; discussion by van der Gracht, CD, 210
tidal attraction, cause of drift, CD, 78
Joly's estimate, XXI, 1203
Joly's hypothesis, inter- and intracontinental drift, necessary consequences of, CD, 67
value in throwing light on mechanical problems, CD, 74

- Joly's theory of radioactive changes in earth's crust, CD, 43, 196
- Jonas, Anna I., and Stose, George W., XII, 161
- Jones and Turner, XVIII, 40
- Jones, A. L., X, 722
- Jones, A. R., Survey, Texas (well 391), 292-335, 410
- Jones, A. W. Mr. and Mrs., XXV, 195
- Jones, Boone, XXIII, 223
- Jones, C. T., XXIII, 1445; XXV, 430; XXVI, 1518; XXVII, 1297
- Cretaceous and Eocene stratigraphy of Barrilla and eastern Davis mountains of trans-Pecos Texas, XXII, 1423
- geology of Wind River Canyon, Wyoming, XXIII, 476
- Jones, Daniel J., STRAT, 166; XXIV, 969; XXV, 796; XXVI, 1095; XXVII, 820; XXVIII, 759, XXIX, 691
- productive areas in McClosky of western Kentucky, XXIII, 1844
- Jones, Daniel J., and McFarlan, Arthur C., STRAT, 168, XVIII, 1128; XXII, 1447
- Jones, E. L., and Conkling, Russell C., XXIV, 19
- Jones, E. L., Jr., and Conkling, Russell C., basement rocks in Shell-Humphreys well, Pecos County, Texas, XIV, 314
- Jones, G. W., and Burrell, G. A., GAS, 1018, 1025
- Jones, I. W., PROB, 76; XIX, 1467
- Quebec, FOP, 123; XXV, 1555
- Jones, J. Claude, PROB, 53; X, 1017; XVI, 44; XVII, 495, 501; XVIII, 264; XIX, 609; XXV, 2066
- memorial of, XVI, 623
- suggestive evidence on origin of petroleum and oil shale, VII, 67
- Jones, J. W., XXVII, 1306
- Jones, Leo J., X, 1119, 1123, 1137; XI, 56, 76, 77, XXV, 375, 386
- Jones, Leland W., XXI, 1567
- acetone for determining oil content of well cuttings, XXVIII, 124
- Jones, McClanahan, SD, 612
- Jones, Paul H., XXIX, 1170
- Jones, Paul H., and Maher, John C., ground water and geologic structure of Natchitoches area, Louisiana, XXIX, 23
- Jones, Paul H., and Pyle, Howard C., XXV, 1312
- Jones, Paul H., Hoots, H. W., and Blount, A. L., determination of carbon and hydrogen in substances of bituminous or pyrobituminous nature occurring in shales, XIX, 293
- marine oil shale, source of oil in Playa del Rey field, California, XIX, 172
- Jones, Richard A., MEX, 74; XVII, 33, 941; XXVIII, 1078
- large gas well in Jim Hogg County, Texas, VIII, 676
- outcrop of surface oil sand in Permian redbeds of Coke County, West Texas, IX, 1215
- reconnaissance study of Salado Arch, Nuevo Leon, and Tamaulipas, Mexico, IX, 123
- relation of Reynosa escarpment to oil and gas fields of Webb and Zapata counties, VII, 532
- subsurface Cretaceous section of (Jones) southwest Bexar County, Texas, X, 768
- Jones, S. B., XV, 1217, 1221
- Jones, T. R., XXV, 1219
- Jones, T. R., Brady, H. B., and Parker, W. K., MSC, 11
- Jones, T. Rupert, VIII, 489
- Jones, T. S., XXVIII, 1079, 1164, 1165
- dolomite porosity in Devonian of West Texas Permian basin, XXVIII, 1043
- Jones, Verner, memorial of Howard Walter Handley, XXV, 184
- Jones, Victor H., RMS, 637; XIV, 867
- Jones, W. F., and Whitehead, W. L., XIX, 775, 786, 788
- Cretaceous-Eocene unconformity of Venezuela, XIII, 617
- Jones, W. M., VIII, 811
- Jones, Wayne V., XXI, Pl. C, opp. 1086, XXVIII, 1355
- Bacon limestone, East Texas, XXIX, 839
- Jones Community 6 (Standard Oil Co.) (well 93), SBP, 87-153, 404
- Jones County, Texas, XXI, 1022; XXIII, 854; XXVI, 1045
- development, XXVII, 779
- discovery, XXIV, 2180
- Noodle Creek pool, STRAT, 698
- Jones sampler, RMS, 601
- Jones sand, PROB, 221; XXII, 967; XXIV, 1095; XXVI, 1257, 1473, 1483
- analysis of oil from, at Schuler field, XXVI, 1508
- correlated with Buckner formation in Schuler field, XXVI, 1475
- data on pressure, monthly production, and gas-oil ratio of, at Schuler field, XXVI, 1502
- permeability of, XXVIII, 223
- porosity of, XXVIII, 223
- Schuler field, water analysis, XXVI, 1513
- Schuler oil field, XXII, 721, 724
- structure-contour map, XXVIII, 218
- Jones sand and Snackover lime sections, Schuler field, XXVI, 1486
- Jones sand reservoir, Schuler field, Arkansas, geologic factors in unitized pressure maintenance, XXVIII, 217
- isopach map, XXVI, 1509
- isovol map, XXVI, 1510
- structural character of, XXVIII, 217
- Jongmans, W. J., and Gothan, W., XIX, 1301; XXV, 411
- Joor, Joseph F., SD, 373, 397; IX, 773
- Jordan, David Starr, XXVII, 1380
- Jordan, David Starr, and Beal, C. H., XXVIII, 1000
- Jordan, David Starr, and Gilbert, J. Z., CAL, 211; X, 130, 132
- Jordan, Eric Knight, Pleistocene fauna of Magdalena Bay, Lower California, review, XXI, 532
- Jordan, J., Survey, Texas (well 357), SPB, 292-335, 409
- Jordan, Louise, XXIV, 118; XXVIII, 1677
- Jordon dome, VI, 149
- Jordan pool, XXIII, 840
- Jordan River delta, section of, XXII, 1313
- Jordan Valley structure, XXII, 1222
- Jordan's law, XXVII, 1379
- Jornado del Muerto, XXIV, 43
- José María Maya, Rancho, echinoid at, (José) MEX, 135
- José shale member, XXVI, 265
- Josephus, Flavius, XX, 905
- Josey pool, PROB, 411
- Joslin, L. R., and Hall, J. R., XXVI, 1656
- Jourdan, T. J., Survey, Texas (well 384), SBP, 292-335, 409
- Journal of Geomorphology, XXII, 502
- Journal of Paleontology, fossils treated in, XXV, 1232
- Journal of Sedimentary Petrology, RMS, 570
- Journée, H. M., SD, 436
- Jov field, XXVI, 1042; XXVII, 772
- Joyce, J. Wallace, manual on geophysical prospecting with magnetometer, review, XXI, 631
- Juan Casiano, MEX, 133, 210, Fig. 32 (in pocket)
- Meson beds at, MEX, 212
- salt water in, MEX, 5
- Juan Casiano pool, V, 506
- Juan de Fuca, MSC, 77
- Juan de Fuca Strait, RMS, 225
- Juan Felipe, MEX, 153, 216, Fig. 32 (in pocket)
- Juan Fernandez Islands, Recent Foraminifera from off, MSC, 12
- Judd, J. W., XXV, 1219
- Judith Mountains, XXVII, 434
- Judith River formation, PROB, 698; GAS, 248, 250, 256; V, 204, 258, VI, 146
- Border-Red Coulee field, STRAT, 274
- gas from, XXI, 991
- in Rocky Mountain area, XXI, 909
- marine, of Montana, XXI, 1267
- nonmarine, XXII, 1634
- Judkins field, Texas, GAS, 456, 457
- Judson, XVII, 1081
- Judson, Sidney A., GAS, 691; X, 703; XIII, 1347; XX, 1427; XXV, 104; XXVIII, 1011
- resumé of discoveries and developments in northeastern Texas in 1928, XIII, 611
- Judson, Sidney A., and Battle, J. C., GC, 150; XVII, 1501
- Judson, Sidney A., and Murphy, P. C., XVI, 470; XVII, 1513
- crooked-hole problems in Gulf Coast district, XIV, 595
- deep sand development at Barbers Hill, Chambers County, Texas, XIV, 719
- Judson, Sidney A., and Stamey, R. A., GC, 910; XX, 561
- overhanging salt on domes of Texas and Louisiana, GC, 141; XVII, 1492
- Judson, Sidney A., Murphy, P. C., and Stamey, R. A., GAS, 707; GC, 145; PROB, 663, XVII, 1493, 1515
- overhanging cap rock and salt at Barbers Hill, Chambers County, Texas, XVI, 469
- Juell, Birger, XX, 1210
- Jujuy-Salta district, Argentina, XI, 263
- Jukes, J. B., XXI, 341
- Jukes-Brown, A. J., RMS, 386
- Jukes-Browne, A. J., and Harrison, J. B., XXIV, 1552, 1572, 1577, 1584, 1585, 1586, 1590
- Julesburg basin, PROB, 680, 683
- Julian, XIII, 1469, 1470
- Jumpingpound area, XXIX, 657

- Jumpingpound fault plate, XXIX, 657
 Jumpingpound well, XXIX, 657
 Junction City dome and Glen Ridge anticline, Illinois, section, STR II, 125
 Junction City pool, Illinois, STR II, 130
 Junction Creek sandstone, XXV, 1750, 1755
 possible equivalents in northwestern New Mexico of sequence from Entrada sandstone to, XXV, 1759
 Jung, Carl, determination of position and extent of simple bodies by use of gradient and differential curvature values, review, XIII, 85
 Jung, Dorothy A., and Malkin, Dons S., marine sedimentation and oil accumulation on Gulf Coast. I. Progressive marine overlap, XXV, 2010
 Jung, Jean, *geologie profonde de la France d'apres le nouveau resau magnetique et les mesures de la pesanteur*, review, XVII, 1395
 Jung, Jean, and Lebedeff, V., *resultats des recentes prospections de petrole en Afrique equatoriale française*, review, XV, 974
 Jung, K., XII, 40, 43
 Juniper Ridge, CAL, 55; SC, 55; XX, 1601
 Juniper Ridge sandstone, XXIX, 993
 Jumero Serra Peak, XXVIII, 453
 Jumero Serra Quadrangle, MSC, 1, 118
 Jura Mountain region, XVI, 1110
 Jura Mountains, Sierra Madre folding compared with, MEX, 161
 Jurassic, CAL, 7, 8, 15-17, 27, 31, 36, 38, 40, 46, 50, 60, 64, 66, 68, 71-97, 101, 107-110, 112, 117, 186, 199, 259, 273, 281, 282, 284, 286, 299, 302; GAS, 10, 308, 325, 327; MEX, 7, 9-16, 92-94, 160, 196, Fig. 12 (in pocket); MSC, 94, 99, 109; PROB, 43, 61, 167, 173, 348, 380, 390, 391, 397, 408, 409, 724, RMS, 331, 332, 517; SC, 5, 117, XX, 1551, 1663
 Alberta, ALTA, 147; XI, 240; XV, 1275
 Argentina, X, 857; XXIX, 557
 Argentina and Chile, paleogeography of, XXIX, 500
 as source of oil in western Cuba, VIII, 516
 Black Hills, XXI, 717
 Border-Red Coulee field, STRAT, 301
 Brazil, XXIX, 549
 Brazil and Peru, XXI, 1347
 California, VI, 305; XXVI, 1818; XXVII, 254
 California Coast Ranges, XXVII, 186
 Canada, FOP, 19; IV, 250; XXV, 1451
 central Oregon, XXIX, 1387
 China, XXVIII, 1424, 1431
 coal measures and arid regions, CD, 27
 Colorado, STRAT, 23; XXV, 1150; XXVII, 470
 Colorado, helium in, GAS, 1057
 Conrad area, Canada, XXIX, 659
 Cuba, II, 139; XIX, 116
 Dakota basin, XXVI, 1562
 Desert Basin, Western Australia, X, 1129
 East Indies, XXII, 13
 (Jurassic)
 East Texas, XXIX, 775
 East Texas, Louisiana, and Arkansas, XXVII, 1231
 Florence field, Colorado, STR II, 78
 Friant Dam, XXVI, 1823
 Germany, XXVIII, 723
 Grass Creek field, Wyoming, STR II, 627
 Greasewood field, STRAT, 23
 Gulf region of United States, XXVII, 1422
 Hugoton field, STRAT, 85
 Idaho, VI, 472; XXI, 721, 722, 729
 Iles dome, Colorado, STR II, 93
 in German salt anticlines, IX, 430
 in Sundance of northwestern United States correlated with European type section, XXI, 758
 Iraq, XXIII, 962
 Kevin-Sunburst field, Montana, STR II, 258
 Lost Soldier district, Wyoming, STR II, 642
 Louisiana, XXVIII, 276
 Lower, climate of, XXVII, 1500
 Lower, localities in Mexico and Central America, XXVII, 1496
 Lower, Mexico, map, XXVIII, 308
 Lower, rocks in southeastern Mexico, correlations of, XXVII, 1498
 Lower, southern Mexico and northern Central America, XXVII, 1495
 Lower, thicknesses of, in Mexico and Central America, XXVII, 1497
 Lower and Middle, coal and plant-bearing beds in Central America, XXVII, 1498
 marine, formations of Sweetgrass arch, Montana, XXIX, 1262
 marine, of Montana, correlation of, XXI, 720
 marine, of Wyoming, paleogeography and lithogenesis of, XXI, 759
 marine, problems of, XXI, 715
 marine, southwestern part of Blue Mountains, XXIX, 1386
 Mendoza province, Argentina, XII, 700
 Mexico, V, 9
 Mid-Continent, XXV, 1688, 1690
 Middle, at Oberg field, XVI, 1146
 Middle, beds in Oaxaca and Guerrero, correlations of, XXVII, 1502
 Middle, Idaho, XXIX, 1019
 Middle, in Oaxaca, coal beds in, XXVII, 1501
 Middle, localities in Mexico and Central America, XXVII, 1501
 Middle, marine and continental beds, Mexico and Central America, XXVII, 1500
 Middle, Montana, XXIX, 1019
 Middle, North Dakota, XXIX, 1019
 Middle, oysters, XXVII, 1501
 Middle, plants, XXVII, 1501
 Middle, rocks in Western Interior of United States, occurrence of, XXIX, 1019
 Middle, rocks of western United States, ammonite zones in, XXIX, 1021
 Middle, South Dakota, XXIX, 1019
 Middle, Utah, XXIX, 1019
 Middle, Wyoming, XXIX, 1019
 Mississippi, XXVIII, 33
 Model dome, helium gas from, FOP, 60; XXV, 1492
 Moffat dome, Colorado, STR II, 93
 Montana, FOP, 42; PROB, 160; IV, 313; V, 260; VI, 146; VII, 174; XXV, 1153, 1474; XXVII, 470
 Moose Mountain area, XXVII, 41
 New Mexico, IV, 75; V, 167
 North Dakota, XXVI, 349, 1418
 North Louisiana, XXVI, 1251
 Northwest Basin of Western Australia, X, 1143
 northwestern Colorado, STR II, 107
 of east-central Utah, correlation of La Plata sandstone of Colorado with, XXV, 1755
 of England, France and southwestern Germany, MSC, 92
 Pánuco River Valley, Mexico, X, 671
 Rocky Mountain region, PROB, 165; VII, 406; XXIII, 1145; XXV, 1847; XXVII, 424
 Russia, XXIII, 496
 Salt Creek field, Wyoming, STR II, 593, 594
 Santa Maria field, California, XXIII, 68
 Santa Maria Valley field, XXVII, 1338
 saturated sands in, XXIII, 508
 Schuler field, XXVI, 1475
 South Arkansas, XXVI, 1251
 southern Mexico and northern Central America, XXVII, 1417
 South Texas, XXIX, 1427
 Texas, V, 14
 Turner Valley field, XVI, 791; XXIV, 1623; XXIX, 1166
 Uinta Mountains, XXI, 720
 Upper, age of Franciscan-Knoxville group, XXVII, 219
 Upper, Alberta, STRAT, 301
 Upper, beds of southern Mexico, correlations of, XXVII, 1514
 Upper, Como Bluff anticline, Wyoming, XXVIII, 1203
 Upper, continent in south Pacific, MEX, 92
 Upper, Cuba, XXVII, 1420
 Upper, deposits of Mexican geosyncline, XXVII, 1495
 Upper, formations in Arkansas, northern limits of, XXVII, 1427
 Upper, formations in eastern Texas and northern Louisiana, columnar sections, XXVII, 1425
 Upper, formations in North Lisbon and Bellevue fields of northern Louisiana, correlation of, XXVII, 1428
 Upper, formations in North Lisbon field, Claiborne Parish, Louisiana, columnar sections, XXVII, 1426
 Upper, formations in southern Arkansas and northern Louisiana, relations of, XXVIII, 612
 Upper, formations in southern Arkansas and northern Louisiana, time relations of, XXVII, 1430
 Upper, formations in southwestern Colorado, nomenclature of, XXV, 1753
 Upper, formations in Texas, Arkansas, Mississippi, and Alabama, sections, XXVII, 1421
 Upper, fossil localities in Mexico, XXVII, 1509
 Upper, fossils of Mexico, XXVII, 1494
 Upper, Freezeout Mountain-Bald Mountain area, XXV, 886
 Upper, Gulf Coastal Plain, XXVIII, 577, 609
 (Jurassic)

(Jurassic)

- Upper, Gulf region, XXVII, 1411
 Upper, Gulf region, paleogeography, XXVII, 1522
 Upper, Kimmeridgian to Tithonian marine beds in southern Mexico, XXVII, 1512
 upper, landmass in eastern Mexico, evidence for, XXVII, 524
 Upper, Mediterranean sea, XXVII, 1232
 Upper, Mexico, map, XXVIII, 309
 Upper, Montana, STRAT, 301, 335
 Upper, northern Mexico and western Texas, XXVII, 1415
 Upper, paleogeography of Mexico, XXVII, 526
 Upper, redbeds in northern Mexico and western Texas, XXVII, 1475
 Upper, Rocky Mountain region, paleogeography of, XXI, 1260
 Upper, sea in Gulf Coastal region, extent of, XXVII, 1235
 Upper, southern Mexico, XXVII, 1418
 Upper, Wyoming, XXIV, 1101, XXVIII, 1215
 Upper, Wyoming and Colorado, FOP, 58; XXV, 1490
 Utah, VI, 215, 244; XXIII, 125, 126, Utah, nitrogen in, GAS, 1057
 Washington, XXVI, 1809
 Wind River Mountains, Wyoming, XXV, 136
 Wyoming, FOP, 52; V, 193, 408; VIII, 515; XXI, 718, 719, 720; XXIII, 481, 483, 927, 1447; XXIV, 1220; XXV, 1484, 2035; XXVII, 855; XXVIII, 1196
 Wyoming, pay zones of, XXII, 686
 Wyoming, Sundance fauna from, XXI, 719
 Wyoming and Montana, XI, 751; XVI, 866
 Jurassic and Lower Cretaceous, boundary between, XXVII, 255
 Jurassic and Lower Cretaceous formations of southern Arkansas, XXV, 329
 Jurassic and Triassic formations in Utah and Wyoming, nomenclature of, XXI, 722
 Jurassic age of Franciscan, XXVII, 190
 of Knoxville, XXVII, 195
 probable, of Texas salt domes, XXVII, 1234
 Jurassic ammonites, MSC, 80
 Jurassic ammonites and plants in Mexico, XXVII, 1418
 Jurassic-Carboniferous unconformity, Turner Valley field, GAS, 45
 Jurassic cephalopod sequence, MSC, 92
 Jurassic-Cretaceous (Giron) beds in Colombia and Venezuela, XXIV, 1611
 bibliography on, XXIV, 1619
 Jurassic-Cretaceous boundary, XXVII, 270
 in Sierra Madre Oriental, XXVII, 1494
 Jurassic deposits in Wyoming, XXI, 717
 on west side of East Texas basin, XXVII, 1230
 Jurassic Ellis formation of Montana, type section of, XXIX, 451
 Jurassic exploration in East Texas in 1944, XXIX, 769
 Jurassic flora, CD, 64
 Jurassic formations, chart showing cor-

(Jurassic)

- relation of, in part of Rocky Mountain region, XXIII, 1176
 in Colorado and Utah, nomenclature of, XXVI, 721
 in Cuba, oil possibilities of, XXVII, 1529
 in Idaho, XXI, 721, 729
 in Mexico, oil possibilities of, XXVII, 1528
 in North Lisbon field, relationships of, XXVII, 1469
 in southern United States, oil possibilities of, XXVII, 1528
 in Utah, Arizona, New Mexico, and Colorado, correlation of, XXI, 723
 in Utah, New Mexico, and Colorado, correlation of, XXI, 723
 in Western Interior region, correlation of, XXIX, 1020
 in Wyoming, nomenclature of, XXI, 720
 map of northeastern Texas showing positions of wells drilled into or through, XXVII, 1412
 map of southern Arkansas and northern Louisiana showing locations of fields producing from, XXVII, 1408
 of Gulf region, XXVII, 1407
 correlation of, XXVII, 1437, 1473
 references on, XXVII, 1530
 Jurassic fossils in Cotton Valley formation of Louisiana and Texas, distribution of, XXVII, 1470
 in Smackover limestone of Alabama, Arkansas, Louisiana, and East Texas, distribution of, XXVII, 1446
 in Wind River Mountains, XXV, 137
 Jurassic gas in Colorado, New Mexico, and Utah fields, GAS, 369
 Jurassic gas-producing horizons in Russia, XVIII, 757
 Jurassic gas reserves, GAS, 21
 Jurassic Giron formation, map of part of Colombia and Venezuela showing location of, XXIV, 1612
 Jurassic history of North America, XXI, 219
 of North America: its bearing on development of continental structure, review XVI, 268
 Jurassic marine formations, gas flows from, GAS, 21
 Jurassic marine fossils, XXVIII, 311
 Jurassic oil, PROB, 155, 161, 166
 in California, XXVII, 260
 in Rocky Mountain region, XIII, 1249
 Jurassic oil and gas in Rocky Mountain states, PROB, 165
 Jurassic oils, XXVII, 1318
 Jurassic outcrops in Sweetgrass arch, XXIX, 1265
 Jurassic peneplain in southern Oklahoma and southwestern Arkansas, depth of base of Trinity sandstone and present attitude of, XII, 1005
 Jurassic redbeds, early Upper, in Mexico, XXVII, 1415
 Jurassic restored section, XXI, 756
 Jurassic rocks in Alberta, gas occurrences in, GAS, 20
 in mountains southeast of Saltillo, XXVII, 1490
 in western Wyoming, evolution of nomenclature for, XXI, 722
 Sundance formation, and related, in Wyoming, stratigraphy of, and

Jurassic)

- their petroleum aspects, XXI, 715
 Wyoming, age of, compared to European type section, XXI, 754
 Jurassic salt deposits in Texas, Louisiana, and Arkansas, XXVII, 1233
 Jurassic sands productive in Emba area, XXIII, 506
 Jurassic section from Badito, Colorado, to Panhandle of Oklahoma, XXIII, 1165, 1166
 from Bull Mountain, Wyoming, to Colorado City, Colorado, XXIII, 1156-1157
 from Colorado City, Colorado, to Las Vegas, New Mexico, XXIII, 1163
 from McElmo Canyon, Colorado, to Sandia Mountains, New Mexico, XXIII, 1169
 from southeastern Idaho to Basalt Mountain, Colorado, XXIII, 1173
 from southeastern Idaho to northwestern Colorado, XXIII, 1172
 from Todilto Park to Gallegos, New Mexico, XXIII, 1168
 Jurassic sections, San Juan Mountains, Colorado, through northern New Mexico, XXIII, 1166
 Jurassic sediments, carbon content of, SBP, 27-31
 carbon-nitrogen ratio, SBP, 34, 35
 Franciscan formation (Jf), SBP, 96, 167-194
 Morrison formation (Jm), SBP, 193-255
 Sundance formation (Js), SBP, 193-255
 Jurassic shales, PROB, 61
 Jurassic shore line in Mexico, XXVII, 1233
 Jurassic source beds in Turner Valley field, XVI, 791
 Jurassic strata in geosyncline of Timor-East Celebes, XXII, 15
 Jurassic stratigraphy of Rocky Mountain region, contribution to, XXIII, 1153
 Jurassic submergence in Argentina and Chile, XXIX, 502
 Jurassic Sundance sandstone, XXII, 680
 Jurassic system in Great Britain, MSC, 80, 90
 review, XVIII, 268
 Jurassic tests, active, January 1, 1945, XXIX, 776
 Jurassic time, end of, in Gulf region, XXVII, 1527
 Jurassic waters of Wyoming, Ellis waters in Montana correlative with, XXVI, 1357
 Jurassic zones in Rocky Mountain fields, XXVII, 472
 Juresan beds, XXIV, 261
 Juresan limestone, XXIV, 253
 Juroberingia, CAL, 75
 Jurocalifornia, CAL, 75
 Jurolaurentia, CAL, 75
 Jurosonora, CAL, 75, 92
 Jurozephyria, CAL, 76
 Juruá and Ucayali rivers, map of region of, XXI, 98
 Juruá area, Brazil, part of potentially oil-bearing structural belt, XXI, 110
 Juruá River, upper, Brazil, and middle Ucayali River, Peru, geological exploration between, XXI, 97, 1347
 Jussen, Edmund, Jr., XX, 950

Justice, P. S., XIII, 1095
Jutland, RMS, 333

K

- Kaempfer, XIX, 473
Kahler, XXIV, 273
Kahrz, XXIV, 751
Kaibab limestone, PROB, 165; VI, 47, 205, 210, 224, 226, 245, XXIV, 620 along Hurricane normal fault, XXIII, 134
Arizona, X, 830
Nevada, XX, 1199
productive of gas in Farnham and Woodside anticlines, Utah, XXI, 1254
Utah, XXIII, 124, 138
Kaibab marine fauna of Colorado, correlated with fauna of Leonard formation of West Texas, XXIV, 621
Kaibab productid, XXIV, 624
Kain, C. Henry, and Schultze, E. A., XII, 1110
Kaiser Wilhelm Institute for Silicate Research, RMS, 622
Kaisers Mound, V, 212
Kakegawa Pliocene, MSC, 170
Kaledonische und variszische Probleme der Westsudeteten, XXIII, 1418
Kalicki, K. P., XXIX, 1743, 1745
Kalitsch, K. P., XVIII, 722, XXI, 1153
Kallnach, RMS, 25
Kalm, Peter, XIX, 477
Kamb, Hugo R., classification of Zwolle field, Louisiana, as limestone reservoir, XV, 1293
review, XII, 562
Ruston gas field, Lincoln Parish, Louisiana, XXIX, 226
Kamb, Hugo R., and Packard, S. A., Olla field, La Salle Parish, Louisiana, XXV, 747
Kamerun Mountain, RMS, 382
Kanawha-Allegheny boundary in Appalachian area, XXIX, 165
Kanawha County, West Virginia, development, XXII, 1160
early development of drilling practices in, XXII, 1088
Oriskany fields in, XXII, 181
summary of drilling by fields, XXII, 187
(well 428), SBP, 349-379, 410
Kanawha Salt Licks, XXII, 1089
Kanawha series, XXIX, 146, 147
Kane, Bill, XX, 392
Kane, William G., XX, 385, 417; XXVIII, 1079, 1175, 1176
structural geology of border province of northeastern Mexico adjacent to Zapata and Starr counties, Texas, XX, 403
wells drilled in northeastern Mexico, XX, 478
Kane, William G., and Gierhart, Guy B., XXVI, 256, 265
areal geology of Eocene in northeastern Mexico, GC, 588; XIX, 1357
Kane, Thermopolis, and Cody sections of Sundance formation, correlation between, XXI, 739, 741
Kane-Elk sands, XXV, 807
Kane sand, PROB, 476, 478
in Bradford field, Pennsylvania and New York, STR II, 416, 422, 424
in Scenery Hill gas field, Pennsylvania, STR II, 449
Kani, H., XIII, 1384
Kanima dome, GAS, 530
Kankakee arch, FOP, 139; GAS, 820; PROB, 537, 539, 540; XVI, 149; XXII, 1539; XXIII, 822, XXV, 1571; XXVI, 1093, XXVIII, 70
uplift of, in Ordovician, XXI, 775
Kannenstine, F. M., XXV, 1258
Kano, Y., and Yamaguti, B., GAS, 1061
Kano, Y., XI, 187
Kansas glacial stage, CAL, 268
Kansas, GAS, 387, 391, 402, 412, 459, 483, 506, 1055; PROB, 275, 276, 292, 294, 297-301, 317-320, 323, 339, 762, 764, 917, RMS, 174
Aagard pool, STR II, 157
age of producing horizon, Rice County, X, 197
age of so-called Hunton limestone of southern McPherson and north-west Harvey counties, discussion, XVIII, 266
Anderson County, oil and gas resources of, review, XII, 217
anticlinal buried hills in Nemaha Mountains region, STR I, 66
Atyeo pool, STR II, 157
Browning pool, STR II, 157
Burkett pool, STR II, 157
Burkett-Seeley pool, Greenwood County, VII, 482
Burton field, XXIV, 1794
Bush City oil field, Anderson County, STRAT, 43
Cambrian in, STRAT, 63, 151
Cambro-Ordovician in, XXI, 1002
Carmi pool, Pratt County, XXVIII, 125
central, geological conditions in, II, 70
central, new data on Comanchean strata of, X, 553
central, oil domes, origin of, IV, 89
central, pre-Mississippian sediments in, XIII, 441
central, stratigraphic cross sections through, with top of Lansing group (Pennsylvanian) as datum plane, to show subdivisions of Mississippi lime and names of outcrop equivalents in Missouri, XXII, 1592, 1593
central, studies of insoluble residues from Mississippi lime of, XXII, 1588
central, uplift, STRAT, 131; XVI, 483; XIX, 1407; XX, 527
Central, uplift, geology of, XIX, 1405
central, well, Mississippian corals from a, XI, 1329
central and western, PROB, 576, 815
central-western, oil pools in, XXIII, 801
Chanute pool, Neosho County—a water-flooding operation, STRAT, 57
Clark-Wick pool, STR II, 157
clastic dike in Fort Hays chalk, XV, 842
Coffeyville field, STR I, 40
Comanchean in western, IX, 1105
Comanchean fossils, X, 561
concentration of Ordovician waters in, PROB, 277
correlatives of Mohawkian sediments in, XIII, 1213
counties productive in, XXV, 1108; XXVIII, 768, 771; XXIX, 704-706
Covert-Sellers field, STR I, 60
Cretaceous in, STRAT, 85, 141; XXIII, 1054; XXIV, 1797
Cretaceous deformation in, XXI, 954
(Kansas)
crystalline rocks, II, 98
Cunningham field, Kingman and Pratt counties, XXI, 500
Cunningham gas field, contours on top of Viola lime, XXIV, 1786
DeMalorie-Souder pool, STR II, 157
developments in 1936, XXI, 1004
developments in 1937, XXII, 666
developments in 1938, XXIII, 797
Devonian in, STRAT, 63
distribution of oil pools in, in relation to pre-Mississippian structure and areal geology, XVII, 793
distribution of pre-Mississippian rocks in, PROB, 321
distribution of shoestring sands in Greenwood and Butler counties, XXI, 40
drilling activity in 1938 and 1939, XXIV, 995
drilling activity in 1940, XXV, 1103
drilling activity in 1941, XXVI, 1074
drilling activity in 1942, XXVII, 806
drilling activity in 1943, increase of, XXVIII, 767
drilling activity in 1944, XXIX, 701
early Pennsylvanian deposits west of Nemaha Granite Ridge, X, 205
early Pennsylvanian sediments west of Nemaha Granite Ridge, discussion, X, 636
eastern, natural gas in, GAS, 483
eastern, oil fields of Greenwood and adjacent counties in, FOP, 84; XXV, 1516
eastern, shale-gas industry of, XIII, 367
eastern, shoestring oil pools, further observations on, X, 568
eastern, shoestring-sand pools, STRAT, 870
eastern, shoestring sands of, VII, 103
Elbing field, STR I, 60
Eldorado field, STR II, 160
Ellis pool, STR II, 158
Enid formation, X, 786
example of directional drilling as applied to geology in Ellis County, XXVII, 87
examples of shoestring sand lenses, STR II, 700
exploration in 1936, XXI, 1001
extension of Rose dome intrusives, XII, 757
Fairport field, STR I, 35
Fankhauser pool, STR II, 157
flank production of Nemaha Mountains (Granite ridge), STR I, 60; XI, 919
Florence field, STR I, 60
fossils, Permian, X, 148
gas fields and natural gas trunk pipelines of, XXIV, 1784
gas pools in McPherson County, XXIV, 1795
geologic conditions in central, II, 70
geologic history of crystalline rocks of, II, 98
geologic structure of Dakota sandstone in western, IX, 1019
geology of Rainbow Bend field, IX, 975
geology, Permian, X, 144
Golden Lanes of Greenwood County, XI, 1151; XII, 99
Gorham oil district, discussion, XII, 443
Granite Ridge region, STR I, 60; X, 95; XI, 821

(Kansas)

granites in, I, 111
 graptolites in, XVII, 80
 Greenwood pool, STR II, 157
 ground-water resources of, XXV, 1412
 Harris pool, STR II, 157
 helium in natural gas in, GAS, 1055, 1056
 historical geological progress, I, 25
 Hittle pool, XXIV, 1002
 Hugoton gas field, Grant, Haskell, Morton, Stevens, and Seward counties, and Texas County, Oklahoma, STRAT, 78, 871; XXIV, 1782
 Hunton in, XVI, 490
 igneous intrusives in Silver City area, XVII, 1268
 igneous rock, IV, 183
 Lamont pool, STR II, 158
 larger gas fields in, XXIV, 1779
 leasing activity in, XXIV, 995
 leasing activity in 1942, XXVII, 807
 leasing activity in 1943, XXVI, 768
 leasing activity in 1944, XXIX, 702
 limestone, V, 401
 lower redbeds of, XXI, 1557
 Lyons gas field, contoured on top of Arbuckle lime, XXIV, 1792
 Madison shoestring pool, STR II, 150, 157
 magnetic vectors in, XVI, 1192
 map of oil pools in Sallyards-Madison trend, STR II, 151
 map showing location of Greenwich and Nemaha trends, XXIII, 644
 McLouth gas and oil field, Jefferson and Leavenworth counties, XXVI, 133
 Medicine Lodge gas field, STRAT, 871
 Medicine Lodge gas field, contours on top of Mississippi limestone, XXIV, 1790
 Mentor sandstone, X, 556
 metamorphic rocks of Woodson County, V, 64
 method of exploration in, XXV, 1108
 migration of oil from Arbuckle limestone into Chattanooga shale in Chetopa oil pool, Labette County, XXV, 1934
 Mississippi lime west of Granite Ridge, X, 96
 Mississippian in, STRAT, 63, 106, 124, 143; VIII, 445; XXII, 676; XXIV, 1002; XXV, 1109
 Mississippian in Greenwich pool, XXIII, 648, 649
 Mississippian in Wilson County, IX, 1211
 Nemaha Mountains, PROB, 410, 574
 Ness County, XXIX, 564
 new pools discovered in 1938, XXIII, 799
 new pools discovered in 1939, XXIV, 997
 new pools discovered in 1940, XXV, 1107, 1108
 Nikkel pool, McPherson and Harvey counties, STRAT, 105
 nitrogen in natural gas in, GAS, 1055, 1056
 occurrence of Ordovician sediments in western, X, 634
 occurrence of productive lenticular sands in, XXII, 831
 oil fields in, SBP, 407
 oil-pool map showing discoveries of

(Kansas)

1941, XXVI, 1078
 oil producing counties in, XXI, 1002; XXII, 667
 oil reserves, VI, 44
Kansas, Oklahoma, and northern Texas: correlation of Permian of, X, 144
Kansas, Oklahoma, and Texas, bibliography of Permian of, XXI, 1573
 geologic section of Blaine and Dog Creek formations, XXVIII, 1013
 Kansas, old wells of, review, VI, 391
 Ordovician in, STRAT, 63, 109, 125, 147
 Ordovician in Greenwich pool, XXIII, 649
 origin of Bartlesville shoestring sands, Greenwood and Butler counties, XVIII, 1313
 discussion, XVIII, 1710
 origin of cave-ins in Wallace County, XIV, 316
 origin of domes in central, IV, 89
 origin of shoestring sands of Greenwood and Butler counties, XXII, 1458
 Otis field, Rush and Barton counties, XXIV, 1788
 Otis gas field, STRAT, 871
 outcrop of basic igneous rocks in, IV, 183
 outpost wells in 1943, XXVIII, 769
 Patterson pool, Kearny County, XXVI, 400
 Peabody field, typical dome, STR I, 60, STR II, 677
 Pennsylvanian in, STRAT, 44, 63, 108, 124, 143; VIII, 446; XXII, 1591; XXIII, 1697; XXIV, 1002
 Pennsylvanian in Golden Lanes, XI, 1152
 Pennsylvanian outcrops in, XXVII, 636
 Permian in, STRAT, 85, 108, 124, 141, X, 786; XXIII, 1697; XXIV, 1782; XXV, 1685
 Permian fossils found below Welch chert in Dickinson County, XI, 1118
 Permian redbeds of, XXIII, 1751
 petrographic study of pre-Cambrian of, XI, 821
 petroleum resources of, review, VI, 386
 physiographic significance of loess near McPherson, XXIII, 1232
 pioneer work on Permian redbeds in, XXIII, 1815
 pipeline activity in 1939, XXIV, 997
 Piqua gas field, STRAT, 871
 Piqua pool, Allen and Woodson counties, XXIV, 1779
 Puxlee area, STR II, 157
 Polhamus-Marshall pool, STR II, 157
 pre-Cambrian in, XXV, 1626
 production at top of Mississippian residual chert in Bornholdt pool, XXIV, 1002
 production in 1941, XXVI, 1075
 production in 1942, XXVII, 807
 production in 1943, XXVIII, 768
 production in 1944, XXIX, 702
 production summary, XXI, 1005
 productive counties in, XXIV, 1796
 properties of oils, VI, 370
 proration regulations in, during 1940, XXV, 1105

(Kansas)

Prusa pool, XXIV, 1002
 Quaternary in, STRAT, 80, 106, 121; XXIII, 1054
 Rainbow Bend field, STRAT, 872; STR I, 52; IX, 974
 recent subsidence in Hamilton County, XV, 201, discussion, XV, 708
 relation between structure and production in Sallyards field, V, 276
 relation of buried granite in, to oil production, IV, 255
 relations of structure to production, VII, 75
 reserves discovered in 1943, XXVIII, 769
 Salina basin of north-central, XII, 177
 Salt Fork division of Cimarron series, Permian system, in, XXI, 1557
 Seeley pool in Greenwood County, STR II, 157, XI, 1166
 shale production in eastern, STR II, 708
 Shambaugh pool, STR II, 158
 Sheridan test, Ellsworth County, X, 199
 shoestring pools, PROB, 400
 Siluro-Devonian in, STRAT, 109
 Sooy conglomerate productive in Wherry pool, XXIV, 1002
 source beds in, PROB, 59
 south central, oil pools in, XXIII, 800
 southeast, subsurface observations in, VIII, 445
 southeastern, STRAT, 64, 65
 southeastern, Engleware channel sandstone of Pennsylvanian age, XIX, 1061
 southeastern, and northeastern Oklahoma, correlation of producing sands in, V, 293
 southeastern, and northeastern Oklahoma, Pennsylvanian outcrop sections, XXVII, 634
 southeastern, and northeastern Oklahoma, physical characteristics of Bartlesville and Burbank sands in, XXI, 246
 southeastern, and northeastern Oklahoma, two layers of geology, XXVII, 909
 southeastern, and northeastern Oklahoma, upper Demoinesian and lower Missourian rocks in, XXVII, 632
 southern, and northern Oklahoma, areal geologic map showing distribution of subdivisions of redbeds, XXIII, 1760-1761
 southern, and Oklahoma, major divisions of Permian in, XXI, 1515
 southwestern, geology of Hugoton gas field of, XXIII, 1054
 Stillwater formation, X, 792
 stratigraphic classification of Pennsylvanian rocks of, XXI, 275
 stratigraphy in southeast, VIII, 445-453
 stratigraphy in western, VI, 549
 stratigraphy, Nemaha Mountains, STR I, 61
 stratigraphy of Marmaton group, Pennsylvanian, XXIX, 1521
 stratigraphy and structure of Smoky Hill chalk in western, XXII, 595
 structure in, CAL, 29; VIII, 488
 structure in Central, II, 85

- (Kansas)
 structure, Rainbow Bend field, IX, 976
 subsidence in Wallace County, XVIII, 1499
 subsurface geology of Wilson County, IX, 1207
 subsurface Mississippian rocks of, XXV, 1410
 subsurface structures of central and western, IX, 1061
 Subsurface study of Greenwich pool, Sedgwick County, XXIII, 643
 Teeter pool, STR II, 156
 temperature gradients, PROB, 995, 996
 tenth annual business meeting, American Association of Petroleum Geologists, Wichita, 1925, IX, 678
 Tertiary in, STRAT, 81, 141, XXIII, 1054
 Thrall pool, STR II, 157
 Virgil pool, STR II, 142
 Voshell field, McPherson County, XVII, 169
 Wallace County, STRAT, 81
 Washburn College pool, Anderson County, XXII, 825
 Watchorn Oil Company's Watkins No. 1 in Arbuckle limestone in Clark County, deepest well ever drilled in, XXIII, 796
 water conditions in Urschel pool, Marion County, VI, 426
 well records in central, II, 90
 Wellington formation, X, 793
 west of Nemaha Granite ridge, exclusive of Hugoton district, gas fields of, GAS, 459
 western, an altered volcanic ash from Cretaceous of, XII, 1015
 western, areas of production discovered in, during 1939, XXIV, 998
 western, central, and northeastern, wildcat activity in 1940, XXV, 1106
 western, contribution to stratigraphy of, VIII, 242
 western, exploration for oil and gas in, during 1943, XXVIII, 1759
 western, local subsidence in, XIII, 605
 western, new areas of production discovered during 1941, XXVI, 1080
 western, new producing zones in old pools, XXIII, 806
 western, oil and gas resources of, XXII, 1287
 western, oil pools in, XXIII, 802
 western, oil pools, 1943, XXVIII, 771
 western, oil possibilities of, VI, 69
 western and northeastern, new pools discovered in 1944, XXIX, 704
 western central, Ordovician strata in deep wells of, XI, 49
 Wherry pool, Rice County, STRAT, 118
 Wichita, tenth annual business meeting, American Association of Petroleum Geologists, 1925, IX, 690
 Wiggins pool, STR II, 158
 wildcat activity in 1938, XXIII, 795
 wildcat activity in 1939, XXIV, 996
 wildcat activity in 1940, XXV, 1000, 1002
 wildcat activity in 1941, XXVI, 1075
 wildcat activity in 1942, XXVII, 807
 wildcat activity in 1943, XXVIII, 769
- (Kansas)
 wildcat activity in 1944, XXIX, 703
 Windom limestone, X, 555
 work on Carboniferous and Permian rocks of, XXIV, 299
 Zenith pool, Stafford County, STRAT, 139; XXIV, 1002
 Kansas and Colorado, use of thin bentonite beds in mapping structure, Rosencranz area, XIV, 1065
 Kansas and Nebraska, recent developments in 1936, XXI, 1000
 Kansas and Oklahoma, Bartlesville and Burbank sands in, XXI, 31, 247, 249, 359
 Mississippian in, XXVII, 909
 oil and gas fields in Burbank and Bartlesville sands, XXI, 32
 origin and distribution of Bartlesville and Burbank shoestring oil sands in parts of, XXI, 30
 Pennsylvanian in, XXVII, 909
 regional investigations, XIX, 948
 relationship of crude oils and stratigraphy in parts of, XXV, 1801; XXVI, 284
 Silurian and Devonian in subsurface in, XXV, 1645
 source and date of accumulation of oil in Granite Ridge pools of, XV, 1431
 stratigraphy of Permian in, XXI, 1513
 studies of source beds in, XXI, 1377
 subsurface distribution of pre-Mississippian rocks of, XIV, 1535
 subsurface water characteristics in, PROB, 855
 Kansas buried uplift, XXII, 1597
 Kansas City, Missouri, subsurface study of Cherokee formation near, XXII, 918
 Kansas City beds in South Dakota, XIV, 1262
 in Wyoming, XIV, 1262
 Kansas City formation, GAS, 497; V, 509, 548, 578
 in Golden Lanes, Kansas, XI, 1170
 Kansas City group, XXI, 506
 Bush City field, STRAT, 44, 45
 (Ckc) (Pennsylvanian), SBP, 259, 261-280, 413
 helium in, GAS, 1055
 in Missouri series in Iowa, XXV, 70
 Kansas City-Lansing limestone most important producer of western Kansas, XXV, 1680
 Kansas City limestone in Eldorado field, Kansas, STR II, 166
 in Greenwich pool, XXIII, 652
 Kansas core data, XXV, 868
 Kansas district, microscopic examination of well samples in, XV, 733
 Kansas fields, GAS, 464, 466, 478-480, 485
 Kansas gas pools, production in, XXIV, 1796
 Kansas gas sands, XXIV, 1797
 Kansas Geological Society, eleventh annual field conference, September, 1937, XXII, 100
 twelfth annual field conference, XXII, 949
 fourteenth annual field conference, XXV, 429
 fifteenth annual field conference, August, 1941, XXV, 1131, 1200, 1617
 Kansas Geological Survey, XXIV, 301
 Kansas maps and sections, list of, 448
- Kansas oil pool map, showing discoveries of 1939 and important dry holes completed in 1939, XXIV, 1000
 Kansas operations, drilling time important in, XXIII, 1821
 Kansas Pipe Line and Gas Company, pipelines of The, GAS, 478
 Kansas potential production, XXIV, 995
 Kansas reserves, development of, in 1939, XXIV, 999
 Kansas sediments, density increase with depth, PROB, 280
 Kansas structures, fault-block nature of, suggested by elimination of regional dip, XIX, 1540
 Kansas Viola, Richmond fossils in, XIV, 1351
 Kansas wells (wells 242-262), SBP, 255-285, 407
 Kansas wildcat drilling, XXV, 1002
 Kansu, China, oil prospects in, X, 1114
 Kant, Immanuel, XXIII, 608
 Kaoc-bay, RMS, 351, 354, 365
 Kaolin, RMS, 11, 537, 602; XXV, 2171
 Kaolin sand of North Sea, RMS, 332
 Kaolinite, RMS, 456-465, 467-490, 620, 623, 626
 crystal structure of, RMS, 459
 identification of, by X-ray, RMS, 624, 625
 in Atlantic sediments, RMS, 383
 in rock salt, XXI, 1293
 quantity of, in a shale, RMS, 509
 Kaolinite minerals, influence of, on clays, RMS, 481
 Kappler, H., XXIV, 1890
 Kar Nikobar, MSC, 221
 Kara-Bugaz, RMS, 102, 367
 Kara-Tau, XXI, 1458
 Karabugas, XXI, 1116
 Karachungul dome, XXIII, 506
 Karcher, J. C., XVIII, 120
 Karcher, J. C., and McDermott, Eugene, deep electrical prospecting, XIX, 64
 Karimata Strait, RMS, 349
 Karlik, XXIX, 1483
 Karman's stress-strain curves for marble, XXVII, 55
 Karnic stage, CAL, 67
 Karpinsky, A. P., XI, 493; XXII, 773, 774, 1018; XXIV, 259, 260, 264, 274, 278, 289, 294, 296, 322; XXVI, 402
 Karrer, Felix, XXV, 1219
 Karrick, Lewis C., PROB, 239, 242; XI, 1223, 1224; XII, 1060
 Karst landscape, effect of, XXI, 437
 Karst topography, GC, 579, XVII, 517
 of central plateau of Chiapas, XX, 1298
 of Reynosa Plateau, GC, 560; XVII, 498
 Karsten, Hermann, XVII, 212; XXIII, 1853; XXIV, 1618; XXIX, 1074, 1102
 Kaserer, H., XXVII, 1179
 Kasumiga-urí Lagoon, Japan, RMS, 509, 510
 Katalla-Yakataga field, commercial production of oil in, FOP, 11; XXV, 1443
 gravity of oil at, FOP, 11; XXV, 1443
 Kattegat, RMS, 298, 317, 319, 332
 Katy area, XXVII, 734
 Katy field, Texas, XXIX, 790
 Katy Lick storage pool, XXVIII, 1573
 Katy rice-growing area, pumpage and

- (Katy)
rainfall in, XXVII, 1097
Katy structure, XXVIII, 855
Katz, D. L., XXV, 1304, 1314
Katz, Sam, GAS, 997
Katzner, Friedrich, XX, 1229; XXIX, 546
Kauenhowen, Walter, oil fields of Germany, XII, 463
reviews, XVI, 613; XXII, 494; XXIII, 611
Verwasserung von Erdölfeldern, ihre Ursachen und Bekämpfung, review, XII, 451
Kaufman, Texas (wells 380, 381), SBP, 292-335, 409
Kaufman County, Texas, XXVIII, 850 (wells 378-381), SBP, 292-335, 409
Kaufmann, G. F., MEX, ix; XIV, 74
Kautz, A. R., XIII, 946
Kavanaugh Pet Co, SD, 611
Kaveler, H. H., XXVIII, 219, 230
Kawkawlin field, Michigan, XXV, 1132, XXVI, 1106, 1108; XXVII, 823, 828; XXVIII, 763; XXIX, 698
Kawkawlin structure, XXIV, 989, 1961; XXV, 1132
Kay, Fred Hall, VII, 620; XXIII, 1510, 1511, 1512, 1513, 1518, 1519, 1521
bibliography of publications by, XXVII, 1563
memorial of, XXVII, 1561
Kay, G. F., XXIX, 1716
Kay, George Marshall, XII, 201; XVIII, 1659; XIX, 1114, 1117; XXIII, 1053; XXVI, 404, 407, 408, 409
classification of Artinskian series in Russia, XXV, 1396
correlatives of Mohawkian sediments in Kansas, XIII, 1213
Kay, John A., STRAT, 775
Kay, M., XXIX, 1250, 1258
Kay, Marshall, paleogeographic and palaeontological maps, XXIX, 426
Kay, S. R., XIX, 839
Kay County, Oklahoma, pre-Pennsylvanian oil and gas horizons in, IV, 173
stratigraphy—oil fields, IV, 173 (wells 263, 264), SBP, 255-285, 407
Kay County fields, Oklahoma, STR I, 160
anticlinal occurrence influenced by buried hills in, STR II, 679
Kay County Gas Company (well 280), SBP, 255-285, 407
Kaye, M. Kamen, XXIII, 1853, 1854
discussion of geology of central Venezuela by L. Kehr, XXIII, 703
geological succession of central Venezuela, XXII, 1224, 1605
Ortiz sandstone and Guarumen sandstone group of north-central Venezuela, XXVI, 126
reconnaissance geology in state of Anzoategui, Venezuela, South America, XXI, 233
Kayenta formation, XXVII, 470
Kaysee dome, Tensleep water in, XXIV, 1299
Kayser and Delavel, XIII, 1468
Kayser, E., SD, 119; XIX, 533
Kazan, cyclothems in *Conchifera* beds south of, XXV, 1401
Kazanian beds, XXII, 1014
Kazanian epoch, section of later Carboniferous and Permian sediments in Russia at close of, XXV, 1401
Kazanian series, XXIV, 262; XXV, 1399, 1402
red cupiferous sandstones in, XXIV, 263
transition from red continental facies to white limestones of Kazan in, XXIV, 263
Kazarmeny Kamen, XXIV, 258
Kearny County, Kansas, Patterson pool, XXVI, 400
Keasey shale, Oregon, MSC, 103, 161, 317, 336, 354
Keble, R. A., and Benson, W. H., et al., XXV, 653
Kedge anchor sampler, RMS, 638
Keechelus andesite series, XXIX, 1394
Keechi Creek formation, XXIV, 88
Keechi dome, Texas, SD, 222, 243-253, 261, 265; GC, 166, 1, 75; VI, 58, 329; X, 36-44; XIII, 614; XVII, 1517
fossils from, SD, 248
Midway Foraminifera, X, 40
salt overhang at, GC, 167; XVII, 1518
Keechi Petroleum Company, SD, 267
Keefeton field, Oklahoma, GAS, 511; XIX, 520
faulting at, GAS, 527
Keele series, XXIV, 293
Keeler, William Weaver, memorial of, XXVII, 565
Keeley, P., XIX, 1358
Keen, A. Myra, XXIV, 1770; XXV, 194; XXVII, 2, XXVIII, 516, 953
percentage method of stratigraphic dating, review, XXIV, 2051
Keen, A., Myra, and Schenck, Hubert G., XXVII, 13
California fossils for the field geologist, review, XXIV, 2186
Keen, C. D., MEX, 122; XVI, 1263
Keenan, J. E., STRAT, 148
Keenan, Marvin Francis, CAL, 129, 130, 131; MSC, 51, 198, 276, 287, 289; 299, 301, 324, 325, 334, Fig. 14 (in pocket); SC, 90; XVI, 611, XX, 1636; XXVII, 7
Keener (Blue) formation, Ohio pools, STRAT, 383
Keener (White) formation, Ohio pools, STRAT, 385
Keener-Big Injun sand, PROB, 494
Keener lenticular sand productive in West Virginia, XXV, 802
Keener sand, PROB, 501, 506, 511, 845; XXV, 801
in eastern Kentucky, GAS, 935
in Granny's Creek pool, West Virginia, STR II, 576
in Ohio, STR I, 143; XI, 1028
in Rouzer pool, West Virginia, STR II, 575
Keener sandstone in Ohio, GAS, 903
Keeran, Texas (well 401), SBP, 335-349, 410
Keever, William R., SD, 468
Kegal, K., XXVII, 1182
Keho Lake to Bassano, southern Alberta, sections of Bearpaw shale from, ALTA, 115; XV, 1243
Kehrer, L., XXII, 1103; XXIV, 1567, 1568, 1611, 1618; XXVIII, 1643
Cabo Blanco beds of central Venezuela, discussion, XXIII, 1853
geology of central Venezuela, discussion, XXIII, 699
Kehrer, Wilhelm, XXIX, 1074, 1075, 1085, 1087, 1088, 1089
Kei Islands, Pliocene trough in, XXII, 49
Keidel, H., CD, 120, XXIII, 1724
Keidel, J., XIX, 1209, 1735, 1738, 1742
Keilhack, K., RMS, 204
Grundwasser und Quellen Kunde, review, XIX, 1701
Keith, Arthur, PROB, 540, 541; XIII, 416, 590, 594, XIV, 58; XV, 146, XXIII, 1073, 1266; XX, 929, 932, 933; XXII, 425, 1180; XXIX, 443
memorial of, XXVIII, 1553
Keller, H., XXIV, 1890
Keller, W. D., earth resistivities at depths less than one hundred feet, XXVIII, 39
size distribution of sand in some dunes, beaches, and sandstones, XXIX, 215
Keller, W. D., and Moore, George E., XXIV, 1650
staining drill cuttings for calcite-dolomite differentiation, XXI, 949
Kellerman, K. F., XVII, 510
Kellett, Betty, XIX, 1411; XXVIII, 832
Kellett, Betty, and Cushman, Joseph A., MSC, 12
Kelley, Frederic Richard, Eocene stratigraphy in western Santa Ynez Mountains, Santa Barbara County, California, XXVII, 1
Kelley, H. Allen, XIX, 1065
Kelley, P. K., XIV, 1080; XXV, bet. 2166 and 2167
Sulphur salt dome, Louisiana, SD, 452, IX, 479
Kelley, W. P., RMS, 456, 457, 461, 462, 463, 474, 486; IX, 1087, XVII, 67
base exchange in relation to sediments, RMS, 454
Kelley, W. P., and Liebig, G. F., Jr., XXVI, 847
base exchange in relation to composition of clay with special reference to offset of sea water, XXVIII, 358
Kellogg, Remington, MSC, 91; XIX, 525, 531; XXIX, 42
Kellogg, Remington, and Packard, Earl L., MSC, 69, 70, 154, 196, 204, 213, 222, 226, 230, 232, 240, 244, 248, 251, 258, 261, 264, 276, 291, 293, 299, 305, 333, 343, 344, 346, 347, 353
Kellum, Lewis Burnett, MEX, x, 13, 14, 22, 38, 160; PROB, 394; XIX, 242, 1358; XX, 407; XXI, 1207; XXVII, 1476, 1477; XXVIII, 1079, 1133, 1148, 1149, 1165, 1166, 1167, 1175
geologic history of northern Mexico and its bearing on petroleum exploration, XXVIII, 301
geology and biology of San Carlos Mountains, Tamaulipas, Mexico, review, XXII, 318
paleogeography of parts of border province of Mexico adjacent to West Texas, XX, 417
review, XX, 1134
similarity of surface geology in front range of Sierra Madre Oriental to subsurface in Mexican South fields, XIV, 73
Kellum, L. B., Imlay, R. W., Kane, W. G., Kelly, W. A., and Singewald, Q. D., evolution of Coahuila peninsula, Mexico, review, XXI, 1206

- Kelly, XXI, 1208
 Kelly, Donald, XIII, 946
 Kelly, H. C., GAS, 609
 Kelly, John M., XXVIII, 832
 Kelly, M. E., SBP, 2
 Kelly, P. K., SD, 430, 452, IX, 749; XX, 167
 Kelly, Thomas, Oil Company (well 45), SBP, 87-153, 403
 Kelly, W. A., XX, 417, 425, 427; XXII, 1525; XXIV, 1969; XXVIII, 1079
 Kelly, W. A., Berquist, S. G., and Hussey, R. C., occasional papers on geology of Michigan, review, XXI, 1597
 Kelly, W. J., RMS, 553
 Kellyville field, PROB, 435
 Kelp beds, RMS, 267
 Kelsey, Lewis O., XXV, 1969
 Kelsey anticline, Upshur County, Texas, PROB, 332
 structure and stratigraphy of, XVII, 656, 1015
 Kelsey dome, PROB, 301, 302
 Kelsey field, XXIII, 865, XXVI, 1004
 Kelsey structure, Texas (well 307), SBP, 292-335
 Kemler, Emory, and Poole, G. A., XXV, 1313
 Kemnitzer, Luis, MSC, 164; XIX, 1432
 Kemnitzer, William J., and Arnold, Ralph, GAS, 816; XIX, 493
 petroleum in United States and possessions, review, XVI, 103
 Kemp, Mrs., XI, 634
 Kemp, A. H., IV, 284
 Kemp, Garrett, lecture notes on practical petroleum geophysics, review, XXIV, 1339
 Kemp, James Furman, XII, 993, XVI, 936, XXVI, 1797
 handbook of rocks, review, XXIV, 1498
 Kemp, James Fulman, memorial of, XI, 221
 Kemp, James Furman, and Billingsly, Paul, VII, 264; XXIX, 1267
 Kemp clay, VI, 331, XXV, 637
 Kendall, F. F., III, 312
 Kendall, M. T., IX, 1087
 Kendall, P. F., MEX, 207, XIV, 562, 564
 Kendall, P. F., and Cornish, V., PROB, 395
 Kendall apparatus for orienting cores, XIV, 564
 Kendrick, Frank E., GAS, 660; XXI, Pl. B, opp 1085
 memorial of William Kennedy, X, 913
 Kendrick, Frank E., and McLaughlin, H. C., GAS, 1054
 relation of petroleum accumulation to structure, Petrolia field, Clay County, Texas, STR II, 542
 Kenilworth area, St. Bernard Parish, Louisiana, XXIV, 1089
 Kennedy, VIII, 428
 Kennedy, C. H., XIV, 1285, 1286
 Kennedy, H. S., GAS, 1054
 Kennedy, H. T., XXIV, 1363
 Kennedy, Luther E., STRAT, 71, 238, 443, 461, 478, 481; XXI, 258
 memorial of Charles Townsend Kirk, XXIX, 1222
 memorial of D. D. Finley, XI, 440
 memorial of Jerome Archibald Chevalier, XXIV, 2060
 Kennedy, Luther E., and Bass, N. W., XXI, 35
 Kennedy, Luther E., Bass, N. Wood, Leatherock, Constance, Dillard, W. Reese, origin and distribution of Bartlesville and Burbank shoe-string oil sands in parts of Oklahoma and Kansas, XXI, 30
 Kennedy, William, GC, 471, 481; SD, 9, 14, 21, 216, 223, 418, 436, 438, 447, 496, 504, 648, 652, 657, 677, 678, 771; I, 33; III, 211, 312; IV, 285; VI, 324; IX, 34, 465, 468, 474, 660, 751, 839, 851, 1285; XIII, 1337, 1342, 1348, 1353, 1358, 1360; XIV, 1301, 1309; XV, 532, 537; XVII, 1294, 1305; XIX, 655, 656, XXIII, 1603; XXVIII, 978, 1008, 1361; XXIX, 1721
 Bryan Heights salt dome, Brazoria County, Texas, SD, 678; IX, 613
 coastal salt domes, I, 34
 memorial of, X, 913
 Kennedy, William, and Hayes, C. W., GC, 437; VII, 539; IX, 601, 744, 844; XVII, 464, 653, 1460, 1505; XIX, 656; XXIX, 1708
 theory of origin of salt domes, IX, 844
 Kennedy, Oklahoma (wells 286-287), SBP, 255-285, 408
 Kennedy sandstone, XXV, 384
 Kennett, William, XXIV, 1723
 Kennett formation, CAL, 63
 Kent, Deane, XXVI, 18
 Kent, William, XIX, 848
 Kent and Lambton gas field, pipe lines from, GAS, 78
 Kentland Coal and Coke Company (well 432), (well U-4518), SBP, 349-379, 410
 Kentucky, CAL, 199; GAS, 813, 853, 915, 938, 939; PROB, 4, 73, 103, 340
 Baumé gravity of crude oil in, PROB, 106
 bibliography on Corniferous at Irvine, Estill County, XXVIII, 539
 bibliography on Devonian subsurface strata in, XXV, 710
 Big Sinking field, Lee County, STRAT, 166, 872
 Campton field, STR I, 73, 79; XI, 483
 central, Silurian and Devonian stratigraphy of, XXVIII, 533
 Chester rocks of Meade, Hardin, and Breckinridge counties, XXII, 267
 Chester sands most productive in, XXV, 1123
 Clay County gas field, STR I, 73, 82; XI, 486
 coal No. 8 in, XXIII, 1385
 Corniferous at Irvine, Estill County, XXVIII, 531
 Cretaceous or post-Cretaceous faulting in, XXV, 2046
 development in 1917, II, 38
 developments in 1942, XXVII, 820
 developments in 1943, XXVIII, 740
 Devonian in, STRAT, 180; XXV, 1147; XXVIII, 531
 Devonian rocks of, review, XV, 89
 Devonian zones in, XXV, 698
 distribution of St. Peter sandstone in, XXIII, 1838
 eastern, STRAT, 170, 872
 eastern, developments in 1941, XXVI, 1129, 1133
 eastern, developments in 1942, XXVII, 852
 eastern, developments in 1944, (Kentucky)
 XXIX, 682
 eastern, gas-producing counties of, XXVI, 1129
 eastern, geologic structure map of, Key bed: fine clay coal, XXIII, 1850
 eastern, natural gas in, XXI, 1352
 eastern, source of Corniferous oil in, XXII, 1452
 eastern, structure maps, VIII, 153-156
 eastern, subsurface structure of, VIII, 152
 eastern, West Virginia, and eastern Ohio, occurrence of oil and gas in, PROB, 485
 eastern coal field, STR I, 74-79
 Elkhart County field, STR I, 73, 82; XI, 487
 gas, VI, 261
 geologic map of, review, XIV, 247
 geology of, XXVII, 1021
 gravity of crude oil in Corniferous limestone in, PROB, 106
 Illinois, and Indiana, cross section, GAS, 816, 819, 822
 Illinois, and Missouri, Cretaceous and Tertiary sediments of, XIV, 845
 Illinois formations correlated with Chester of, XXII, 271, 275, 280-283
 Irvine pool, STRAT, 872
 isopach map on interval between top of Tyrone and Knox in, XXIII, 1840
 Janet gas field, STRAT, 872
 Lee-Estill-Powell field, STR I, 73, 79, 83; XI, 482
 list of wells used in study of Devonian and Silurian in, XXV, 700
 Menefee gas field, STRAT, 872
 Mississippian in, STRAT, 180; XXV, 1147; XXVII, 820; XXVIII, 759
 natural gas in eastern, GAS, 915
 natural gas in Eastern Interior Coal basin, GAS, 813
 Kentucky, northeastern Mississippi, and Tennessee, oil horizons of, VIII, 621
 notes on origin of oil in, XVIII, 1126
 oil fields of, II, 40
 oil geology of Warren County, VI, 24
 oil geology of Warren County, abstract, V, 100
 oil reserves, VI, 44
 oil shales of, abstract, V, 100
 Onondagan in, XXV, 686
 Ordovician in, STRAT, 173
 Ordovician section in, below top of Tyrone, sample log typical of, XXIII, 1842
 Owsley County gas field, STR I, 73, 81; XI, 484
 Pennsylvanian in, STRAT, 181; VIII, 630; XXVII, 820; XXVIII, 759
 preliminary report on oil shales of, review, V, 522
 present status of St. Peter problem in, XXIII, 1836
 production in 1940, XXV, 1123
 production in 1941, XXVI, 1095
 production in 1942, XXVII, 820
 production in 1943, XXVIII, 751
 production in 1944, XXIX, 682, 691
 relation between carbon ratios and oil and gas, PROB, 74
 relation of Devonian of, to petroleum

- Kentucky)
 possibilities, XXV, 710
 relation of Rough Creek fault of, to Ouachita deformation, XXII, 1682
 résumé of past years' developments in, from a geologic standpoint, II, 38
 reviews, V, 522; VI, 262-264, 383, 386, 387
 St. Peter sandstone in, XXIII, 107, 1837; XXIV, 1644
 Silurian in, STRAT, 179, XXV, 1147, XXVII, 820; XXVIII, 531
 some geological problems in recovery of oil and gas in, IV, 303
 source beds in, PROB, 59
 stratigraphy of Devonian in, XXV, 669
 stratigraphy, structure, oil fields, II, 38; IV, 303
 structure section, Clay County to Pike County, GAS, 929
 structure section, Powell County to Letcher County, GAS, 930
 structure section showing Irvine-Paint Creek fault, Johnson Creek fault, and Caney anticline, Morgan County, GAS, 926
 structure section showing Pine Mountain fault in Bell County, GAS, 925
 sulphur gas at Flat Gap-Win-Ivyton gas field, GAS, 944
 Sunbury shale in eastern, GAS, 936
 Temple Hill gas field, GAS, 825
 tests in, during 1940, XXV, 1147
 Turkey Knob gas field, GAS, 944
 unconformities in eastern, GAS, 917
 unexposed Silurian section and producing zone of Irvine oil field, Estill County, XXII, 1447
Kentucky, Virginia, and Tennessee, mechanics of low-angle overthrust faulting as illustrated by Cumberland thrust block, XVIII, 1584
 Warfield, anticline, GAS, 932
 Warren County, STRAT, 873, VI, 24
 Wayne and McCreary counties, STRAT, 872
 Weir gas field, GAS, 916
 Weir sands in Flat Gap-Win-Ivyton gas field, GAS, 944
 Weir sandstone in eastern, GAS, 935
 Weir sandstone in Isonville field, GAS, 945
 wells in, SBP, 410
 West Hickman fault in central, GAS, 924
 western, PROB, 562
 western, Coal Measures in, XXIII, 1385
 western, composite correlation diagram showing relation of Devonian and subjacent Silurian formations in, XXV, 695
 western, correlation of Devonian and subjacent Silurian formations of, XXV, 709
 western, developments in 1939 and 1940, XXIV, 969
 western, developments in 1940, XXV, 1123
 western, developments in 1941, XXVI, 1095
 western, developments in 1942, XXVII, 820
 western, developments in 1943, XXVIII, 759
 western, developments in 1944, XXIX, 691
- (Kentucky)
 western, Devonian subsurface strata in, XXV, 668
 western, geologic conditions in, XXV, 2047
 western, geology of oil and gas fields of, XVI, 231
 Kentucky, western, Illinois, and Indiana, Mississippian in, XXIV, 770
 Kentucky, western, Indiana, and Illinois, correlation of minable coals of, XXIII, 1374
 western, main producing formations of Mississippian in, XXIV, 854
 western, minable coals in, XXIII, 1379
 western, new pools discovered in 1943, XXVIII, 740
 western, paleostratigraphic map of Devonian of, XXV, 693
 western, post-Appalachian faulting in, XXV, 2046
 western, productive areas in McClosky of, XXIII, 1844
 western, sections, showing pre-Chattanooga structure and thinning of Devonian and Silurian south and east, XXV, 694
 western Kentucky fields, STRAT, 873
 zones of Silurian in Kentucky, XXV, 696
 Kentucky and Illinois, analyses of natural gas from, GAS, 838
 Chester correlation in, XXII, 272
 Kentucky and Indiana, paleontology of Borden group in, XXIV, 807
 Kentucky and southern Indiana, Devonian in, XXV, 686
 Kentucky and southern Michigan, magnetic vector study of, XVIII, 97
 Kentucky and Tennessee, Mississippian, VIII, 627
 oil and gas in, PROB, 515
 Kentucky and Virginia, Pennsylvanian in, XXV, 794
 Kentucky coal basin, XXIX, 691
 Kentucky Coal No. 9, XXIII, 1390
 Kentucky core data, XXV, 868
 Kentucky eastern coal field, relation of structure to production in five oil and gas fields of, STR I, 73; XI, 477
 Kentucky examples of accumulation due to lenticularity of producing formation, STR II, 698
 Kentucky fields, GAS, 820, 835, 837, 878, 923, 947
 Kentucky gas and oil pools, pipe lines from eastern, GAS, 921
 Kentucky gas fields, central, GAS, 877
 Kentucky geological maps, review, XIV, 954
 Kentucky Geological Survey, GAS, 814, 823, 824
 Kentucky geosyncline, eastern, GAS, 924, 933
 Kentucky maps and sections, list of, XXII, 454
 Kentucky Natural Gas Company, GAS, 813, 820, 823, 824
 Kentucky nomenclature, XXIII, 1374
 Kentucky Pipe Line Company, GAS, 943
 Kentucky River fault zone, XXIII, 1847
 Kentucky samples (wells 430-434), SBP, 349-379, 410. (See also Appalachian samples)
 Kentucky-Tennessee line, oil develop-
- (Kentucky)
 ments along, during 1923, VIII, 454
 Kentucky-West Virginia Gas Company, GAS, 942, XXII, 1183
 Kenwood sandstone, XXIV, 796
 Keokuk area, columnar section of, XXIII, 224
 Keokuk cherts in northeastern Oklahoma, fossils in, XXIII, 329
 Keokuk fauna, bryozoans abundant in, XXIV, 807
 Keokuk field, Oklahoma (well 294) SBP, 255-285, 408
 Keokuk formation, IV, 45; V, 122
 XXI, 1160; XXV, 1652
 fauna of, XXI, 1161
 in Oklahoma, XXIII, 329
 in southern Ozarks, XVIII, 1154
 Keokuk limestone, XXIV, 795
 Keokuk pool, Seminole and Pottawatomie counties, Oklahoma, anticlinal folding at, XXIII, 236
 communization plan at, XXIII, 237
 faulting in, XXIII, 237
 faulting and folding in Pennsylvanian time, XXIII, 236
 fossils in, XXIII, 229, 230, 233
 geology and development of, XXIII, 220
 gravity of Wilcox oil at, XXIII, 241
 Hunton limestone productive in, XXIII, 231
 Hunton unconformity at, XXIII, 236
 map showing location of, XXIII, 221
 Oklahoma, Pennsylvanian in, XXIII, 223
 production from, XXIII, 244
 proration at, XXIII, 241
 repressuring at, XXIII, 243
 reserves at, XXIII, 245
 stratigraphy of, XXIII, 222
 structural history of, XXIII, 232
 voluntary restriction in rate of production, XXIII, 237
 wells in, XXIII, 220, 222, 230, 231, 237-245
 wide spacing in, XXIII, 245
 Kepler, W. R., GAS, 1111
 Kerguelen Islands, organic sediments in, PROB, 30
 Kermba Archipelago, MSC, 169
 Kermit-Ellenburger pool, XXVIII, 818
 Kern County, California, CAL, 140, 177, 179, 288; MSC, 26, 32, 40, 49, 50, 61, 85, 102-105, 107, 108, 113, 114, 125, 133, 152-155, 163, 188, 192, 198, 199, 201, 204, 205, 208, 210, 214-217, 219, 221, 225-227, 230, 232, 234, 237, 240, 241, 246, 251, 253, 257, 258, 260, 262, 266, 271, 274, 275, 287, 290, 292, 293, 302, 305, 308, 310, 312, 314, 316, 320-322, 324, 325, 328, 329, 333, 334, 342, 343, 346, 347, 352, 353; XXI, 984
 Edison oil field and vicinity, STRAT, 1
 Eocene stratigraphy of Chico Martinez Creek area, XXVII, 1361
 Kern Front oil field, STRAT, 9
 outcrop sections K, U, SBP, 167-194, 411
 Paloma oil field, XXIV, 742
 Rio Bravo oil field, XXIV, 1330
 Strand oil field, XXIV, 1333
 Wasco field, XXIII, 1564
 (wells 21-24), SBP, 130-153, 403
 Kern County oil fields, PROB, 196, 197, 199, 200, 202, 204, 205

- Kern Front oil field, Kern County, California, PROB, 204, 745, 804, STRAT, 9, 15**
 accumulation of oil, STRAT, 12-15
 analyses of oil and water, STRAT, 17-18
- Kern River, CAL, 16, 20, 214, 288; MSC, 124, 127, 158, 202, 231, 256, 265, 289, 312, 315, 337, Fig. 14 (in pocket), SC, 35, XX, 1581**
- Kern River and Sunset-Midway fields, microlithology and micropaleontology of oil-bearing formations in, X, 482**
- Kern River and Temblor Basin, Neocene deposits of, MSC, 153**
- Kern River area, MSC, 67, 120, 303**
- Kern River bluffs, MSC, 27**
- Kern River district, XIII, 107**
- Kern River fault, CAL, 43**
- Kern River field, California, PROB, 203, 744, 745, 803, 839, 962-964; IV, 21; V, 178, 457; VI, 380, XIII, 231**
- Kern River formation, CAL, 235, 242; PROB, 203, 205**
 Edison field, STRAT, 2
 Kern Front field, STRAT, 10
 Kern River series, California, X, 492
 Kernschichte, RMS, 104
- Kerogen, PROB, 53, 236, 238, 271, 728, IX, 180**
 in Black shale in eastern Kentucky, GAS, 938
 of oil shale, effect of rock flowage on, IX, 158
 physical properties, VIII, 308
 solubility of, IX, 1139
- Kerogen and its relation to origin of oil, VIII, 301**
- Kerogen shales, X, 1017**
 marine, XIII, 1380
- Keroher, R. F., and Abernathy, G. E., sequence of beds in southeastern Kansas, STRAT, 65**
- Kerosene, PROB, 112, 121, 122, 139, 141**
 in crude oil, PROB, 128
- Kerosene cut, California, VIII, 566**
- Kerr, J. B., and Bell, H. W., petroleum engineering in the Burkburnett field, Texas, review, VI, 260**
- Kerr, Paul F., CAL, 123; MSC, 115; RMS, 457, 468, 473, 484, 485, 619, 625, 628; SC, ix; XII, 148, 160; XX, 1535**
- Kerr, Paul F., and Schenck, Hubert G., CAL, 134, 149; MSC, 114, 115; XIII, 203; XVI, 24; XXVII, 6**
- Kerr, Richard, GAS, 119**
- Kervagant, M., XXIV, 1550**
- Kessler, D. W., VIII, 720, 730; IX, 445**
 Kessler limestone, grain residue of, XXIV, 431
 insoluble residues of, XXIV, 430
 Kessler limestone member of Bloyd formation on Hale Mountain, Oklahoma, XXIV, 430
- Ketones, PROB, 36**
- Kettle Creek oil pool, Kentucky-Tennessee, VIII, 456**
- Kettleman Front area, XVI, 364**
- Kettleman Hills, California, CAL, 18, 20, 46-48, 148, 168, 171, 173, 198, 205, 215-217, 219, 220, 240, 245, 255, 262; GAS, 128; MSC, 38, 50, 68, 70, 71, 105, 128, 188, 202, 204, 206, 215, 230, 232, 237, 251, 254, 256, 261, 264, 266, 268, 276, 277, 281, 282, 309, 310, 312, 314, 316, (Kettleman)**
 323, 330, 344, 345, 347, 353, Fig. 14 (in pocket), PROB, 145, 188, 795, 840, SC, 29, 35, 53, 56, 62; XX, 1575, 1581, 1599, 1602, 1608; XXII, 709; XXIV, 1940, XXVII, 865
 age of producing horizon at, XV, 839; discussion, XVI, 417, 611
 geologic events in, SC, 137, XX, 1683
 geology and unit operation at, XVIII, 1465
 heavy-mineral studies on correlation of sands at, XVIII, 1559
 Whepley shale faunule, MSC, Fig. 14 (in pocket)
- Kettleman Hills and Belndge, Reef Ridge shale faunules from, MSC, Fig. 14 (in pocket)**
- Kettleman Hills anticline, PROB, 406**
- Kettleman Hills area during Lower Pleistocene, SC, 66, XX, 1612**
- Kettleman Hills field, California, PROB, 186, 746; VI, 57; XIII, 1479**
 geology of, XVII, 1161
 preliminary report on, review, XIII, 1488
 waters in, PROB, 959, 960, 985 (wells 7-20), SBP, 130-153, 403
- Kettleman Hills North dome, California, GAS, opp 128, 132, 134; XXVII, 870**
 faulting on, XXVII, 1260
 gas-oil ratios in, XXIV, 1945
 gravity of oil in, XXIV, 1945
 McAdams (Eocene) sand contours, XXIV, 1945
 models of, XXIV, 740
- Kettleman North Dome Association, GAS, 135; XXII, 709; XXIV, 1941**
- Kettleman North Dome Association (well 15), SBP, 130-153, 403**
- Kettleman Hills oil field, California, MSC, 106, 229, 241, 248-250**
 subsurface stratigraphy of, XVIII, 435
- Kettleman Hills pool, reservoir rock of, Temblor formation of middle Miocene age, XXIX, 1189**
- Kettleman Hills structure, magnetometer surveys, XV, 1364**
- Kettleman Plain, SC, 53, 64; XX, 1599, 1610**
- Kettleman sand, PROB, 796**
- Kettner, Radium, VI, 525, 530**
- Keunecke, O. XVIII, 69**
- Kevin-Sunburst and other oil and gas fields of Sweetgrass arch, review, XIII, 691**
- Kevin-Sunburst area, PROB, 932, 935, 939, 940, 950**
- Kevin-Sunburst dome, Montana, GAS, 250, 252, 267, 269; PROB, 702, 703, 705; STRAT, 303, 304; XXVII, 432, 436, 464; XXIX, 1265, 1281**
 Sawtooth formation in, XXIX, 1274 section, XXIX, 1302
 Swift formation in, XXIX, 1284
- Kevin-Sunburst field, Toole County, Montana, GAS, 269, 270, 1057, 1065; PROB, 160, 348, 349, 368, 684, 687, 692, 928, 980; STRAT, 273; STR II, 254; VII, 763; X, 197, XIII, 781; XXI, 993; XXII, 684, 688; XXIII, 909, 920; XXVI, 326; XXVII, 465, 471; XXVIII, 791, 797**
 explained on hydraulic theory, VII,
- Kevin-Sunburst)**
 217
 gravity of oil in Ellis formation in, XXVIII, 797
 production from, XXII, 688
 Montana, stratigraphic trap at, XXI, 1244
 waters in, XXVI, 1371
- Kevin-Sunburst oil field, Montana, notes on, VII, 263**
- Kew, William S. W., CAL, 3, 5, 6, 10, 42, 229, 231, 257, 278; GAS, 119, 205; MEX, 134, 135, 139, MSC, 101, SBP, 92; VII, 607; VIII, 789; X, 502, 753, 759, 763, XI, 89; XII, 120, 237, 243, 244, 246, 519, 559, 746, 752, 753; XIII, 493, 494, 500, 502, 505, 511, 516, 517, 640, 751, XVII, 732, 1162; XVIII, 788; XX, 126; XXI, 213, 224, 229, 584; XXIII, 518, 521, 533; XXV, 245; XXVI, 176, 185, XXIX, 957**
 California meeting of American Association of Petroleum Geologists, VII, 705
 geologic formations of part of southern California and their correlation, VII, 411
 memorial of Carl St. John Bremner, XXIX, 120
 memorial of Eric A. Starke, XVIII, 967
 reviews, VI, 481, VIII, 832; XVIII, 1213; XXIV, 1841; XXVI, 1777
- Kew, William S. W., and Brown, Arthur B., occurrence of oil in metamorphic rocks of San Gabriel Mountains, Los Angeles County, California, XVI, 777**
- Keweenaw Oil Company (well 279), SBP, 255-285, 407**
- Keweenaw fault, PROB, 538, 539, 554**
 Keweenaw sandstones, upper, contact between basal St. Croixian and top of, XXIV, 744
- Keweenaw sandstones and arkoses, heavy-mineral analyses of, XXVIII, 115**
- Keweenaw series of northern Michigan, bitumen in Nonesuch formation of, XVI, 737**
- Keweenaw structural front, PROB, 539**
- Kewley, James, XX, 290**
 petroleum and allied industries, review, XII, 223
- Key to formation symbols, SBP, 413-416**
- Key to productivity classification, SBP, 83**
- Appalachian, SBP, 375**
 California, SBP, 146, 148
 California outcrop samples, SBP, 190
 central California, SBP, 148
 East Texas, SBP, 327
 Gulf Coast, SBP, 346
 Los Angeles Basin, SBP, 146
 Mid-Continent, SBP, 281
 Rocky Mountains, SBP, 237
 Rocky Mountains outcrop samples, SBP, 253
 West Texas, SBP, 289
- Key fossils of *Planulina harangensis* zone, XXIV, 444**
- Key horizons, beds of volcanic material as, IX, 341**
- Key wells, structural map of central Michigan showing location of, XXII, 168**
- Key West field, PROB, 764**

- Keyes, C. R., I, 23, 24; XXIII, 329; XXIV, 778; XXV, 64, 2109, 2112, 2113, 2114, 2123, 2138; XXIX, 166
- Keyes, C. R., and Rowley, R. R., XXIV, 779
- Keyes, D. A., and Eve, A. S., applied geophysics in search for minerals, review, XII, 1571
- Keyes, Robert L., and Case, J. B., GAS, 183
- Keyes, Wilson, memorial of, XX, 1272
- Keys, XII, 190
- Keys, D. A., XVI, 1264
- Keys of Florida, RMS, 293
- Keyser limestone, XXIV, 1984
- Keystone-Ellenburger field, XXIX, 750
- Keystone-Ellenburger pool, XXVIII, 818
- Keystone-Holt area, reserve in, XXIX, 747
- Keystone pool, XXIII, 842; XXVIII, 819
- Keystone structure, XXVIII, 819
- Keyte, Ivy Allen, XIII, 958, 963, 967, 995, 999, 1016, 1019; XIV, 792; XV, 1030, 1100, XVII, 110, 375; XXIV, 307
- correlation of Pennsylvanian-Permian of Glass Mountains and Delaware Mountains, XIII, 903
- memorial of, XV, 985
- Keyte, I. A., and Brainerd, A. E., PROB, 684; XI, 1235; XXI, 719, 748, 751
- some problems of Chugwater-Sundance contact in Bighorn district of Wyoming, XI, 747
- Keyte, Ivy Allen, Blanchard, and Baldwin, XIII, 903
- Keyte, Ivy Allen, Brainerd, A. E., and Baldwin, H., XVIII, 540
- Keyte, Ivy Allen, Brainerd, A. E., and Baldwin, H. L., Jr., pre-Pennsylvanian stratigraphy of Front Range in Colorado, XVII, 375
- Keyte, W. Ross, PROB, 247; SBP, 6, 7; XXV, 1933
- bibliography of, on source beds, SBP, 8
- Keyte, W. Ross, and McCoy, Alex W., PROB, 313, 920; XX, 254, 292, 296; XXVII, 1183, 1189
- present interpretations of structural theory for oil and gas migration and accumulation, PROB, 253
- Khabokou, XXIV, 297
- Khvorova, I. V., XXIV, 244
- Kiamichi clay in northern Texas, XIII, 1293
- in trans-Pecos Texas, XXII, 1430
- Kiamichi-Duck Creek contact, XXVII, 1070; XXIX, 1460
- Kiamichi-Duck Creek section exposed at Denison Dam, log, XXVII, 1063
- Kiamichi formation, XXVII, 487, 1060, 1061; XXIX, 172
- correlation, XXIX, 1461
- distribution and thickness, XXIX, 1458
- erosion of, during Duck Creek time, XXIX, 1459
- in South Texas, sections, XXIX, 1460, 1461
- of middle Albian age, XXIX, 1426, 1464
- stratigraphic and lithologic features, XXIX, 1459
- Kiamichi residues, XXVII, 1063
- Kiamitia clay, V, 298, 343
- Kiamitia horizon, PROB, 382, 391
- Kibbey formation, XXVII, 1298
- Kibbey time, XXVII, 1301
- Kibler field, GAS, 564, 565
- Kick, XIV, 1041
- Kidd, Gentry, STRAT, 680; XXVII, 739; XXVIII, 858
- developments in south Texas, 1938-1939, XXIII, 860
- Kidd, Robert L., XIV, 1537, 1541; XVII, 80
- Richmond fossils in Kansas Viola, XIV, 1351
- Kiddville layer, XXV, 690
- Kidston, XIX, 1261
- Kiedel, J., XXVIII, 1476
- Kiger division of Cimarron series, XXI, 423; XXIII, 1803
- Kildale, Malcomb B., XXIV, 1770
- Kildare field, XXVII, 784; XXVIII, 848
- gravity of oil at, XXVII, 784
- Kildeer Mountains, XXVI, 357
- Kilian, W., XVI, 1118; XXIV, 1192, 1197
- Killians limestone, XXVII, 576; XXVIII, 183
- Killam-Oilton field, Webb County, Texas, XXII, 754
- Killen, W., Survey, Texas (well 336), SBP, 292-335, 409
- Kilpatrick gas well, XXII, 1505
- Kilpatrick gas zone, XXII, 1506, 1513
- Kimball, E. W., memorial of Jesse Elmore Simmons, XXV, 1610
- Kimball, J. P., MEX, 1; XI, 404
- Kimball, K. K., VIII, 739
- Kimball, A. H., X, 1250, 1258
- Kimberly - North - West correlations, XXV, 391
- Kimble, James C., STRAT, 9; XXIX, 956
- Kimbro area, Texas, XVI, 761
- Kimmel, Bernhard, and Newell, H. D., XXV, 134
- Kimmeridge formation, PROB, 380, 391
- Kimmeridgian, MEX, 11-13, 16, 33, 94, Fig. 9 (in pocket)
- Sundance correlated with, XXI, 719
- Kimmeridgian to Tithonian marine beds, Upper Jurassic, in southern Mexico, XXVII, 1512
- Kimmeridgian ammonites, XXVII, 1483
- Kimmeridgian beds, XXVIII, 1143
- Kimmeridgian charophyte oögonia and ostracoda, XXIX, 1269
- Kimmeridgian fossils, XXVII, 1513
- Kimmeridgian stage, XXVII, 1420
- Kimmeridgian time, XXVII, 1525
- Kimmiswick limestone, XXV, 1119
- Kimmiswick (Trenton) limestone productive in Dupo and Waterloo fields, XXIII, 821
- Kincaid, MEX, 100, 103, 104
- Kincaid formation, name proposed for lower Midway of Texas, XVII, 744
- unconformable on Cretaceous, XXIII, 195
- Kincaid sea, MEX, 140
- Kind, XIV, 561, 562, 563
- Kind core drill, XIV, 561
- Kind method of orienting cores, XIV, 563
- Kinderhook beds, V, 122
- Kinderhook faunas, XXIV, 792; XXV, 2109, 2112
- Kinderhook group, XXV, 1655
- basal group of Mississippian system of Eastern Interior basin, XXIV, 778
- (Kinderhook)
- (Ck) (Mississippian), SBP, 260, 261-280, 413
- in Illinois basin, XXIV, 233
- Kinderhook-Osage relations, XXIV, 792
- Kinderhook paleontology, XXIV, 789
- Kinderhook sedimentation, XXIV, 789
- Kinderhook series, XXIX, 135, 137
- Kinderhook shale, XXI, 507; XXII, 1591
- Greenwich pool, isopach map of, XXIII, 651
- Greenwich pool, structure map of, XXIII, 654
- Martinsville field, Illinois, STR II, 130
- Nikkel pool, STRAT, 109, 111
- Wherry pool, STRAT, 125
- Zenith pool, STRAT, 143
- Kinderhook shale and Mississippian limestone, unconformity between, XXIII, 649
- Kinderhookian conodonts, XXVI, 1565
- Kindle, Edward M., GAS, 941; MSC, 13; RMS, 43, 214, 285, 633, 634, 645, 651, 661; VII, 612; XI, 199, 239, 253; XV, 166, 1149, 1153; XVII, 510; XXII, 554, XXV, 684, 685, 686, 687, 834, 847; XXVI, 345, 347
- bottom deposits of Lake Ontario, review, IX, 1121
- scale of hardness and cohesion for sedimentary rocks, XI, 199
- Kindle, Edward M., and Bosworth, T. O., oil-bearing rocks of Lower Mackenzie River valley, review, V, 524
- Kindle, Edward M., and Butts, Charles, XXV, 688
- Kindle, Edward M., and Taylor, Frank B., XXII, 81
- Kindle ripple mark sampler, RMS, 633
- Kinematic equations and coefficients, RMS, 72-74
- Kinetic energy, RMS, 42
- King, II, 172; XXV, 94; XXVI, 829
- King and Duce, XXIX, 1078
- King, C., XIII, 592, XXVI, 1384
- King, Charles C., XVII, 242
- King, Clarence, GAS, 324, 342; XIV, 1015; XVI, 2, 9, 15, 16; XXI, 720
- King, F. H., IX, 203; XIII, 1075; XVI, 382; XXIV, 115
- King, Grace, SD, 323
- King, Helen C., PTNM, 539; XXVI, 539
- King, Jack Joseph, memorial of, XIII, 405
- King L., GAS, 609
- King, Philip B., PTNM, 533; XV, 1030, 1035, 1036, 1039; XVI, 95; XVII, 268; XVIII, 1537, 1538, 1663, 1692; XIX, 1306; XX, 487, 489, 1125; XXI, 836, 857, 874, 875; XXIII, 1673; XXIV, 5, 7, 8, 11, 87, 95, 165, 171, 281, 282, 308, 309, 320, 328; XXV, 74, 81, 90, 91, 92, 98; XXVI, 218, 224, 232, 383, 533, 1014; XXVII, 751; XXVIII, 1596, 1644; XXIX, 169, 1767, 1768, 1776
- abstract, XXII, 1707
- age of Bissett conglomerate, discussion, XIX, 1544
- discussion of late Paleozoic crustal movements, XIX, 1306
- discussion of pre-Carboniferous of Marathon uplift, XV, 1083
- notes on Upper Mississippian rocks

- (King)
 in Trans-Pecos Texas, XVIII, 1537
 older rocks of Van Horn region, Texas, XXIV, 143
 Ouachita boulder problem, XX, 484
 outline of structural development of trans-Pecos Texas, XIX, 221
 Permian of West Texas and southeastern New Mexico, PTNM, 535; XXVI, 535
 possible Silurian and Devonian strata in Van Horn region, Texas, XVI, 95
 pre-Carboniferous stratigraphy of Marathon uplift, West Texas, XV, 1059
 reviews, XX, 832, XXII, 318, 1206
 King, Philip, and Bridge, Josiah, XXIV, 6
 King, Philip B., and King, Robert E., XII, 1111, 1113, XIII, 646, 944, 959, 975, 1016; XIV, 977; XV, 994, 1030, 1034, XVI, 485
 stratigraphy of outcropping Carboniferous and Permian rocks of Trans-Pecos Texas, XIII, 907
 King, Philip B., and Stephenson, L. W., XXI, 806
 King, Philip B., Baker, C. L., and Sellards, E. H., XVIII, 1005
 King, R. H., XXVI, 1387; XXVIII, 1498
 King, Ralph, XXVIII, 1621
 King, Robert E., XXI, 1207, 1208, XXIII, 1700; XXIV, 183, 309, 312, 1131, XXV, 74, 75, 81, 90, 91, 438, XXVI, 218, XXVII, 751; XXVIII, 305, 307, 1079, 1183, 1186, 1887; XXIX, 1767
 King, Robert E., and King, Philip B., XII, 1111, 1113; XIII, 646, 944, 959, 975, 1016; XIV, 977; XV, 994, 1030, 1034; XVI, 485
 King, Robert E., Dunbar, Carl O., Cloud, Preston E., Jr., and Miller, A. K., XXIX, 1767
 King, Victor H., XXIX, 956
 King, William, Survey, Texas (well 310), SBP, 292-335, 408
 King-Castlebury pool, XXIII, 849
 King City, CAL, 44, 175; MSC, 109, 133
 King City fault, CAL, 43, 58, 262; XIII, 210
 King City Mesa, XIII, 203
 King County, Texas, Custer formation in, XXI, 459, 460
 King Oil Company, XXIII, 853
 King sand, XXIII, 854
 Kingfisher formation, II, 74
 Kingman and Pratt counties, Kansas, Cunningham field, XXI, 500
 Kingman sandstone, contact with Chickasaw sandstone, XXIII, 1784
 Kingman sandstone member of Cimarron series, XXIII, 1767
 of Harper sandstone, XXIII, 1785
 Kings County, California (wells 9-20), SBP, 150-153, 403
 Kings Creek, MSC, 53, 108, 196, 198, 204, 213, 216, 221, 222, 240-242, 258, 260, 276, 316, 319, 323, 332, 346, 355
 type San Lorenzo faunules from, MSC, Fig. 14 (in pocket)
 Vaqueros faunule from, MSC, Fig. 14 (in pocket)
 Kings Creek-Big Basin, MSC, 2
 King's dome, SD, 222, 274, 275, 308-311; X, 256; XXVI, 995
 Kings River, CAL, 16
 Kinkaid formation, XXIV, 211
 Kinkaid limestone, XXII, 280; XXIV, 839, XXV, 874
 Kinkel, John Franklin, memorial of, XXI, 691
 Kinkel, W. C., notes on southern part of Permian Basin, XX, 1250
 Kinney, D. M., XXVIII, 1627
 Kinney *et al.*, SD, 611
 Kinney-Coastal Oil Company, XXII, 684
 Kinney-Coastal Oil Company (well 230), SBP, 194-243, 407
 Kinsey, T. M., STRAT, 565
 Kinta anticline, GAS, 520
 Kinta pool, GAS, 520, 522
 Kiome sand, XXVII, 301
 Kiowa County, Colorado (well 241), SBP, 194-243, 407
 Kiowa County, Oklahoma, Hobart pool, XXIV, 1022
 Kiowa shale, II, 73, 79; VI, 70, 551
 Hugoton field, STRAT, 84, 85
 Kip, A. F., and Evans, R. D., XXIV, 1532
 Kirby, Grady, III, 137
 Kirby, J. M., XVIII, 1348, 1355, 1356; XXIX, 958, 963, 990, 992, 993, 1006
 Upper Cretaceous stratigraphy of west side of Sacramento Valley south of Willows, Glenn County, California, XXVII, 279
 Kirby, J. M., and Hickey, H. N., developments in Rocky Mountain region in 1938, XXIII, 903
 Kirby, Thomas, SD, 684
 Kirby Creek anticline, XXVII, 448
 Kirby Petroleum Company, SD, 529, 612
 Kirk, Charles Townsend, GAS, 560; XXI, 34
 memorial of, XXIX, 1222
 memorial of James Earl Hoover, XVIII, 430
 notes on Sequoyah County, Oklahoma, V, 503
 publications of, XXIX, 1223
 review, XIV, 639
 significant features of western coal deposits, I, 148
 Kirk, Charles Townsend, and Weirich, T. E., XII, 769
 Kirk, Edwin, CAL, 20, 60, 61, 62, 66; XIV, 1283, 1284, 1287, XV, 1061, 1065, 1068, 1073, 1075; XVII, 353, 366, 387; XVIII, 532, 1539; XXIV, 143, 154, 164; XXVIII, 1322
 review, XXV, 1421
 Kirk, H. M., XIX, 1432
 Kirk, M. Z., II, 71, 90; XXIII, 1756
 Kirk gas sand in Graham District, Oklahoma, IX, 1024
 Kirker Creek, MSC, 161
 Kirker foraminiferal localities, MSC, 66
 Kirker formation, CAL, 148, 149, 151, 310; MSC, 160
 mollusks from, MSC, 161
 Kurker tuff, MSC, 163
 Kirker tuffaceous sandstone, MSC, 323
 faunules from, MSC, Fig. 14 (in pocket)
 Kirkfield limestone, lower Trenton, large ripples in, XXIX, 431
 Kirkham, Virgil R., GAS, 1059; XXIV, 1937
 natural gas in Washington, Idaho, eastern Oregon, and northern (Kirkham)
 Utah, GAS, 221
 petroleum possibilities in southeastern Idaho, review, VII, 197
 Kirkman limestone, oolitic phosphate in, XXIV, 626
 Kirkpatrick, Ruth, XXII, 1331
 Kirkpatrick, Sidney D., XI, 404
 Kirksville pool, XXVII, 819; XXVIII, 758
 Kirkuk anticline, XXVIII, 1498
 Kirkuk field, XXIII, 962; XXVIII, 1498
 Kirkwood formation, XXIX, 900
 Kirsch, Gerhard, geomechanics, review, XXIII, 349
 Kirwan, M. J., XVI, 1024
 Kisatchie Hills, XXIX, 1176
 Kiser gypsum, II, 114
 Kisinger channel, XXV, 1664
 Kiskapoo limestone, III, 138
 Kiskimmetas canal coal, X, 871
 Kislung, J. W., XVII, 656
 Kislung, J. W., Jr., Denison, A. R., and Oldham, A. E., PROB, 332
 structure and stratigraphy of Kelsey anticline, Upshur County, Texas, XVII, 656, 1015
 Kiss, Stephen, XVII, 1256, 1258
 Kissling, James, XIII, 683
 Kistler, Phillip S., XXIX, 956
 Kit Carson deep test, XXIII, 922
 Kitchener, XI, 148
 Kitchin, Joseph, XIII, 1100, 1123, 1125
 Kite, William Casper, XXI, 1547
 outline for type report on an oil field, I, 131
 Kitsap County, MSC, 77
 Kitson, Howard Walde, XV, 283
 graphic solution of strike and dip from two angular components, XIII, 1211
 memorial of, XVI, 115
 origin of folds of Osage County, Oklahoma, discussion, XII, 1026
 Kittrell field, Texas, XXI, 1086
 Kivalina River oil shale, Alaska, XIII, 835, fol. 848
 Kjeldahl-Arnold-Gunning method, SBP, 36
 Klamath graben, XXI, 115
 Klamath Island, CAL, 278, 292, 293
 Klamath Mountains, CAL, 1, 15, 26, 95, 233; XXI, 1345; XXIX, 1395, 1413
 boundary of Coast Ranges, CAL, 11
 Carboniferous in, CAL, 65
 Cretaceous in, CAL, 117, 118
 Eocene near, CAL, 124
 geology of, CAL, 15
 Granitic Basement, CAL, 27
 granitoid rocks in, CAL, 94, 96
 Jurassic in, CAL, 72, 74
 Northern Franciscan area, CAL, 30
 Pacific Ranges in, CAL, 35
 Pliocene along west margin of, CAL, 233, 251
 Redding district of, CAL, 63
 rocks of, correlation, CAL, 96
 Klamath peneplain, CAL, 15, 233
 Klamathonia, XXI, 1345
 Klein, I. L., VII, 351, 357
 Kleinpell, Daniel Shively, MSC, 5
 Kleinpell, Robert M., CAL, 175, 179, 210, 214, 215; MSC, 1, 7, 24, 28, 36, 37, 56, 61, 65, 69, 72, 73, 103, 113, 117, 160, 196, 199, 202, 213, 219, 222, 226, 227, 230, 232, 240, 242, 243, 244, 248, 251, 254, 256, 258, 260, 261, 264, 265, 266, 269,

- (Klempell)
276, 277, 285, 290, 291, 293, 299,
305, 308, 309, 313, 316, 323, 324,
329, 331, 333, 334, 337, 344, 346,
352, Fig. 14 (in pocket), SBP, 98;
SC, 30; STRAT, 12, XVI, 611;
XXVIII, 435, 1568, 1571, XIX, 523,
527, 530, XX, 126, 217, 1576;
XXIII, 25, 38, 40, 44, 252;
XXIV, 1723, 2038, 2043; XXV,
194, 198, 250, 251, 252; XXVI,
165, 189, 1614, XXVII, 1345,
1346, 1350, 1361, 1365, 1368,
1369; XXVIII, 955, 971
correlation chart of California Mio-
cene, CAL, 214
difficulty of using cartographic ter-
minology in historical geology,
XVIII, 374
Miocene zones of (Tlm, Tmm, Tum),
SBP, 92, 94, 95, 130-167, 168-194,
416
occurrence of bitumen in Queen
Charlotte Islands, British Colum-
bia, XVI, 797
Klempell, Robert M., and Alexander,
C. I., MSC, 27
Klempell, Robert M., and Bramlette,
M. N., MSC, 47, 65
Klempell, Robert M., and Cushman,
J. A., MSC, 68, 198, 209, 221, 233,
234, 272, 273, 295, 297, 321, 334,
347
Klempell, Robert M., and Galliher,
E. W., MSC, 34, 36
Klempell, Robert M., and Schenck,
Hubert G., MSC, 33, 79, 99, 100,
103, 152, 160, 161, 174, Fig. 6 (in
pocket); XX, 493; XXIV, 1930;
XXVII, 3, 6
Refugian stage of Pacific Coast Ter-
tiary, XX, 215
Klempell, Robert M., Bramlette,
M. N., and Lohman, K. E., MSC,
31, 45, Fig. 6 (in pocket)
Klempell, Robert M., Eckis, R., and
Lohman, K. E., MSC, 61
Klempell, Robert M., Gregersen, A. I.,
and Richards, G. L., Jr., MSC, 65
Klempell, Robert M., Schenck, Hubert
G., and Hobson, H. D., MSC, 53
Klempell, Robert M., Schenck, Edward,
and Schenck, Hubert G., MSC, 65
Klempell, Robert M., Woodring, W. P.,
and Bramlette, M. N., MSC, 77,
200, 206, 207, 209, 211, 212, 218,
221-223, 225, 230, 231, 237, 238,
244, 245, 247-249, 251-253, 255-
257, 259, 261-268, 270-274, 276-
279, 281-286, 288, 289, 294, 295,
297-300, 303, 304, 307-310, 312-
314, 317, 319, 320, 324, 326-328,
330-332, 334, 335, 337-342, 344,
347, 348, 350, 354, Fig. 14 (in
pocket)
Miocene stratigraphy and paleontol-
ogy of Palos Verdes Hills, Cali-
fornia, XX, 125
Klempell, W. D., CAL, viii, 219; GAS,
119; MSC, 1, 5, 7-9, 27, 45, 51, 61,
67, 73, 117, 118, 131, 204, 208, 290,
291, 310, 314, 320, 324, Figs. 4, 6,
14 (in pocket); PROB, 431; SC,
ix, 77; XVIII, 435; XX, 1535;
XXI, 1343; XXIV, 1723
Klempell, W. D., and Cunningham,
George M., XXIV, 2023
importance of unconformities to oil
production in San Joaquin Valley,
California, PROB, 785
Klempell, W. D., and McCloskey, D.,
MSC, 50, 105, Fig. 6 (in pocket)
Klepper, Harry John, STRAT, 172
Kline, Mortimer, XXVIII, 1780
Kline, Virginia H., XXVI, 342;
XXVII, 1568, 1588
stratigraphy of North Dakota, XXVI,
336
Klinger, Edgar D., Cross Cut-Blake
district, Brown County, Texas,
STRAT, 548
Klippe areas, SD, 112
Klappen, IX, 1190; XXIII, 1472; XXV,
1739
Kliwa sandstone, Europe, VI, 526
Klondike gold field, V, 524
Kluk, Christopher, XV, 14
Klyce, Erskine, XX, 1163
K.M.A. Ellenburger pool, XXVIII, 837
K.M.A. field, Wichita County, Texas,
V, 514, XXIII, 845, 850; XXV, 21,
1066
accumulation of oil in, XXIV, 118
development, XXVII, 778
discovery oil in Ellenburger forma-
tion, XXIV, 1494
Ellenburger limestone production in,
XXV, 1065
Strawn beds productive in, XXV,
1677
K.M.A. limestone, XXVII, 781
Seymour pool, STRAT, 763
K.M.A. pool, production at, 1943,
XXVIII, 835
K.M.A. sand, XXIII, 851
K.M.A. zone, XXIV, 1052
Knapp, Arthur, VII, 673, 674; XXVI,
1659, 1666
reviews, XI, 93, 641
Knapp, Arthur, technical papers and
their presentation, XII, 77
Knapp, I. N., SD, 389, 397
Knapp Creek dome at Bradford field,
Pennsylvania and New York,
STR II, 420, 431
Knapp formation in Bradford field,
Pennsylvania and New York,
STR II, 411
Music Mountain pool, STRAT, 494
Knappen, Russell S., IX, 902, XI, 823;
XXIII, 580, 581
memorial of James Furman Kemp,
XI, 221
report of general business committee,
March, 1934, XVIII, 703
report on research for 1933, XVIII,
711
Knappen, R. S. and Moulton, G. F.,
GAS, 248; PROB, 697; STRAT,
277, 281
Knebel, G. Moses, IX, 1153; XII, 528,
538; XVI, 585, 586; XVII, 1293
Knebel, G. Moses, and Wendlandt,
E. A., GAS, 654; PROB, 331;
STRAT, 608; XV, 537, 870;
XVII, 623, 764, 1129; XX, 1422
Lower Claiborne of East Texas, with
special reference to Mount Sylvan
dome and salt movements, XIII,
1347
Mount Sylvan dome, Smith County,
Texas, GC, 1041
Knechtel, M. M., XIX, 1694; XX, 491,
1343; XXI, 2; XXII, 913, 1105;
XXV, 1638
Knechtel, M. M., and Hass, W. H.,
XXVI, 313
Knechtel, M. M., and Rothrock, H. E.,
apparent recent crustal movement
at western end of Ouachita Moun-
(Knechtel)
tains, Oklahoma, XIX, 1219
Knechtel, M. M., Bridge, Josiah, and
Hendricks, T. A., geology of Black
Knob Ridge, Oklahoma, XXI, 1
Knechtel, M. M., Hendricks, T. A., and
Dane, C. H., stratigraphy of Arkan-
sas-Oklahoma coal basin, XX,
1342
Knight, XXIV, 1131
Knight, D. A., XIV, 1066
Knight, G. L., XVII, 241; XXIII,
1788, 1792, 1802
Knight, J. Brookes, PTNM, 539, 708;
XVI, 95; XVIII, 1538; XXIV,
154, 156, 171; XXVI, 539, 708,
1585, XXVII, 1061
Knight, J. Brookes, et al., are the
"Omphalotrochus beds" of U. S. R.
Permian? Discussion, XXIV, 1128
Knight, J. Brookes, Newell, Norman
D., Moore, Raymond C., and Brill,
Kenneth, XXIII, 1811
Knight, O. B., MEX, ix
Knight, S. H., PROB, 722; X, 445,
XVII, 144; XVIII, 1659, 1672;
XXIII, 1158; XXV, 883, 1729;
XXVIII, 1198, 1213
Knight, W. C., V, 206; XVIII, 1687,
1690; XXI, 718; XXV, 884;
XXVIII, 1196, 1212
Knight formation, XXV, 1735, 1741
Kniker, Hedwig T., GC, 749; SD, 211,
229; VIII, 442, 539, 541, 551; X,
3, 21, 157; XII, 911, 928; XV, 746,
748, XIX, 385, 393, XXIV, 1912;
XXV, 1222, 1250; XXVIII,
1357; XXIX, 1417
Kniker, Hedwig T., and Beede, J. W.,
XXIV, 289, 293, 297, 302, 321
Kniker, Hedwig T., Applin, Esther
Richards, and Ellisor, Alva C.,
GAS, 689; IX, 24; XIV, 730;
XVII, 640, 641
subsurface stratigraphy of coastal
plain of Texas and Louisiana, IX,
79
Knipovitsch, X, 1278
Knobbs, Walter, VII, 616
Knobtown sandstone, Pleasanton chan-
nel sandstone of north-central
Missouri correlated with, XXV, 32
Knopf, Adolph, CAL, 18, 26, 42, 43, 60,
61, 64, 66, 69, 95, 109; PROB,
1010; SC, 7; XX, 1553; XXIV,
500; XXVII, 182; XXIX, 1234
Knopf, Adolph, and Westgate, Lewis
G., XXIII, 130
Knopf, Adolph, Longwell, Chester R.,
and Flint, Richard F., outlines of
physical geology, review, XVIII,
960
textbook of Geology, Part I, Physi-
cal Geology, review, XVI, 1160
Knott, C. G., CD, 16
Knott County, XXVI, 1131
Know dolomite, XXIX, 684
Knowledge, need for broader, by field
geologist, XXVIII, 906
Knowlton, II, 71
Knowlton, Don R., XXI, 1470, 1474;
XXVI, 1202
Knowlton, F. H., VIII, 664, 666; IX,
258, XIV, 1293, 1294; XX, 1311,
1328; XXVIII, 509
Knowlton, G. F., XI, 988
Knox, John Knox, XX, 1087
geology of New Mexico as an index
to probable oil resources, IV, 95
Knox County, XXVI, 1049

- Knox County field, Kentucky, GAS, 932
- Knox dolomite, FOP, 151; V, 170; XXV, 1583; XXVII, 853
- Alabama, GAS, 858
- Big Sinking field, STRAT, 174
- Pickett County, Tennessee, XI, 907
- productive in Gainesville pool, XXV, 1124
- Tennessee oil fields, STR I, 245
- Knox dolomite group, XXVII, 1047
- in Tennessee, XXIV, 1653
- sandy zones in, XXIV, 1658
- structural contour map on top of, XXVII, 1046
- Knox field, XXVII, 775
- Knox Mississippian field, XXVIII, 837
- Knox test, XXVIII, 741
- Knoxville, Tennessee, RMS, 632
- Knoxville and Franciscan, map of California showing, XXVII, 123
- Knoxville beds, SC, 6, 9, 88, 91; XX, 1552, 1555, 1634, 1637
- alteration of, XXVII, 201
- basic and ultrabasic intrusions in, XXVII, 202
- distribution of, XXVII, 196
- Knoxville deposition, disturbances during, XXVII, 201
- Knoxville fauna, XXVII, 197
- Knoxville floras, CAL, 109
- Knoxville formation, CAL, 14, 36, 74, 77, 78, 83, 85, 86, 90, 91, 99, 101, 103, 107, 109-112, 114, 117-119, 287, 293, 302; SC, 8; XX, 1554; XXVII, 216, 254, 1343
- along west side of Sacramento Valley, lithology of, XXVII, 196
- Jurassic age of, XXVII, 195
- (Kkl, Kku) (Jurassic and Cretaceous), SBP, 96, 168-194, 414
- thickness of, XXVII, 220
- Knoxville fossils, XXVII, 198
- Knoxville mollusks, CAL, 111
- Knoxville series in California Mesozoic, XXI, 1344
- unconformable with Shasta series (Lower Cretaceous), XXI, 1345
- Knoxville shales, PROB, 183, 184
- Knoxville unit, XXVIII, 62
- Knudsen, Martin, RMS, 50, 61, 62, 661
- Kobayashi, Gichiro X., geology of oil fields in North (Russian) Sakhalin, X, 1150
- Kobayashi, X, 1164
- Kobe pump, XXIX, 773
- Kober, Leopold, CAL, 35, 36, 37, 38, XI, 47; XII, 853
- der Bau der Erde*, review, XIII, 87
- die Orogenese*, review, XVIII, 824
- Koch, Ant., SD, 111; IX, 1189
- Koch, H., XXIV, 1890
- Koch, L. P., research bearing on theory of continental drift, CD, 101
- Koch, Thomas W., analysis and effects of current movement on an active fault in Buena Vista Hills field, Kern County, California, XVII, 694
- Koenen, A. von, SD, 163; XVIII, 728
- Koenig, Ralph, STRAT, 22
- Koenigsberger, G., and Morath, O., XXIX, 1652
- Koenigsberger, Johann, VII, 608; XIII, 1259, 1271; XIV, 1165, 1166; XVI, 1274, 1302, 1304, 1310, 1328, 1329; XIX, 110; XXI, 1204
- adjustment of gradient of torsion balance and application of undulation method to gravity measurements, (Koenigsberger) discussion, XIV, 1221
- Aufsuchung von Wasser mit geophysikalischen Methoden*, review, XVIII, 1375
- grouping of geothermal data for different geologic and topographic features, XIX, 110
- Koenigsberger, Johann, and Muhlberg, M., PROB, 997; XIII, 1258, 1260
- Koenigswald, G. H. R. von, MSC, 173
- Koerber, W., XXIV, 1890
- Koerner, G., XIV, 566
- Koerner device for orienting cores, XIV, 566
- Koester, Edward A., SBP, 257; STRAT, 131; XXI, 505, 507, 508; XXII, 1235, XXIII, 1777; XXV, 1621, 1626, 1633, 1640
- developments in north Mid-Continent in 1940, XXV, 1103
- developments in North Mid-Continent in 1941, XXVI, 1073
- developments in north Mid-Continent in 1942, XXVII, 806
- developments in north Mid-Continent in 1943, XXVIII, 767
- geology of Central Kansas uplift, XIX, 1405
- wildcat activity in Kansas, 1938, XXIII, 795
- Koester, Edward A., and Cole, Virgil B., developments in north Mid-Continent in 1944, XXIX, 701
- Koester, Edward A., and Daniels, J. I., XXI, 133
- Koester, Edward A., and Meyer, Robert F., developments in north Mid-Continent in 1939, XXIV, 994
- Koeter area, Borneo, XXVIII, 1449
- Koeter formation Borneo, V, 417
- Kohlenpetrographie, Lehrbuch der*, review, XX, 830
- Kohlenpetrographisches Praktikum*, review, XII, 868, 953
- Kohler field, XV, 764
- Kohlschütter, E., XXI, 114
- Kohlshütter net, XXII, 1266
- Kohn, XIV, 148
- Kohn, Manfred, RMS, 546, 547, 548, 549
- Kohn's pipette, RMS, 549
- Koken, E., XXV, 397
- Kokos Islands, RMS, 399
- Koksharov, Lt., XXIV, 239
- Kollman formation, PROB, 422
- Kollman pay in Mexia-Groesbeck district, Texas, STR I, 309
- Kolm, R. N., XVI, 552
- Komleff, L., and Nikitin, B., XXIV, 1533
- Konawa pool, PROB, 777
- Konstantinov Kamen, XXI, 1441
- Koolhoven, W. C. B., XXII, 30, 43, 53
- Koons-Bentley pool, XXIII, 1035
- Koontz, W. B., SD, 468
- Koopman field, XXVII, 745
- Kootenai formation, GAS, 248-250, 257, 267, 270, 273, 274; PROB, 167, 698; SBP, 193, 200-243, 414; STRAT, 285, 286, 338; IV, 250, 313; V, 253; VI, 116, 146; XXVII, 41, 855, 857
- Border-Red Coulee field, STRAT, 285, 319
- Cut Bank field, STRAT, 338
- Kevin-Sunburst field, Montana, STR II, 257
- (Kk) (well 198) (Cretaceous), SBP, 193, 200-243, 414
- Kootenai formation waters, XXVI, 1342, 1344
- characteristics, XXVI, 1349
- in Montana, XXVI, 1341
- Kootenai sandstone, monoclinical wedge of, XXI, 993
- Kootenai waters in north-central fields of Montana, XXVI, 1348
- in Sweetgrass arch fields, XXVI, 1341
- Kootenay formation, Turner Valley field, GAS, 40, 45
- Kootenay sand in Dead Horse Coulee field, GAS, 20, 21
- Kopecky, RMS, 546
- Kopecky's tube, RMS, 546
- Koppen, W., XII, 920
- Koppen-Wegener, maps, CD, 7, 11, 17, 21, 23, 27, 31, 33, 37, 31, 45, 53, 135
- reference to their paleo-climatic maps, CD, 62
- Koralevski, XVIII, 661
- Kormos, T., MSC, 173
- Kornfeld, XV, 737
- Kornfeld, J. A., XXIX, 1748
- Kornfeld, M. M., MSC, 13, XIX, 691; XX, 169
- Hackberry foraminiferal zonation at Starks field, Calcasieu Parish, Louisiana, XXIII, 1835
- Kornfeld, M. M., and Steinberger, C. R., Edna gas field, Jackson County, Texas, XXV, 104
- Koschagyl, base of salt core at, XXIII, 496
- Koschagyl dome, accumulations associated with faulting in Jurassic, Comanche, and Cretaceous beds at, XXIII, 506
- productive zones at, XXIII, 509
- Kosciusko beds, XXVIII, 65
- Kossmat, Franz, XXIV, 1607
- Palaeogeographie und Tektonik*, review, XXI, 278
- Kossowicz, A., PROB, 41
- Kotick, Ottmar F., XXIV, 1723
- Koubergandy beds of Pamirs, XXII, 1018
- Kovalevsky, S. A., face of the Caspian Sea, review, XIX, 120
- Kowalczewski, J., XVIII, 894
- Kozlowski, R., XXIV, 1332
- Kozu, Prof., XIII, 1384
- Kraemer, PROB, 261
- Kraemer, A. J., STR II, 348
- Kraemer, A. J., and Grandone, P., PROB, 109
- Kraemer, A. J., and Smith, H. M., oil analyses, STRAT, 17
- Kraemer, G., and Spulker, A., X, 898; XVII, 1253
- Kraemer field, VI, 303
- Kraemer zone at Richfield field, GAS, 214. (See Kramer zone)
- Kraft, F., XVII, 1254
- Kraft pool, Kansas, XXII, 673
- Krause, Alfred, SD, 207
- Krauss, A., XVIII, 724, 727, 728
- Krajewski, St., XV, 2
- Kramer, Hans, RMS, 17
- Kramer, W. B., XVIII, 993; XXIII, 122; XXVII, 1317
- Kramer, William, XX, 484, 485, 487, 490, 1125
- boulders of Bengal, review, XVII, 1538
- en échelon faults in Oklahoma, XVIII, 243
- Ouachita boulder problem, XX, 479, 487

- (Kramer)
 Permian ledge-makers in Concho County, Texas, XVIII, 1577
 Kramer zone, PROB, 224
 Kramm, H. E., XXVII, 203
 Krampert, E. W., GAS, 305, 321; X, 126, XIII, 1247
 geological characteristics of producing oil and gas fields in Wyoming, Colorado, and northwestern New Mexico, PROB, 719
 oil fields of Rawlins-Lost Soldier district, Wyoming, VII, 131
 oil strikes in Hanna Basin and Red Desert, Wyoming, VII, 575
 Krampert, Walter, XVII, 422
 Krasnokamsk field, XXIII, 957
 Kraus, Edgar, PTNM, 539; XII, 60; XVI, 655; XXIII, 1855, 1857; XXV, 1229; XXVI, 539, 1026
 geologist and well-spacing problem, XXII, 1440
 logging wells drilled by rotary method, VIII, 641
 reply to William W. Porter II's discussion of the geologist and the well-spacing problem, XXIII, 1858
 Kraus, Edgar, Cole, Taylor, and Dickey, Robert I., developments in West Texas and southeastern New Mexico during 1940, XXV, 1044
 Kraus, Ernst, *Abbau der Gebirge*, review, XXI, 1355
 Kraus, M., IX, 151; XVI, 1063; XVIII, 649
 theory concerning salt masses, IX, 151
 Krause, Albert, XXIV, 1365
 Krause, Ramann, Remeli, and Shellhorn, XIII, 1469
 Krauskopf, Konrad, XXVII, 1364; XXVIII, 953; XXIX, 1383
 Krauss, G., RMS, 547
 Krauss, M., SD, 122, 135, 141
 Krebs, C. G., XXVII, 1215, 1218
 Krebs, Charles E., STRAT, 808, 809, 818
 Krebs, N., XVII, 517
 Kreichgauer, D., theory of drift, CD, 34
 Krejci-Graf, Karl, RMS, 381; SD, 181-184, 206; SBP, 2, 3; IX, 1239, 1241, 1243; XV, 190; XVI, 1062, 1063, 1066; XVIII, 649; XX, 256, 1479; XXI, 270, 944, 1153, 1192; XXIX, 1743
die Roumanischen Erdolagerstätten, review, XIII, 1404
die Salzen von Becsu-Berca, Rumänien, review, XIX, 1075
Erdöl, review, XX, 1504
Fortschritte der Oelgeologie, review, XX, 837
Grundfragen der Oelgeologie, review, XIV, 1234
 rule of density of oils, XVI, 1038
 Kremlin dome, GAS, 252
 Krempf, XXII, 62
 Krems, A. I., XVIII, 655
 Krenkel, Erich, XXI, 113, 114
 similarities and dissimilarities of African and South American geology, CD, 120, 127
 Kreps, E., RMS, 420
 Krummer, A. W., SD, 709
 Krummer, A. W., and Ewald, R., IX, 729
 Krey, F. F., XXIV, 769, 778
 Kreyenhagen, lower, shale, XXVIII, 956
 (Kreyenhagen)
 upper, or Tumey shale, XXVIII, 962
 Kreyenhagen formation, CAL, 106, 141, 149-154, 161; SC, 66; XX, 1612; XXVIII, 954
 Capistrano district, CAL, 144
 Coalinga district, 123, 139, 153, 154, 166, 280
 diatoms in, CAL, 135, 151, 154
 Eocene, CAL, 139, 141, 144, 145, 152
 foraminifera from, CAL, 154
 fossils of, CAL, 288
 Oligocene diatoms from, CAL, 154
 Panoche district, CAL, 156
 partly of Eocene age and partly Oligocene, XXVIII, 972
 type locality, CAL, 151
 zonation and correlation of, XXVIII, 971
 Kreyenhagen group, Kern Front field, STRAT, 12
 Kreyenhagen Hills, SC, 64; XX, 1610
 section, CAL, 236, 240, 310
 Kreyenhagen shale, MSC, 101, 162, 194, 252; PROB, 183, 186, 188, 194, 195, 407; SC, 58; XX, 1604; XXIV, 1733
 age and correlation of, in California, IX, 990
 at type locality, Fresno County, California, XIV, 1321
 California outcrop sections H₁, J, SBP, 167-194, 411
 (Eocene and Oligocene) (Tk), SBP, 95, 168-194, 415
 fauna of, XXIV, 1930
 foraminifera of, MSC, 78, 102
 of Fresno County, foraminifera from, MSC, 79
 Oligocene diatoms from, CAL, 154
 sandstone dikes in, XIV, 411
 Kreyenhagen shale and Avenal sandstones in Coalinga region, XXIV, 1729
 Kreyenhagen-Tumey contact, MSC, 101
 Kribbs, George R., oil development activities in California, 1942, XXVII, 862
 Krider dolomite, porosity in, XXIII, 1060
 Kriley pool, XXVIII, 772
 Krivolai, XXIII, 511
 Kroenlein, George Alfred, PTNM, 608, 611, 752, 758, 761, 762; XX, 780; XXVI, 245, 251, 608, 611, 752, 758, 761, 762; XXVIII, 1610
 abstract, XXII, 1707
 memorial of, XXIV, 1521
 salt, potash, and anhydrite in Castile formation of southeast New Mexico, XXIII, 1682
 Krogh, A., RMS, 438, 440
 Krohn pool, XXIX, 763
 Krosno beds, Europe, VI, 526
 Krosno formation, XV, 16
 Krosno series, XXI, 1184
 Krotow, P., XXIV, 259, 262
 Krotz Springs field, XXIX, 797, 800
 Krotz Springs Oligocene producing area, XXVII, 736
 Kruckenberger pool, XXIV, 999
 Krueger, Max L., XVIII, 435, 1575; XXI, 584; XXIV, 649, 651
 memorial of Eugene Law Ickes, XXV, 1962
 Krueger, Max L., and Simonson, Russell R., Crocker Flat landslide area, Temblor Range, California, XXVI, 1608
 Krumbeck, XXII, 11
 Krumbein, William C., RMS, 1, 209, 214, 540, 542; XXVI, 1706, 1711, 1712, 1717; XXVII, 919, 926
 criteria for subsurface recognition of unconformities, XXVI, 36
 distinguished lecture tour, XXIX, 474
 graphic presentation and statistical analysis of sedimentary data, RMS, 558
 recent sedimentation and the search for petroleum, XXIX, 1233
 reviews, XXIV, 1498; XXVII, 1163
 tidal lagoon sediments on Mississippi delta, RMS, 178
 Krumbein, William C., and Aberdeen, E., XXIX, 1255
 Krumbein, William C., and Caldwell, L. T., STRAT, 484, 488
 areal variation of organic carbon content of Barataria Bay sediments, Louisiana, XXIII, 582
 Krumbein, William C., and Croneis, Carey, down to earth: an introduction to geology, review, XX, 1131
 Krumbein, William C., and Griffith, J. S., XXIX, 1255
 Krumbein, William C., and Pettijohn, F. J., XXIV, 1359; XXVI, 1706
 manual of sedimentary petrography, review, XXIII, 256
 Krumbein pipette, XXV, 2179
 Krumholz, A., XXVIII, 22
 Krynlne, Paul D., RMS, 610; XXVI, 1377, 1393, 1698, 1755; XXVII, 919, 926; XXVIII, 103, 579
 graywackes and the petrology of Bradford oil field, Pennsylvania, discussion, XXV, 2071
 petroleum and genesis of Third Bradford sand, review, XXV, 1413
 Ksanda, Charles J., RMS, 625; X, 866
 Kuban district, Russia, XI, 499; XXI, 1078; XXII, 758; XXIII, 951
 Kudrjatzew, N., XVI, 1071
 Kuennen, Ph. H., RMS, 1, 101, 414; XXII, 59, 64; XXV, 411, 412; XXIX, 1486, 1487
 geology of coral reefs, review, XIX, 300
 sediments of East Indian Archipelago, RMS, 348
 Kuennen, Ph. H., and Escher, B. G., XIV, 504; XV, 59; XVIII, 1176
 experiments in connection with salt domes, review, XIV, 107
 Kugler, Hans G., XXI, 630; XXII, 1102, 1105; XXIII, 1240, 1242; XXIV, 1548, 1549, 1550, 1563, 1564, 1573, 1585, 1586, 2125
 summary digest of geology of Trinidad, XX, 1439
 Kuhn, Othmar, XV, 155
 Kuhr, C. A. H. von Wolzogen, PROB, 916; X, 1276
 Kujime, M., XVI, 1030, 1032
 Kukuk, P., geology of the Rhenish-Westfalian coal district, review, XXIII, 611
 Kulikov, M. V., XXII, 776
 Kulnura grit, XXIV, 638
 mineralogical variations in, XXIV, 643
 part of upper Manne series, probably Murree stage, XXIV, 646
 Kummel, Bernhard, Jr., new technique for measurement of stratigraphic units, XXVII, 220
 Kummerow, XXIII, 1723

- Kumming disturbance, XXVIII, 1422
 Kundig, E., XXII, 1103, XXIV, 1567, 1611, XXVIII, 1644
 Kungurian of southern Urals correlative of mother salt of Emba area, XXIII, 497
 Kungurian and Artinskian strata, section through Shikhan Tra-Tau, showing relations of, XXIV, 256
 Kungurian beds, XXII, 1014
 Kungurian limestone productive in Ishimbaevo field, XXIII, 957
 Kungurian sediments, XXV, 1402
 Kungurian series, XXV, 1399
 potash salt deposits of, XXIV, 262
 salt bearing, XXIV, 262
 Kunkler and Schwdhelm, XIII, 323
 Kupferschiefer, RMS, 436
 Kùppers, Ernst, RMS, 298
 Kura Basin, Russia, XI, 503
 Kura district, Russia, XXII, 758; XXIII, 951
 Kura mass, XVIII, 781
 Kura plate, XVIII, 609
 Kuragan series, XXI, 1443
 Kurile Islands, RMS, 504
 Kuroshio current, RMS, 117, 504
 Kurtosis, RMS, 576, 578, 581, 585, 587
 Kurtz, R. G., XIV, 1015
 Kurz, Dr., XXV, 168
 Kutta Basin, Russia, XI, 504
 Kuttung glaciation, XXV, 407
 Kutz Canyon gas field, GAS, 379; XXVII, 464
 Kuwait and Qatar, oil fields shut in, XXVIII, 919
 Kyanite, RMS, 602; XXII, 560
 Kyanite zone, XXIV, 2096
 Kyanite zone assemblage of minerals, XXIV, 2088
 Kyoto, Japan, study of structure of Suwa Basin near, by torsion balance, XIX, 58
Kyphopza christneri, key fossil for Ozan, XXII, 1480
- L
- La Antigua, type locality of Aragon formation, MEX, 105
 La Barge anticline, XIII, 1284; XXV, 1743
 La Barge fault, ROB, 692; XXV, 1740
 La Barge field, Wyoming, PROB, 172, 692; XXV, 1152
 (well 231), SBP, 194-243, 407
 La Barge oil field, history of, XXV, 1741
 La Barge region, Lincoln County, Wyoming, coal seams in Adaville formation in, XXV, 1742
 economic resources of, XXV, 1742
 gas produced in, XXV, 1743
 geology of southern part of, XXV, 1729
 pre-Tertiary in, XXV, 1736
 structure in, XXV, 1736
 Tertiary in, XXV, 1740
 water in, XXV, 1743
 La Barge Ridge, Lincoln County, Wyoming, geologic map and structure section of southern part of, XXV, 1738
 horizontal Almy sediments on crest of, XXV, 1740
 stratigraphy, XXV, 1731
 topography and drainage, XXV, 1731
 La Barge Ridge area, geologic formations in, XXV, 1732
 La Barge sandstone, correlation in southwestern Colorado, XXV, (La Barge) 1751
 La Blanca field, Texas, in Frio sand, XXI, 1046
 (well 404), SBP, 335-349, 410
 La Blanca structure, Hidalgo County, Texas, XXI, 947
 fauna of, XXI, 947
 fossils of, XXI, 947
 wells in, XXI, 947
 La Borrega, MEX, 45, 57
 La Borrega Cañon, MEX, 25, 27-29, 31, 34, 44, 56, 57, 162
 contact metamorphism in, MEX, 149
 La Brea (See Rancho La Brea)
 La Brea Canyon, PROB, 206
 La Brea-Parinas field, Peru, XXIII, 963
 La Brea region, Peru, V, 594
 La Caja formation, XXVII, 1417, 1485, 1487
 Zacatecas, section, XXVII, 1491
 La Casita formation, Coahuila, XXVII, 1416, 1485, 1487, 1488
 sections, XXVII, 1489
 La Casita uplift, XXVIII, 1158
 La Ceiba Crossing, MEX, 120, 130, 131
 Vicksburg fauna at, MEX, 120
 La Chona, synonym for Encarnación, MEX, 147
 La Cima pool, MEX, 164, 192
 La Cira and Infantas fields electrically operated, XXIX, 1117
 La Cira anticline, XXIX, 1113
 La Cira field, XXIII, 962; XXIX, 1113
 La Cira fossil interval, XXIX, 1099
 La Cira fossil zone, XXIX, 1117
 La Cira oil field, XXIX, 1099
 La Cira structure, Colombia, section, XXIX, 1114
 La Cira zone, XXVI, 802
 La Concepcion field, Venezuela, XIII, 1189
 La Dow, C. V., IX, 1208
 La Gloria and Zuloaga formations, contact of, XXVII, 1493
 La Gloria field, XXIII, 867
 La Gloria formation, XXVII, 1416, 1479
 Coahuila, sections, XXVII, 1481, 1482
 origin of, XXVII, 1484
 La Gloria recycling operations, XXVI, 1006
 La Habra area, California, groundwater contours, XVI, 347
 La Habra Canyon, MSC, 39, 247, 250, 254, 267, 270, 272, 273, 320, Fig. 14 (in pocket)
 La Huerta silt, XXVIII, 1610
 La Huerta siltstone, analysis of, XXVI, 73
 La Huerta saltstone member and Fletcher anhydrite member of Salado formation, plates showing anhydrite from, XXVI, bet. 64 and 65
 La Huerta siltstone member of Salado, XXVI, 72
 La Jolla, California, CAL, 122, 141; RMS, 48, 245, 275, 416
 La Jolla section, California, outcrop section T, SBP, 167-194, 411
 La Jolla submarine canyon, RMS, 252, 253, 275, 276
 La Lomita, a possible salt dome, SD, 770
 La Luna formation in Venezuelan Andes, XIX, 791
 La Luna limestone, XXIX, 1088, 1128 (La Luna)
 in Venezuela, XV, 231
 La Luna seas, planktonic life in, XXI, 1137
 La Merced Hills, PROB, 213
 La Paja shale, XXV, 1789, 1794
 La Palma, MEX, 28, 49, 60
 La Panne, on North Sea, RMS, 334
 La Panza Island, CAL, 164-166
 La Panza Mountains, CAL, 11, 169, 198, SC, 1, XX, 1547
 La Panza region, CAL, 186
 Lapara, Gulf Coast, I, 36
 La Paz field, Venezuela, XIII, 1189
 La Paz sandstone, XXIX, 1098
 La Pena Cañon, MEX, 25, 28, 29, 44, 162
 La Peña formation, XXVIII, 1155, 1159, 1168; XXIX, 1446
 La Perla shale member, XXVI, 264
 La Pez, MEX, 35, 164, 193
 La Picc, St. James Parish, Louisiana, XXIV, 1087
 La Piedra, andesite at, MEX, 147
 La Pilona, XXVIII, 1460
 La Place area, St. John the Baptist Parish, Louisiana, XXIV, 1088
 La Plata sandstone, GAS, 369, VI, 47
 analysis of southwestern Colorado section of, XXV, 1746
 correlated with Entrada sandstone of Utah, XXV, 1750
 Cross', southwestern Colorado, correlation of, XXV, 1745
 lower, correlated with Entrada, XXV, 1757
 map of southwest Colorado showing occurrences of, XXV, 1747
 members of, XXV, 1746
 nomenclature of divisions of, alternative interpretations, XXV, 1754
 of Colorado, correlation of, with Jurassic of east-central Utah, XXV, 1755
 La Presa Cañon, MEX, 7, 9, 13
 La Quinta formation, Venezuela, XXIV, 1613
 fusulinids in, XXVIII, 1642
 La Rosa, A. Cabrera, XXI, 99, 107, 109
 La Rosa area, XXIII, 868
 reflection-seismograph maps of XXV, 302-304
 La Rosa field, Refugio County, Texas, XXIII, 867; XXV, 300; XXVII, 745
 cross sections, XXV, 315, 316
 drilling and production methods at, XXV, 317
 fault in, XXV, 313
 Frio formation productive in, XXV, 309
 gas sands in, XXV, 312
 gas-oil ratio at, XXV, 317
 gravity of oil at, XXV, 317
 hydrocarbons, XXIV, 867
 importance of reflection seismograph in discovery of, XXV, 300
 isopach map showing interval from top of Greta sand to top of 5,900-foot sand, XXV, 310
 map showing contours on top of 5,900-foot sand, XXV, 308
 map showing contours on top of Greta sand, XXV, 307
 map showing contours on top of 6,300-foot sand, XXV, 311
 mineralization, XXIV, 867
 oil-producing sands in, XXV, 309
 stratigraphy, XXV, 305
 structure, XXV, 306

- La Rosa field, Venezuela, XXIII, 958
 La Rue dome, Texas, XII, 537
 La Sagra, II, 133
 La Sal Vieja pool in Willacy County, Texas, XXI, 1045
 La Salle XXII, 1187
 La Salle anticlinal belt, XXI, 690
 La Salle anticline, GAS, 820, 822, 831, PROB, 558, 560, V, 311; XIII, 420; XVI, 150, XXI, 777; XXII, 651, 1539, XXIII, 1380, 1505; XXIV, 219, 770, 965; XXVI, 1092, XXVIII, 71
 Illinois fields on, XXII, 73
 in Illinois, STR II, 116, 117, 122, 133
 responsible for formation of major features of southeastern oil fields of Illinois, XXIV, 219
 La Salle coal, XXIII, 1391
 La Salle County, Texas, Washburn field, XXVI, 276
 La Salle County and vicinity, Illinois, Coal Measures succession of, XXIII, 1380
 La Salle limestone, XXIII, 1512
 La Salle Parish, Louisiana, oil in, XXVIII, 273
 Olla field, XXV, 747
 La Salle uplift producing areas, XXIII, 1352
 La Tigre structure, XXIX, 1121
 La Tuna member of Magdalena formation, XXIV, 170
 Labarge oil field, Wyoming, XXVII, 434
 Labette County, Kansas, migration of oil from Arbuckle limestone into Chattanooga shale in Chetopa oil pool, XXV, 1934
 Labette shale, I, 135, II, 119; V, 293, 401; XXV, 37
 Labor in petroleum industry, problems of, XXI, 191
 Labor supply and labor relations in oil industry, XXV, 1288
 Laboratory, portable sedimentary, XVIII, 1705
 Laboratory and field observations of effect of acidizing oil reservoirs composed of sands, XXV, 850
 Laboratory exercises in physical geology, XXII, 501
 Laboratory experiments, limitations, XXVI, 769
 Laboratory headquarters for the work, SBP, 7
 Laboratory orientation of well cores by their magnetic polarity, XXI, 580
 Laboratory procedure in preparation of insoluble residues from rock samples from Morrow group, XXIV, 411
 Laboratory study of percentage distribution of feldspar in Red Clastic series, in Hinckley sandstone, and in Mt. Simon sandstone, XXIV, 745
 of sediments, RMS, 528-531, 558-616
 Labradorite, MEX, 147
 Laby, T. H., and Edge, A. B. Broughton, principles and practice of geophysical prospecting, review, XV, 1299
 Laccadive-Maladive Islands, RMS, 400
 Laccolithic intrusions in southeastern Utah, XIX, 1492
 Laccolithic mountains, new interpretation of some, and its possible bearing on structural traps for oil and gas, XXVI, 197
 Laccoliths, PROB, 721; MEX, 143, 148, 162
 Lacey, William N., XIX, 883
 Lacey, William N., and Sage, B. H., XXV, 1304, 1314
 Lachmann, Richard, SD, 153, 154, 163, 201, 207; IX, 428, 429, 440, 1261, XX, 51, XXI, 1273, 1274, 1306, XXII, 1285
 Laconia gas field, XXVI, 1094
 Lacoste, J., XVI, 445
 Lacroix, Professor, XXI, 294
 Lacroix, Adrien, and Ragot, Charles L., a graphic table combining logarithms and anti-logarithms, review, XI, 641
 Lactic acid, RMS, 422
 Lactic acids, PROB, 39
 Ladd, Harry S., RMS, 212
 marine ecology as related to paleontology, review, XXVII, 656
 Ladd formation, XXVI, 170
 Ladore shale, V, 295
 LaDow, B. E., IX, 1107, 1208; X, 554
 LaFavor, D. D., III, 312
 Lafayette and Johnson counties, Missouri, Des Moines series in, section, XXV, 33
 Missouri series in, section, XXV, 33
 Lafayette County, Arkansas, Midway field discovery, XXVI, 1289
 oil in, XXVIII, 266
 Lafayette formation, Illinois and Missouri, XIV, 857
 Louisiana, IV, 130; VI, 180
 Oklahoma, V, 141
 Texas, V, 223
 Lafferty, Robert C., STRAT, 820; XXII, 1160
 Central basin of Appalachian geosyncline, XXV, 781
 Oriskany in West Virginia, XXII, 175
 Lafferty limestone, XXV, 1644
 Lafitte field, Jefferson Parish, Louisiana, XXI, 1061; XXVIII, 1283
 electric-log cross section, XXVIII, 1285
 LaFleche, Pierre, XXI, 716
 LaFourche Crossing, LaFourche Parish, Louisiana, XXIV, 1088
 Lafourche subdelta, RMS, 159, 160, 161
 Lag gravel, XXVI, 40
 Lagartero, MEX, 30, Fig. 22 (in pocket)
 Lagarto, El, olive basalt at, MEX, 146-148
 Lagarto, Gulf Coast, I, 36
 Lagarto, Oakville, and Reynosa formations, stratigraphy of, between Nueces and Guadalupe rivers, Texas, XVII, 523
 Lagarto, upper, formation, XXI, 495
 Lagarto and Fleming, nomenclatorial difficulties of, XXVIII, 1010
 Lagarto clay in Amelia field, XXIII, 1643
 in Louisiana, GC, 413, 416; XVII, 643, 646
 (upper Miocene or lower Pliocene) (TI), SBP, 336, 338-349, 415
 Lagarto formation, XXVIII, 1007
 of Dumble, type locality of, XXIX, 1730
 Lagarto-Oakville section at Saxet field, XXIV, 1814
 Lagenas, Pliocene, MSC, 79
 Lagenidae, MSC, 14, 20, 102, 109, 120, 128, 162, 195
 of Reliz Canyon, MSC, 15
 Lagenidae and rotallidae, Miocene, (Lagenidae)
 MSC, 14
 Lageninae, MSC, 224
 Lagonda shale, XXV, 42, 54
 Lagoon at Morro Bay, XXVI, bet. 154 and 155
 Lagoons, RMS, 213, 362, 423, 449
 glauconite in, RMS, 509, 510
 marginal, favorable for origin of black shales, XXIII, 1191
 organic content of, RMS, 450
 Russian, RMS, 199
 sands of, RMS, 560
 Lagrange formation in Kentucky, Illinois, and Missouri, XIV, 854
 Laguna, CAL, 170; MEX, 164, 193
 Laguna area, MSC, 114, 119
 Laguna Beach, MSC, 123, 124
 Laguna de la Milpa, reverse faulting in, MEX, 168
 Laguna de los Volcanes, XX, 1281
 Laguna district, eastern Durango, mountains west of, XXVIII, 1165
 Laguna Salada, GC, 237, 240; XVII, 943, 946
 Laguna-Santa Ana area, MSC, 119
 Laguna Seca, XXIX, 990
 Laguna Tamahua, MEX, 6, 36, 136, 209, Fig. 32 (in pocket)
 Lagunillas field, XXIII, 958
 Lagunitas, well in, Pánuco field, MEX, 30
 Lahee, Frederic H., GAS, ix, 656, 671, 673, 678, 1073; GC, 72, 409, 762; PROB, 144, 247-251, 295, 296, 309, 313, 330, 332, 341, 403, 600, 601, 616, 648, 649, 654, 779, 812; SBP, 2, 7, 296; STRAT, 618; IX, 632, 653; X, 459, 953, 1035, 1264; XI, 825; 833; XII, 694; XIII, 638, 853, 946; XIV, 186; XVI, 259, 727, 743; XVII, 37, 639, 981, 1002, 1077, 1135, 1229, 1249, XVIII, 134, 819, 1059, 1257, 1265, 1461; XIX, 272; XX, 36, 73, 316, 615, 1368; XXI, 341; XXIII, 1573, 1574; XXIV, 1353, 1394, 1507, 1537, 2047; XXV, 324, 2005; XXVI, 1203; XXVII, 912, 949, 1250; XXIX, 870, 1733, 1734, 1736
 bioherm and biostrome, XVI, 484
 carbon ratios, foreword, PROB, 67
 Chapel Hill pool, Smith County, Texas, XXII, 1107
 Chestnut dome, Natchitoches Parish, Louisiana, XV, 277
 classification of exploratory drilling and statistics for 1943, XXVIII, 701
 Clay Creek dome, Washington County, Texas, XII, 1166; discussion, XV, 279, 1113
 crooked-hole report, XIV, 635
 Currie field, Navarro County, Texas, VII, 25; X, 61
 discovery of new pools, XIII, 849
 discussion of cap-rock petrography, XV, 528
 discussion of redbed bleaching, X, 636
 discussion of source of Darst Creek oil, XVII, 37
 discussion of tension faulting, XIII, 638
 editorial, XXII, 1613
 exploratory drilling in 1944, 629
 field geology, reviews, XV, 1297; XXVI, 1537
 Frío clay, south Texas, discussion, XVI, 101
 further data on wildcat drilling in

(Lahee)

- 1937, XXII, 1231
 geological notes, value of, XIII, 849
 introduction to symposium on reservoir conditions in oil and gas pools, XVI, 861
 lateral migration of oil at Van, Texas, XX, 615
 memorial of Donald C. Barton, XXIV, 1521
 migration and accumulation of petroleum, foreword, PROB, 247
 note on origin of petroleum, VIII, 669
 oil and gas fields of the Mexia and Tehuacana fault zones, Texas, STR I, 304
 oil seepages and oil production associated with volcanic plugs in Mendoza Province, Argentina, XVI, 819
 petroleum geology, XVII, 548
 petroliferous belt of central-western Mendoza Province, Argentina, XI, 261
 problem of crooked holes, XIII, 1095
 report of committee on application of geology for 1933, XVIII, 708; for 1934, XIX, 747
 report of committee on college curricula for 1941, XXVI, 942
 report of committee on college curricula in petroleum geology, XXVII, 694
 report of committee on college curricula in petroleum geology for 1943, XXVIII, 670
 report of committee on public relations for 1932, XVII, 605
 report of committee on publication, for 1937, XXII, 614
 report of committee on publication for 1938-1939, XXIII, 753
 report of president for 1932, XVII, 577
 report of representative to National Research Council, for 1936, XXI, 678
 report of representative to National Research Council, for 1937, XXII, 615
 report of representative to National Research Council, for 1938, XXIII, 754
 report of representative to National Research Council for 1939, XXIV, 938, 1148
 report of special committee on college curricula, XXV, 969
 report on editorial work for 1929, XIV, 666; for 1930, XV, 581; for 1931, XVI, 516
 review of exploratory drilling statistics, 1938-1944, XXIX, 1581
 reviews, VII, 300; VIII, 684; X, 98, 200; XVI, 107; XXVI, 1538
 sericitization and dolomitization compared with fixed carbon ratio of coal as indices of metamorphism in oil-bearing formations, VII, 291
 standardization in compiling and reporting data on oil reserves, XXVIII, 1217
 study of crooked-hole problem, XIII, 853, 1227
 study of evidences for lateral and vertical migration of oil, PROB, 399
 suggestions to authors, XIV, 1484
 symposium on geophysics, foreword, XV, 1307

(Lahee)

- temperature of fluids in wells, VI, 547
 this matter of estimating oil reserves, XXV, 164
 where will young graduates in petroleum geology acquire field experience? XXIV, 1386
 where will young graduates in petroleum geology acquire field experience? Discussion, XXV, 167
 wildcat drilling in 1935 and 1936, XXI, 1079; XXII, 1236
 wildcat drilling in 1937, XXII, 645
 wildcat drilling in 1938, XXIII, 789
 wildcat drilling in 1939, XXIV, 953
 wildcat drilling in 1940, XXV, 997, 1938
 wildcat drilling in 1941 with comments on discovery rate, XXVI, 969
 wildcat drilling in 1942, XXVII, 715
 Wortham and Lake Richland faults, IX, 172
 Lahee, Frederic H., and Pratt, Wallace E., faulting and petroleum accumulation at Mexia, Texas, VII, 226
 Lahee, Frederic H., and Washburne, C. W., XIX, 319
 oil-field waters, PROB, 833
 Lahee, Frederic H., and Wilde, H. D., Jr., simple principles of efficient oil-field development, XVII, 981
 Lahiri, H. M., XXV, 406
 Laming, Boris, CAL, 229; MSC, 39, 45, 77, 107, 291; SC, 122; XXII, 1012; XXVIII, 435, 788; XIX, 530; XX, 1668; XXIII, 518, 535; XXIV, 1770; XXV, 194, XXVII, 2, 1369, 1380, 1383; XXIX, 956
 foraminiferal correlations in Eocene of San Joaquin valley, California, XXIV, 1923
 some foraminiferal correlations in Eocene of San Joaquin valley, California, review, XXIV, 2049
 Laming, Boris, and Cushman, Joseph A., MSC, 28, 32, 85, 86, 97, 98, 111-113, 116, 186-189, 191, 192, 202, 204, 208, 211, 213, 216, 217, 221, 225-227, 230, 233, 240, 241, 243, 248, 251, 260, 261, 266, 275-277, 288, 290, 305-307, 316, 317, 321, 323, 333, 335, 342, 343, 345, Figs. 6, 14 (in pocket); XXVIII, 377; XX, 222
 Laming, Boris, and Hughes, Donald D., MSC, 195, 230, 268, 269, 273, 309, 310, 313, Fig. 14 (in pocket); XXVIII, 470, 472
 Laming, Boris, Cushman, J. A., and Eaton, J. E., MSC, Fig. 14 (in pocket)
 Laming, Boris, Goudkoff, Paul P., and Hughes, Donald D., MSC, 39; XXVIII, 460
 Laird, Wilson M., Devonian and Mississippian inliers of southwestern Pennsylvania, XXV, 161
 Laja anticline, trend of, GC, 263; XVII, 1206
 Lake, Francis Wilbur, and Phelps, Robert William, application of alignment chart to petroleum engineering, IX, 803
 petroleum engineering, review, IX, 1299
 Lake, M. C., XI, 1287
 Lake, Merrill Evans, memorial of, XXIII, 115

- Lake, Philip, CD, 136
 Lake, RMS, 160, 163, 164, 242, 366, 449
 on delta, RMS, 170
 ox-bow, RMS, 156
 Lake Agassiz silts, XXVI, 357
 Lake Ainslie area, XXIX, 656
 Lake Alleguash, gas in, XXV, 846
 Lake Balkal, Siberia, ozocerite and naphtha on, IX, 811
 Lake Barre salt dome, XVII, 1509
 salt overhang at, GC, 158; XVII, 1509
 Lake Basin (Big Lake), GAS, 250
 topography of bottom of, XXV, 831
 Lake Basin field, PROB, 945; GAS, 271
 waters in, XXVI, 1374
 Lake basins due to damming, XXV, 827
 due to excavation, XXV, 828
 due to glacial or fluvioglacial deposition, XXV, 830
 effect on, of character of surrounding rock and soil terrane, XXV, 831
 effects of size and depth of, XXV, 828
 of structural origin, XXV, 828
 origins of, XXV, 827
 Lake Bistineau gas field, XXII, 722
 Lake Bonnevill, XXII, 1308
 diagram indicating fluctuations in lake level of, XXII, 1308
 Lake Borgne, RMS, 160
 Lake Bully Camp field, XXVII, 736
 Lake Cahulla, CAL, 23
 Lake Chapala region, central-western Mexico, GAS, 1003, 1009
 Lake City area of Barber County, XXIX, 704
 Lake City limestone, XXVIII, 1680, 1693
 in Florida, and white limestone of Jamaica, correlation between, XXVIII, 1695
 Lake City pool, Barber County, Kansas, XXIII, 806
 Lake Creek field, XXVI, 986; XXVII, 734
 Muddy water in, XXIV, 1257
 Lake Crescent anticline, XI, 1326
 Lake Decade field, XXVII, 736
 Lake deposits, changes in, after deposition, XXV, 845
 in Honda district, XXVI, 824
 plan of, XXV, 837
 Lake Erie, RMS, 213
 Lake Lahontan, petroleum in sediments, PROB, 53
 Lake Long field, Lafourche Parish, Louisiana, XXVIII, 1274
 electric-log cross section, XXVIII, 1276
 faulting at, XXVIII, 1303
 Lake Maracaibo, organic sediments in, PROB, 30
 Lake Maracaibo area, southwestern, XXIX, 1124
 Lake Maracaibo district, XXIII, 958
 Lake Maurepas, RMS, 160
 Lake Mendota, XXV, 834
 Lake Michigan, RMS, 209, 213, 637
 Lake Mongoulois deep-seated salt dome, faults at, XXVIII, 1302
 Lake Mongoulois field, St. Martin Parish, Louisiana, XXVIII, 1298
 electric-log cross section, XXVIII, 1300
 Lake Ontario, RMS, 661
 bottom deposits of, review, IX, 1121
 Lake Peigneur at Jefferson Island dome, GC, 985, 994, 996; XIX, 1604, 1613, 1615

- Lake Peltó, PROB, 115
 Lake Pinto sandstone, Walnut Bend pool, STRAT, 786
 Lake Pontchartrain, Louisiana, alterations of sediments and organisms due to environmental changes, XXIII, 9
 analysis of bottom sediments of, XXIII, 13
 areas and volumes of, between successive hydrographic contours, XXIII, 2
 bottom sediments of, XXIII, 1
 classification of samples of sediments of, XXIII, 13
 color of samples of bottom sediments of, XXIII, 14
 frequency of grain distribution of samples of bottom sediments of, XXIII, 14
 hydrographic contour map showing shore lines and basin reliefs of, XXIII, 6
 influence of factors of climatology on sediments of, XXIII, 9
 isorganic chart of sediments of, XXIII, 17
 iso-textural chart of sediments of, XXIII, 15
 methods of collecting samples of bottom sediments of, XXIII, 12
 molluscan life of, XXIII, 22, 23
 odor of samples of bottom sediments of, XXIII, 15
 organic content of sediments of, XXIII, 15, 17
 origin and physical development of, XXIII, 7
 relation of organic content to bottom topography of, XXIII, 17
 relation of sediments of, to streams, XXIII, 10
 relation of texture to bottom topography of, XXIII, 15
 relation of texture to waves and currents of, XXIII, 16
 Lake Pontchartrain and Lake Maurepas, isorganic chart of, XXIII, 18
 iso-textural-hydrographic chart of, XXIII, 4-5
 Lake Pontchartrain sediments, physical properties of, XXIII, 21
 stratigraphy of, XXIII, 19
 Lake St. John field, XXVIII, 269, 271
 Lake St. John field extension, XXIX, 808
 Lake St. John structure, XXVIII, 273
 Lake Salvador, XXV, 1013
 Lake sandstone, GAS, 627, 628, 635
 Lake sediments, fresh-water, from Keller Lake, XXV, 2171
 changes in, after deposition, XXV, 842
 organisms important sources of, XXV, 836
 sources of, XXV, 835
 stratification of, XXV, 846
 Lake stages in Baltic, RMS, 299
 Lake Superior geosyncline, PROB, 537, 554
 Lake Tahoe, CAL, 65, 68
 Lake Titicaca, map, V, 597
 Lake Titicaca region, XXIX, 560
 Lake Titicaca region and Chaco basin on Andean plateau, XXIX, 510
 Lake Valley, New Mexico, section, XXV, 2156
 Lake Valley formation, XXV, 2107, 2109, 2114, 2125
 map of Deadman Canyon area showing location of type sections of, XXV, 2115
 Sly Gap Canyon, Sheep Mountain, New Mexico, XXIV, 1680
 Lake Valley limestone, XXIV, 165; XXV, 2109
 of New Mexico correlated with lower Burlington limestone of Iowa, XXV, 2109
 Lake Valley type section, Apache Hill, Lake Valley, New Mexico, XXV, 2110, 2157
 Lake View gusher, PROB, 200; V, 453
 Lake Washington, Louisiana, PROB, 115; GAS, 712
 Lake Washington field, Louisiana (well 409), SBP, 335-349, 410
 Lake waters, chemical character of, XXV, 835
 effect of circulation of, on sediments, XXV, 832
 overturn of, favorable for origin of black shales, XXIII, 1187
 thermal stratification of, XXV, 835
 Lakelong, Louisiana, XXII, 743
 Lakes, effects of semi-annual overturns in, on organisms, XXV, 833
 inorganic sediments of, XXV, 838
 organic sediments of, XXV, 838
 organisms in, XXV, 833
 rates of deposition in, XXV, 841
 Lakota conglomerate in Lost Soldier district, Wyoming, STR II, 644
 Lakota formation, IV, 38; V, 261; XXVI, 350
 Lakota samples from Lance Creek, XXV, 1851
 Lakota sand, PROB, 167, 408, 409, 935; XXIII, 908, 919
 Ferns dome, Wyoming, STR II, 658
 Grass Creek dome, Wyoming, STR II, 625
 Lance Creek field, Wyoming, STR II, 609
 Little Lost Soldier dome, Wyoming, STR II, 649
 Salt Creek field, Wyoming, STR II, 596
 Lakota sandstone, XXIII, 486; XXVI, 1534; XXVII, 855; XXVIII, 792, 796
 from Nieber dome, XXV, 1851
 Lakota water, differences from Frontier water, XXIV, 1249
 Lakota waters in Salt Creek area, XXIV, 1266
 Lalicker, Cecil G., XXIV, 435
 Lamar, XXIII, 600
 Lamar, J. E., XIV, 846
 Lamar, J. E., and Sutton, A. H., Cretaceous and Tertiary sediments of Kentucky, Illinois, and Missouri, XIV, 845
 Lamar, L. C., and Markham, E. O., STRAT, 481
 South Burbank pool, Osage County, Oklahoma, XXI, 560
 Lamar, Mirabeau B., XXII, 1189
 Lamar County, Mississippi, Scanlan or Midway dome in, XXII, 816
 Tatum salt dome, XXV, 424
 Lamar geophysical prospect in Arkansas County, Texas, XXI, 1046
 Lamar limestone, PTNM, 583, 589; XXI, 846; XXVI, 583, 589
 Lamar limestone member of Delaware Mountain formation, XXI, 875
 Lamarch, XXV, 1215
Lamarchina clabornensis zone, GC, (*Lamarchina*)
 427; XIX, 691
Lamarchina zone, XXII, 1276
 Lamare, Pierre, XXII, 2119, 1222
 Lamb, Horace, RMS, 134
 Lambert, G. S., XIV, 1537
 Lambert, G. S., Clapp, C. H., and Bevan, Arthur, PROB, 697
 Lambert, J., MEX, 132, 135, 139
 Lambert, W. D., calculation of shifting of continental mass, CD, 148, 181
 changes of position of continents a question for geologists rather than geophysicists, CD, 152
 Lamberts locality, relationship of, to exposures north of Citronelle, Alabama, XXIII, 1556
 Lamberts Station, Alabama, plant-bearing clays near, XXIII, 1554
 Lamborn, R. E., SBP, 357; XXV, 795
 Lamborn, R. E., Stout, Wilber, and Schaaf, Downs, XXIV, 487
 Lamborn, R. E., Stout, Wilber, Ring, D. T., Gillespie, J. S., and Lockett, J. R., natural gas in central and eastern Ohio, GAS, 897
 Lambton and Kent gas fields, pipe lines from, GAS, 78
 Lamellibranchs, XXV, 134, 138, 383, 388
 Lamey, Carl A., and Stout, Wilber, Paleozoic and pre-Cambrian rocks of Vance well, Delaware County, Ohio, XXIV, 672
 Laminar motion in streams, RMS, 6, 15, 19
 Lamination of San Felipe shales, MEX, 67
 Laminations. (See Stratification)
 in stagnating basins, RMS, 99
 in tidal muds, RMS, 202
 Lammers, Edward C. H., STRAT, 301
 Lamont pool, Kansas, STR II, 158
 Lamont trend, XVIII, 1331
 Lamott pool, XXVI, 1093
 LaMotte sandstone, Missouri, equivalent to Hickory formation of Texas, XXV, 1632
 Lampasas and Morrow series in north-central Texas, XXIV, 82
 Lampasas axis, XXIV, 105
 Lampasas section of central Texas, ammonites of, XXIX, 164
 Lampasas series, XXIV, 85; XXV, 1663, 1676; XXVI, 211; XXIX, 146
 Lampasas series, Bryson field, STRAT, 541, 542
 Lampasas series of Brazos, Colorado, and Llano river valleys, type section, XXIX, 164
 Lampasas-Strawn boundary, XXIX, 163
 Lampasas type section and correlations, XXIX, 156
 Lampton dome, XXIX, 830
 Lampton field, XIX, 518
 Lanare field, XXVIII, 743
 Lancaster East pool, XXIX, 687
 Lancaster field, XXII, 80
 Lancaster-Jones, E., XIII, 40, 42; XVI, 1264
 Lance Creek, geothermal variations at, PROB, 991
 Lance Creek anticline, Lance Creek field, Wyoming, STR II, 607; XXI, 998; XXII, 686
 pre-Oligocene folding of, STR, II, 607
 Lance Creek Field, Niobrara County,

- (Lance)
Wyoming, XXII, 680, 688, XXIII, 911, 921, XXV, 1151; XXVII, 465, 1320
map of, XXII, 682
Minnelusa sandstone productive in, XXIV, 1101
structure map of, XXIV, 1109
Sundance sand productive in, XXIV, 1108
Lance Creek oil and gas field, Wyoming, STR II, 604; III, 358, IV, 37, review, VI, 385
anticlinal theory of accumulation vindicated at, STR II, 609
Lance Creek oil field, Niobrara County, Wyoming, XXI, 992, 993
Converse and Leo waters in, XXIV, 1301
Fall River, Lakota, and Cloverly waters in, XXIV, 1268
geologic structure map of, XXV, 1156
Sundance water in, XXIV, 1282
Lance Creek oils, representative, index graphs of, XXVII, 1320
Lance Creek pool, PROB, 343
Lance formation, V, 258, VI, 144; XXVI, 355, 1560
Lance Creek field, Wyoming, STR II, 605
Montana, quartzite pebbles at base of, IX, 434
nonmarine, XXII, 1634
Land, formation of, at mouth of Mississippi River, RMS, 159, 164
of Sheba, XXII, 1606
reclamation of, in North Sea, RMS, 204, 205
Land and water areas, representation of, on a map to be used for lantern slides, XXVI, 1664
Land animals, CAL, 136, 155, 181, 211, 247, 264, 304
Land bridges, CD, 66, 138, 140, 199, 225
Land-bridges and subsidence, hypothesis of, CD, 140
Land humus in Baltic, RMS, 307
Land leasing, XXI, 711
Land life explainable on basis of radial dispersion from Holarctis and Antarctica, CD, 138
Land-locked basins, XXIII, 1194
Land-locked bays, RMS, 223
Land-locked seas favorable for origin of petroleum, XXVIII, 1507
Land-locked waters and black muds, references on, RMS, 369
Land-locked waters and deposition of black muds, RMS, 356
Land masses which furnished sediments to Illinois basin, XXVIII, 112
Land plants, CAL, 109, 134, 153, 208, 244, 263, 287, 299; MEX, 10-12, 100; RMS, 441
in Chicotepec beds, MEX, 83, 100
in Lower Eocene of southeastern North America, not found in Old World, CD, 196
or animals *in situ*, XXVI, 54
Lander anticline, XXVII, 448
Lander area, Wyoming, PROB, 687
Lander field, V, 191
Embar water in, XXIV, 1289
Tensleep and Embar waters in, XXIV, 1295
Lander sand, Cut Bank field, STRAT, 345
Lander sandstone, XXV, 129
Landes, Henry, GAS, 221
Landes, Kenneth K., STRAT, 80; XVIII, 1503; XXII, 100
petrographic study of pre-Cambrian of Kansas, XI, 821
Porter oil field, Midland County, Michigan, XXVIII, 173
recent subsidence, Hamilton County, Kansas, discussion, XV, 708
Landes, R. W., and Russell, L. S., XXIX, 1267, 1291
Landforms, geomorphology* an introduction to study of, XXVII, 551
Landon, R. E., XX, 686
Landreth limestone at Rock Crossing, Texas, XXI, 525
in Wilbarger County, Texas, XXIII, 853
Landreth pool, Texas, STR I, 299
Landreth Production Company, GAS, 633
Landreth Production Corporation, XXIII, 1526
Landrum member, lower, exposed in Leon and Houston counties, Texas, sections of, XXIV, 1672-1675
Landrum shale, XXIV, 1664
Landscape and climatic accidents, XXVII, 1013
Landscape forms, volcanoes as, XXIX, 1046
Landslides, RMS, 95
in submarine canyons, RMS, 254, 260
Landsort Deep, RMS, 305
Landscape, map showing radial dispersive movements of northern crust-sheets, CD, 168
Lane, Alfred C., PROB, 850, 868, 997; III, 327; IX, 1081; XVI, 154, 164; XVIII, 19, 1244; XXI, 319; XXII, 396; XXIV, 2151; XXV, 725, 731, 732; XXVII, 572
calcium chloride waters, connate and diagenetic, XI, 1283
classification of limestone reservoirs, discussion, XIII, 179
geologic significance of a geothermal gradient curve, discussion, XXI, 1494
importance of water analyses, VIII, 87
normal geothermal gradient in United States, discussion, XIX, 560
report of committee on measurement of geologic time, review, XIX, 302
temperature gradient in Pechelbronn, Alsace, XIII, 1569; XIV, 105
Lane, Alfred C., *et al.*, measurement of geologic time, review, XXIII, 331
Lane, E. C., and Garton, E. L., XXVII, 1306
Lane, E. C., and Reistle, C. E., Jr., XVI, 410
Lane, E. C., and Smith, N. A. C., PROB, 109, 129, 143
Lane, E. W., RMS, 11
Lane, Laura Lee, SD, 211, 241, 242, 257, 258, 564, 570; IX, 661; X, 3, 33, 34, 49, 50; XX, 169
Lane, Laura Lee, and Deussen, Alexander, Hockley salt dome, Harris County, Texas, SD, 570; IX, 1031
Lane, T. W., IX, 712
Lane, W. P., Survey, Texas (wells 385, 386), SBP, 292-335, 410
Lane City field, Texas, XXIX, 787
Lane Hill anticline, GAS, 564, 565, 567
Lane-Wells Company granted license by Wells Surveys, Inc., to make radioactivity surveys in United States, XXV, 1769
Lane-Wells gun perforator, XXV, 754
Laney shale member (upper Green River), XXII, 1023, 1032
Lang, H., and Hoffmann, F., XV, 616
Lang, K. N., and Scheuchzei, J. J., XXV, 1210
Lang, W. E., STRAT, 166
Lang, Walter B., GAS, 1065; PTNM, 592, 593, 596, 608, 610, 611, 612, 640, 688, 740; PROB, 1008; XII, 163; XXI, 1517; XXIV, 9, 10, 11, 45, 48, 342; XXV, 82, 94, 1713, 1722; XXVI, 81, 84, 85, 98, 230, 245, 251, 592, 593, 596, 608, 610, 611, 612, 640, 688, 740, 1637, 1643; XXVIII, 1016, 1599, 1614, 1621
a Soxhlet extractor for porosity determination, X, 998
basal beds of Salado formation in Fletcher potash core test, near Carlsbad, New Mexico, XXVI, 63
correction for well logs, XI, 1116
geologic significance of a geothermal gradient curve, XXI, 1193
discussion, XXI, 1494
Lang, Walter B., microscope eclipse plate for routine index determinations, XXII, 1278
new source for sodium sulphate in New Mexico, XXV, 152
Permian formations of Peccs Valley of New Mexico and Texas, XXI, 833
Salado formation of Permian basin, XXIII, 1569
unusual natural gases, discussion, X, 1176
upper Permian formation of Delaware basin of Texas and New Mexico, XIX, 262, 561
Lang, William Robert, SD, 468
Langbeinite, XXIII, 1690, 1692
Langdon, D. W., GC, 344, 359; XIX, 1163, 1654; XXVII, 596
Langdon, D. W., Jr., Smith, E. A., and Johnson, L. C., XXII, 1655
Langenheim, R. L., SBP, 7
Langenheim, R. L., Jr., XXV, 2158
Langewisch-Kuester pool, Illinois, STR II, 130
Langford, Charles G., XXIV, 29
Langham sand productive at Amelia field, XXIII, 1639, 1645, 1652
Langham, MSC, Fig 14 (in pocket)
Langmuir, Irving, RMS, 17
Langworthy, A. A., PROB, 587, 589, 590, 591, 764; XIII, 1095; XVII, 241
Cromwell field, Seminole and Okfuskee counties, Oklahoma, STR II, 300
review, XV, 973
Lanester, E. Ray, XXIV, 1178
Lanoraie wells, GAS, 108
Lansing formation, V, 297, 509
in Nemaha Mountains region, Kansas, STR I, 63, 64
Lansing group, GAS, 477, 480; XXI, 506
Bush City field, STRAT, 44, 45
(C1) (Pennsylvanian), SBP, 258, 261-280, 413
of Pennsylvanian in Kansas, XXII, 1596
Lansing-Kansas City groups, GAS, 467
Lansing-Kansas City limestone, XXI, 1002; XXII, 672; XXIII, 803, 806; XXV, 1107, 1109; XXVIII, 771, 772; XXIX, 704
production in, XXIV, 1002

- Lansing-Kansas City oil in Adell pool, XXIX, 703
- Lansing limestone, XXI, 502
in Eldorado field, Kansas, STR II, 166
- Lansing limestone group in Cunningham field, Kansas, XXI, 509
- Lansing oil and gas zone, productive at Cunningham field, Kansas, XXI, 521
- Lantern-slide, diagram to show relationship between size of original copy, width of projection, and size of actual, XXVI, 1671
- Lantern-slide copy, amount of reduction involved in use of maps, etc. for, XXVI, 1665
- electrical well-log correlations of Edna producing sands, redrafted for, XXVI, 1663
- generalized structure section from Tennessee through Mississippi, redrafted for, XXVI, 1663
- graphic representation of minimum height of letters necessary for legibility for, XXVI, 1660
- physiographic map of Santo Domingo redrafted for, XXVI, 1665
- preparation of, XXVI, 1656
- recommended pen sizes for use in preparing, XXVI, 1659
- relation of, to maximum audience distance, XXVI, 1667
- requirements of, XII, 79
- rules for curves on, XXVI, 1661
- Lantern-slide presentation, bar chart prepared for negative, XXVI, 1670
- line chart prepared for negative, XXVI, 1669
- Lantern slides, formulae used for legibility of, XXVI, 1671
- representation of land and water areas on a map to be used for, XXVI, 1664
- techniques in preparation of, XXVI, 1658
- types of, XXVI, 1657
- Lanternfish, section of well core showing, XXV, 319
- Lantzsch, K., XXVII, 1179, 1181
- Lapilli, RMS, 382
- Lapilli tuff bed in Salinas Quadrangle, XXI, 1343
- Laplace, XXV, 2162; XXIX, 1631
- Lapworth, C., XXIV, 287
- Laramian overthrusts, XXIX, 449
- Laramide deformation, XXII, 1433
- Laramide deformational movements, nature and direction of, XXIII, 1479
- Laramide diastrophism, XXVII, 424
- at Grass Creek field, Wyoming, STR II, 632
- Laramide disturbances, SC, 143; XX, 1689
- Laramide folding, SC, 143; XX, 1689; XXVII, 902
- Laramide Mountains, XXIII, 1451
- Laramide movements, XXIII, 1478
- Laramide orogenesis cause of connection between Caribbean Ridge and Rif-Kabylian Ridge, XXIV, 1606
- Laramide orogeny, XX, 1185; XXVI, 1396
- Laramide revolution, FOP, 15, 37; GAS, 7, 8; PROB, 682, 685, 690, 692, 700, 721, 722; XVI, 12; XVII, 166; XXIII, 125, 1150; XXV, 1447, 1469; XXVIII, 313; XXIX, 1082, 1190
- (Laramide)
- Wind River Range folded during, XXV, 144
- Laramide tectonic pattern, XXVII, 425
- Laramie and Dawson formations in southeastern part of Denver Basin, Colorado, XX, 1308
- Laramie Basin, Wyoming, Great Plains, and Black Hills, correlations between, XX, 1194
- Laramie Basin, Wyoming, PROB, 680, XXI, 996; XXVII, 431
- a synclinalorium, XXVIII, 1208
- analyses of waters in, XXIV, 1326
- character of waters, XXIV, 1261, 1277, 1298
- Dakota group waters in, XXIV, 1262
- Frontier-Niobrara contact in, XX, 1189
- stratigraphy of, XXVIII, 1199
- Sundance waters in, XXIV, 1278
- Tensleep waters in, XXIV, 1294
- underground water in, XXVIII, 1213
- Laramie basin and western Wyoming, correlations between, XX, 1195
- Laramie flora, XX, 1311
- Laramie formation, IV, 109; VI, 204, 223; XXII, 1029
- Greasewood field, STRAT, 24, 27
- in northwestern Colorado, STR II, 98
- Laramie Mountains, XXVII, 430
- Laramie Range, XXVI, 1559, 1567
- pre-Cambrian rocks exposed in, XXVIII, 1200
- Laredo, cross section from, to Rio Grande City, XXVI, 259
- Laredo to Mexico City, geologic road log of Pan-American Highway, XX, 457
- Laredo and Rio Grande City, Texas, stratigraphy of Eocene between, XXVI, 256
- Laredo area, Texas, conditions in 1940, XXV, 1041
- important production and reserves in, XXIV, 1078
- Laredo district, Texas, STR I, 389; PROB, 60; GC, 631; XIX, 1131
- classification of formations, XXI, 1423
- Eocene production in, XXIV, 1077
- occurrence and accumulation of oil in, XXI, 1422
- oil and gas fields of, XXI, 1424-1425
- pools of, PROB, 579
- Laredo-Monterrey highway, GC, 597; XIX, 1366
- Laredo-Monterrey highway section, GC, 611; XIX, 1380
- Laredo-Monterrey railroad section, GC, 610; XIX, 1379
- Larimer County, Colorado, outcrop section p. SBP, 243-255, 411 (wells 237, 238), SBP, 194-243, 407
- Larios, H., XVI, 552
- Larious Creek, California, outcrop section H., SBP, 167-194, 411
- Larissa field, XXVII, 784
- gravity of oil in, XXVII, 784
- Larke, John, XVII, 1492
- Larkin, Pierce, VII, 630
- Larremore area, Caldwell County, Texas, geology of, XIV, 917
- Larremore oil field, Texas, XXIX, 1734
- Larsen, XI, 362, 1293
- Larsen, Esper S., XII, 993; XXIV, 499
- Larsen, Esper S., and Berman, Harry, XXI, 1293
- Larsen, Esper S., and Cross, Whitman, (Larsen)
- XXIII, 1170
- Larsen, Esper S., Allen, E. T., Crenshaw, S. H., and Johnson, John, PROB, 909
- Larsen, Raymond M., XXIII, 462; XXIV, 1215; XXVI, 1318
- developments in Rocky Mountain region in 1942, XXVII, 854
- developments in Rocky Mountain region in 1943, XXVIII, 789
- developments in Rocky Mountain region in 1944, XXIX, 1593
- Larsen, Raymond M., and Crawford, J. G., occurrence and types of crude oils in Rocky Mountain region, XXVII, 1305
- Larsen, W. P., Hartzell, T. B., and Diehl, H. S., XX, 262
- Larson, XXI, 1490
- Lartet, Louis, XI, 148; XX, 881, 890, 897, 901
- LaRue, Robert, XXVIII, 628
- LaRue, Wilton W., and McCollum, Burton, XVII, 1499
- utilization of existing wells in seismograph work, XV, 1409
- Larvae, RMS, 105, 201
- Las Animas arch, Lincoln, Cheyenne, and Kiowa counties, Colorado, structural development of, XXIX, 1663
- New Mexico and Colorado, XXVII, 427
- sections showing stages of structural development, XXIX, 1667
- Las Canoas, MEX, 23, 60
- Las Cortinas formation, XXVIII, 1151
- Las Delicias area, XXVIII, 321
- Permian in, XXVIII, 307
- Las Flores, San Felipe in well at, MEX, 66
- (Southern Tamaulipas), Agua Nueva in well at, MEX, 71
- (south-southwest of Tantoyuca, Veracruz), *Bulimina* beds between Chicotepec and, MEX, 89
- Las Flores field, XXVII, 1345
- Las Lajas formation, CAL, 141
- Las Monas structure, XXIX, 1121
- Agua Clara, Colombia, section, XXIX, 1122
- Las Palmas, MEX, 36, 38, 46
- Las Perdices group, XXIX, 1096
- Las Piedras, MEX, 80, 86, 111
- Las Posas district, CAL, 155, 310
- Las Posas fault, SC, 99; XX, 1645
- Las Posas formation, CAL, 249, 303; SC, 102; XX, 1648
- Las Posas zone, CAL, 268
- Las Rayas, thickness of Tamesí beds in well at, MEX, 76
- Las Tablas Creek, MSC, 49, 116, 322
- Las Tablas fault zone, map and cross sections showing relations of Marmolejo breccia in vicinity of, XXVIII, 465
- Las Tablas thrust zone, XXVIII, 481
- Las Trojas, Chicotepec beds near, MEX, 99
- Las Varas Canyon, MSC, 33, 241
- Las Vigas formation, XXVIII, 1167, 1185
- Lasard, RMS, 337
- Lasky, Bernard H., memorial of Mowry Bates, XI, 107
- Lasky, Samuel G., newly discovered section of Trinity age in southwestern New Mexico, XXII, 524
- Lassen Peak, CAL, 26

- Lassiter, L. E., GAS, 609
- Lasson, M. L., RMS, 537, 544, 548, 549
- Last Chance anticline, XXI, 1258
- Last Chance field, XXVII, 450
- Last glacial period, RMS, 405, 410
- Latah formation, XXIX, 1386
- Late-glacial sediments in Baltic, RMS, 303-321
- Late Paleozoic age of Morehouse formation of northeastern Louisiana, XXVI, 1672
- Late Paleozoic stratigraphy of Gore area, Colorado, XXVI, 1375
- Latent heat of evaporation and fusion of water, RMS, 67
- of volcanism, MEX, 226
- Lateral and vertical migration of oil, a study of evidence for, PROB, 399
- of petroleum into lower Wasatch sands at Powder Wash, assumption of, untenable, XXII, 1042
- Lateral compression, V, 482
- Lance Creek anticline caused by, STR II, 608
- Rock River field, Wyoming, fold probably caused by, STR II, 617
- Lateral diffusion due to the turbulence, RMS, 81
- Lateral drilling technique, XXIV, 1366
- Lateral gradation as opposed to overlapping unconformity in Anadarko basin, XXI, 1554, 1555
- in the Seven Rivers formation, Rocky Arroyo, Eddy County, New Mexico, XXVI, 80
- of Chickasha member northward into Dog Creek-Blaine and Flower-pot members of El Reno group, XXI, 1556
- on evaporite deposition in upper part of San Andres, XXIV, 24
- rather than unconformity at base of Marlow, XXI, 1560
- Lateral migration. (See Migration)
- of oil in Osage County field, Oklahoma, STR II, 389, 390
- of oil in Santa Maria field, California, STR II, 18
- of oil in Texon zone, Big Lake field, Texas, STR II, 526
- of oil in Virgil pool, Kansas, STR II, 149
- of oil into McMurray sands, XXII, 1142
- Lateral migration theory of origin of oil in McMurray sands, XXII, 1142
- Lateral mixing of water in sea, RMS, 274
- Lateral movement by gravity, XVI, 45
- of Los Bajos fault zone, evidence of, XXIV, 2111
- Lateral pressure, domes formed by, STR II, 680
- Lateral sand reservoirs in West Columbia field, Texas, STR II, 467
- Lateral sands in West Columbia field, Texas, production in, STR II, 466, 683
- Lateral shears, XXVII, 1260
- Lateral transitions in Permian section, XXIII, 1706
- Lateral variation in Chester sandstones producing oil and gas in lower Wabash River area, with special reference to New Harmony field, Illinois and Indiana, XXVI, 1594
- in foraminiferal content of some zones, XXIX, 959
- Lateritization, RMS, 486, 509
- Latimer, Frank Parkes, memorial of, (Latimer)
- XIII, 1237
- Latin America, Zemorrian Stage in, MSC, 179
- Latin American and Californian foraminiferal faunas, relationship, MSC, 176
- Latin American faunas, Eocene-Oligocene-Miocene, MSC, 177, 178, 180
- Latin American foraminiferal formations, MSC, 179
- Latin American republics, American training of geologists in, XXVI, 1210
- Latitude, as a cause of variation in tides, RMS, 131, 132
- effect of, on turbulence, RMS, 121
- evidence of change meager and opposed to drift theory, CD, 192
- influence of, on heat received by sea, RMS, 85
- of Mediterranean belt of mountains not explained, CD, 193
- Latitude and longitude observations for geologic mapping, XVI, 97
- Laton pool, PROB, 777
- Lattice, RMS, 459, 460-462, 477, 479, 488
- crystal, RMS, 538
- excess charges on, RMS, 481
- expanding, RMS, 474
- Lattice constants, RMS, 623, 624
- Lattice forces, RMS, 534
- Lattice layer, RMS, 461, 463
- Lattice structure, RMS, 456, 459, 462
- of clays, RMS, 474, 478
- Laubmeyer, G. XXIV, 1464
- Laudermilk, J. D., XXVI, 40
- Laudon, L. R., XVIII, 1133, 1138, 1142, 1147; XXV, 1652, 1656, 2113, 2127
- stratigraphy of northern extension of Burlington limestone in Missouri and Iowa, XXI, 1158
- stratigraphy of Osage subseries of northeastern Oklahoma, XXIII, 325
- Laudon, L. R., and Bowsher, A. L., XXVI, 1734; XXVII, 918; XXIX, 136
- Mississippian formations of Sacramento Mountains, New Mexico, XXV, 2107
- Laue, RMS, 622
- Laue method of X-ray studies, RMS, 622
- Lauer, A. W., MEX, 41, 51, 149, 165, 169, PROB, 260, 384, 394; VIII, 718; XII, 1154
- Laughlin-Simmons Well Elevation Service, XXI, 34
- Laughner-Wittmer (well 418), SBP, 349-379, 410
- Laura Thompson graben, GC, 208, 248; XVII, 960
- Laurel Canyon, MSC, 195, 230, 261, 268, 269, 273, 310, 312
- Laurel facies of Missouri-Illinois Bainbridge formation, XXVI, 9
- Laurel field, waters in, XXVI, 1374
- Laurel Fork pool, V, 81
- Laurel Hill anticline, XXVI, 1120; XXVIII, 732
- Laurel limestone in Missouri, XXVI, 10
- in Sumner County field, Tennessee, STR I, 251
- Laurel Ridge anticline, V, 368
- Laurel Ridge field, Louisiana, XXIX, 794
- Laurent, XIX, 486
- Laurentia, CAL, 41
- Laurentian land mass, PROB, 537
- Laurie, F., MEX, 213
- Lava, MEX, 24, 143, 145, 147, 154
- Lava flows of Barrilla and Davis mountains, XXII, 1437
- Lavaca County, Texas, active faulting in, XXII, 104
- Lavaca field, GAS, 565, 566
- Lavaca gas field, XXI, 1410
- Lavaderos, asphalt seepages from boss of quartz-dolerite, MEX, 152
- near San José de las Rúsias, quartz-dolerite at, MEX, 147
- olivine basalt at, MEX, 148
- LaVergne, XXI, 1586
- Lavington, Charles S., STRAT, 24; XVI, 257; XVII, 422
- discussion of Bartram's paper on Upper Cretaceous of Rocky Mountain area, XXI, 912
- Greasewood oil field, Weld County, Colorado, STRAT, 19
- Montana group in eastern Colorado, XVII, 397
- oil seep in north-central Nevada, XI, 1117
- Law, G. G., GAS, 1057
- Law applicable to oil and gas industry, part played by petroleum geologists in development and administration of, XXII, 1087
- of gases, XXIX, 1190
- of Hilt, relation of, to regional metamorphism, XIX, 595
- of oil and gas, rôle of petroleum geologist in development of, XXII, 1080
- of superposition of strata, XXIV, 1752
- Lawall, C. E., and Holland, C. T., XXVII, 1218
- Lawndale, PROB, 753
- Lawndale field, California, GAS, 215
- (wells 42, 43), SBP, 87-155, 403
- Lawnsdale - Hawthorne - Manhattan area, waters in, PROB, 979, 980
- Lawrence, XXII, 1219, 1220
- Lawrence County, Kentucky (well 430), SBP, 349-379, 410
- Lawrence County pools, amount of oil calculated in, PROB, 566
- Lawrence shale, V, 64
- Lawrence Township, Pennsylvania (well 413), SBP, 349-379, 410
- Lawrence uplift, XXV, 1650
- Laws and regulations governing unit operation of oil and gas fields, XVIII, 1488
- Lawson, Andrew Cowper, CAL, vi, 3, 8, 14, 33, 35, 36, 43, 79, 82, 84, 87, 118, 190, 193, 243, 251, 255, 270; MSC, 65, 115, 167; SBP, 92; VIII, 55, 580; IX, 56, 232; X, 756; XI, 34; XII, 117, 132, 845, 971, 978, 982; XIII, 201, 207, 501, 594; XV, 374, 400, 401; XX, 867, 869, 872; XXV, 1332, 1334, 1342; XXVI, 1798; XXVII, 115, 118, 131, 159, 255; XXVIII, 513; XXIX, 1326
- honorary member of American Association of Petroleum Geologists, XXII, 1120
- radium in sial and sima, CD, 43
- Lawson, Robert W., XVIII, 35
- Lawson, R. W., and Holmes, A., XXI, 1200
- Lawson field, Haskell County, Texas, XXVI, 1044
- Lawson Hill, California, MSC, 65

- (Lawson)
outcrop section E, SBP, 167-194, 410
Lawson limestone, XXVIII, 1681
correlation of lower member, XXVIII, 1708
Lawson limestone and clastic beds of Navarro age, XXVIII, 1708
Lawsonite in Franciscan schists, XXVII, 173
Lawton field, III, 257
Lawton pool, GAS, 576, 586, 587
Laycock pool, Wheeler County, Texas, columnar section, XXIII, 1037
Layser, XXIII, 1074
Layered sediment, conversion in, XXVIII, 944
Layers of geology and wedge belts of porosity, XXVII, 917
of water, effect of, on upwelling, RMS, 123
thickness of, XXVI, 1726
Layne and Bowler, SD, 595
Laysan und der Chatham-Inseln, Foraminiferen von, MSC, 13
Layton sand, Blackwell field, Oklahoma, STR I, 167
Cushing field, Oklahoma, STR II, 397
Depew area, Oklahoma, STR II, 366, 377
Garber field, Oklahoma, STR I, 178, 182
Morrison field, Oklahoma, STR I, 151, 152, 156; XI, 1091
Oklahoma, PROB, 992; II, 121; III, 259; V, 400; VI, 320; XXV, 1677; XXVII, 798
analyses of water from, PROB, 866
Layton sand, Osage County field, Oklahoma, STR II, 379, 385, 389
Le Blanc, E. H., XXIX, 1170
Le Chatelier, XVII, 1260
Le Conte, Joseph, CAL, vi; PROB, 14; SD, 397; XII, 112, 114, 130, 132, 136; XVI, 36, 37; XX, 870; XXIII, 551
Lea County, New Mexico, Permian in, XXI, 856
radioactivity logs in Cooper pool, showing correlation, interval changes, and expression of potash beds, XXV, 1786
(well 302), SBP, 285-292, 408
Lea County, New Mexico, and Ward and Winkler counties, Texas, "Sand Belt" area of, STRAT, 750
Lea Park formation, foraminifera in, XXIX, 1619
Lea Park shale, fossils in, XXIX, 1618
lithology, XXIX, 1618
Leach, C. E., and Menken, F. A., overturned plunge on overturned folds in Sespe-Piru Creek district, California, XVI, 209
Leach, E. F., X, 1239
Leach, Thomas W., XXVII, 1592
Leach, W. W., STRAT, 339
Leach, W. W., and Rose, B., XIX, 1453
Leach Trough, CAL, 40
Leaching effect in limestone, MEX, 52, 169
Lead, RMS, 149, 435, 436
Leadville limestone, XXVI, 1377, 1384
in Colorado, XVII, 535
Leaf-bearing beds, SC, 59; XX, 1605
League City field, XXIII, 882
Leamington gas field, GAS, 69, 73, 75
Leasing activity in Kansas in 1937, XXII, 667
in 1939, XXIV, 995
in 1942, XXVII, 807
(Leasing)
in 1944, XXIX, 702
Leasing activity in Kansas and Nebraska in 1941, XXVI, 1074
Leasing activity in Mississippi in 1940, XXV, 1017
in 1941, decline of, XXVI, 995
Leasing activity in southeastern United States in 1942, XXVII, 991
Leatherock, Constance, STRAT 66, 71, 238, 443, 461, 478, 481; XXI, 39
physical characteristics of Bartlesville and Burbank sands in northeastern Oklahoma and southeastern Kansas, XXI, 246
Leatherock, Constance, and Bass, N. W., Chattanooga shale in Osage County, Oklahoma, and adjacent areas, XX, 91
Leatherock, Constance, Dillard, W. Reese, Kennedy, Luther E., and Bays, N. Wood, origin and distribution of Bartlesville and Burbank shoestring oil sands in parts of Oklahoma and Kansas, XXI, 30
Leatherock, Otto, memorial of, XXV, 2101
Leaton oil and gas field, XXII, 146
Leaton pool, GAS, 796
Leavenworth, P. B., developments in Gulf Coast of Upper Texas and Louisiana, in 1943, XXVIII, 853
memorial of Reichle S. Stelfox, XVII, 1021
Lebanon limestone and Pencil Cave members of Carters limestone in middle Tennessee, XXIV, 1647
Lebanon Township pool, Ohio, XI, 952
Lebedeff, A. F., XX, 715
water held by soil after centrifuging in tests by, XX, 716
Lebedeff, V., and Jung, J., *Résultats des récentes prospections de pétrole en Afrique équatoriale française*, review, XV, 974
Lebkicher, Roy, PROB, 348, 683, 702; XIII, 781, 791; XV, 149
LeBlanc, Rufus J., XXIX, 51
LeBlanc, Rufus J., and Barry, John O., XXV, 741; XXIX, 25, 53, 61, 62, 64
fossiliferous localities of Midway group in Louisiana, XXV, 734
Lebo shale, VI, 144
Lecanospira fauna, XXIV, 154
Leck, Lawrence Vander, unproved areas, review, VI, 481
Leckelt sand, oil-bearing, XXVII, 1107
Lecompton limestone in Virgil pool, Kansas, STR II, 144
Lecture notes on practical petroleum geophysics, XXIV, 1339
Leda zone, XXVIII, 956
Leder Müller, XXV, 1214
Ledge-makers, Permian, in Concho County, Texas, XVIII, 1577
Lee, XII, 1016
Lee and Garlough, XI, 919
Lee, C. H., X, 1042; XIV, 8
Lee, C. H., and Ellis, A. J., PROB, 814; XVII, 732
Lee, C. Y., and Tan, H. C., XXV, 2063
Lee, Cheng-San, Block, W., and Dahlgren, F., *Kaledonische und variszische Probleme der Westsudeteten*, review, XXIII, 1418
Lee, F. W., XVI, 1264
Lee, F. W., and Swartz, J. H., XVI, 1328; XVIII, 40
Lee, H. W., GAS, 119
Lee, Harvey, SBP, 6
Lee, J. S., XXIX, 132
Lee, Lynn K., XXII, 133
discussion of Iowa series in Illinois, XXIV, 236
geology of Basin fields in southeastern Illinois, XXIII, 1493
Lee, Marvin, XIX, 1406
financial report for 1930, XV, 577
review, XIX, 300
Lee, Marvin, and Baughman, George W., XXI, 133
recent developments in Kansas and Nebraska in 1936, XXI, 1000
Lee, W. T., SBP, 196, 257
Lee, Wallace, STRAT, 133, 551; XX, 780; XXIII, 1511, 1512, 1513, 1518, 1519, 1520, 1521; XXV, 1660, 2113; XXIX, 136
geology of Siam with reference to petroleum, XI, 407
McLouth gas and oil field, Jefferson and Leavenworth counties, Kansas, XXVI, 133
subsurface Mississippian rocks of Kansas, review, XXV, 1410
Lee, Wallace, and Lupton, Charles Thomas, VII, 9; XXVI, 1339
geology of Cat Creek oil field, Fergus and Garfield counties, Montana, V, 252, 327
Lee, Wallace, and Rogers, G. S., IX, 889
Lee, Wallace, *et al.*, XXIV, 90
Lee, Wallace, Lupton, Charles Thomas, and Van Burch, Lisle Reed, oil possibilities of western Kansas, VI, 69
Lee, Willis T., GAS, 308; PROB, 682; STRAT, 28, 100; V, 163; VI, 222; VII, 169; IX, 949; X, 819, 820, 850; XII, 940; XIII, 650, 758, 935; XIV, 765, 778, 780; XV, 1095, 1098, 1133; XVII, 110, 127, 129, 130, 152; XVIII, 868, 1657, 1658, 1660, 1667, 1677, 1679, 1687, 1694; XIX, 163, 258, 259, 260, 1002; XXI, 719, 848, 849, 852; XXII, 1025; XXV, 82, 135, 884; XXVI, 218
concerning granite in wells in eastern New Mexico, V, 163, 329
Lee, Willis T., and Boyer, W. W., XI, 803
Lee, Willis T., and Girty, G. H., PTNM, 674; IV, 74; XIII, 967; XXVI, 674
Lee and Keys pool, XXIII, 856
Lee County, Kentucky, Big Sinking field, STRAT, 166
Lee County oil field, PROB, 509
Lee-Estill-Powell field, Kentucky, STR I, 73, 79; XI, 482
Leedo dome, XXIX, 830
Leeds and Northrup soil-resistivity tester, XVI, 1272
Leeds fault block in St. George district, Utah, XXIII, 136
Lees, De Böck, and Richardson, XXVII, 1507; XXIX, 1082
Lees, Charles H., PROB, 994; XVIII, 16
Lees, G. M., XIII, 975, 979; XVII, 564; XIX, 809; XX, 889, 898; XXIII, 514
Black Sea conditions in Arabian Sea, XXI, 1579
reservoir rocks of Persian oil fields, XVII, 229
Lees, G. M., and Taitt, A. H., geological results of search for oilfields in

(Lees)

- Great Britain, review, XXIX, 1353
 Lees, James H., XII, 201
 Lees, Martin, XVII, 1027
 estimates on flowage of salt, GC, 21
 Lee's location of Ancestral Rockies, XIV, 766
 Lee's Summit field, XXV, 1407
 Leesburgh pool, Kansas, XXIII, 805
 Leesville member of Warsaw limestone, XXIV, 805
 Leet, L. Don, practical seismology and seismic prospecting, review, XXII, 1607
 Leet, L. Don, and Ewing, W. Maurice, XVIII, 112
 Leeuwenhock, Anton, XXV, 1211
 Lefors basin, XXIII, 995, 1045
 Lefors dome, GAS, 394
 Lefors granite ridge, XXIII, 995
 Lefors ridge, XXIII, 1049
 peneplanation in, XXIII, 986
 Lefors saddle, XXIII, 1004
 Legal problems, cooperation of geologist in, XXII, 521
 Legardeur de Saint-Pierre, M., XXIX, 1605
 Leger, RMS, 661
 Leger dredge, RMS, 660, 661
 Leggett, J. W., XXVIII, 1360
 Leggette, Max, XXI, 260, 261
 Leggette, R. M., and Taylor, G. H., XX, 718
 Lego limestone, XXVI, 11
 LeGrande pool, GAS, 835; XXVI, 1095
 Lehman, Roy P., XXI, 1561, 1562, 1568
 thrust faulting in Arbuckle Mountains, Oklahoma, XXIX, 187
 Lehmann, H., XXII, 50
 Lehmann, J. G., XXV, 2162
 Lehn and Fromme pools, Pecos County, producing from sands and dolomite of Whitehorse section, XXIV, 1038
 Lehn and Masterson pools, gravity of oil in, XXV, 1049
 Lehn pool, XXIX, 745
 Lehner, E., XX, 1439, 1440, 1445, 1449, 1450; XXI, 630; XXIV, 1596
 Lehnhard, P. J., and Reimers, Hans, XXIV, 1363
Lehrbuch der angewandten Geophysik. Geophysikalische Aufschlussmethoden, review, XXIV, 1374
 Leibensperger, R., MEX, ix
 Leidecker sand, V, 290
 Leidhold, Clemens, XVI, 561, 568
 Lelidy, Joseph, SD, 372, 396; IX, 772; XXVIII, 1000, 1002
 Leigh dolomite, XXV, 129
 Leighly, John B., RMS, 7, 15, 79; XXIII, 1201
 Leighton, M. M., GAS, 813; X, 1286; XIII, 461, 1467
 twenty-fifth annual meeting of the Association, address of welcome, XXIV, 1157
 Leine type of salt structures, IX, 1250
 Leine Valley anticline, XVI, 169
 Leine Valley district, SD, 187, 190, 193
 Leinz, V., RMS, 380, 382, 392, 397
 Leiser, J. B., XXI, 1379
 Leitchfield, field, GAS, 878
 Leitchfield formation, XXIV, 840
 Leith, Charles Kenneth, GAS, 1081; VI, 228; X, 296, 1038; XI, 34; XII, 1165; XIII, 560, 635, 1449, 1453, 1454, 1462; XIV, 633; XV, 398,

(Leith)

- 399; XIX, 271; XXVI, 42, 46
 economic aspects of geology, review, VI, 157
 experiments showing effects of rotational stresses, X, 296
 Leith, Charles Kenneth, and Mead, W. J., X, 1038
 Leith, Charles Kenneth, and Van Hise, C. R., XXV, 1624
 Leitmeier, H., and Feigl, F., XXII, 1367
 Lela dome, GAS, 394; XXIII, 1035
 Lemberg, J., XVIII, 359
 Lemberg solution staining of drill cuttings, XXI, 949
 Leme, XX, 1230
 Lemke, E., XXI, 1357
 Lemley, John, STRAT, 846
 Lemmon syncline, POP, 77; XXV, 1509; XXVII, 1582
 location of axis of, on top of Dakota sandstone, XXVII, 1583
 Lemoine, Paul, CD, 127
 Lemurian compression of Asia, CD, 54, 199
 Lemurs, CD, 143
 Lenapah limestone, II, 122; V, 548; VI, 464; XXV, 38, 40; XXVII, 632
 Lenapah sand, V, 293
 Lennep sandstone, nonmarine, XXII, 1634
 Lenord Petroleum Company (well 350), SBP, 292-335, 409
 Lens of chert-bearing dolomite and limestone in Hutchinson and Moore counties, Texas, XXIII, 1040
 Lenses of coarse detritus in Santa Margarita shale of Temblor Range, XXV, 1342
 Lenses of sand interbedded with salt in Salado formation, XXVIII, 1612
 productive of gas in Saxet field, XXIV, 1814
 Lensing, PROB, 745, 748; XVIII, 1313
 Lensing and shoestring sands, origin of, XXVII, 918
 Lensing activity in Kansas, XXIII, 798
 Lensing beds, PROB, 306, 400, 509, 554
 Lensing character of Mesón beds, MEX, 136
 Lensing sand in Alice field, XXIII, 867
 in East White Point field, XXV, 1987
 in Seminole area, XXI, 1009
 in South Burbank pool, Oklahoma, XXI, 579
 in South Texas, XXVII, 744
 Lensing sands, XVII, 550; XXI, 1433; XXVI, 211
 in Cabin Creek field, XI, 712
 in Crinerville field, Oklahoma, XI, 1082
 in Glenn pool, Oklahoma, XI, 1062
 in Illinois, XXVI, 1089
 in Saratoga field, oil in, SD, 515
 in Tri-County field, XI, 609
 in Wilmington field, California, XXII, 1056
 of Ohio, STRAT, 382; XI, 958, 1028-1031
 production from, in Texas, XXIV, 1047
 Lenticular anhydrite stringer, XXII, 971
 Lenticular beds, XXVI, 350
 in Basin fields in Illinois, XXIII, 1496
 in Bellevue field, XXII, 1665, 1667
 in Eocene in California, XXIV, 1943

(Lenticular)

- in Peru, XII, 19
 of Popo Agie formation, XXV, 135
 porous, productive in Buckeye field, XXIV, 1962
 Lenticular character of oil zones, sections through north and south Buckeye field, showing, XXIV, 1974
 Lenticular dolomite, PROB, 413
 Lenticular gas sand in Kevin-Sunburst field, Montana, STR II, 265
 Lenticular gas sands, GAS, 152, 153, 370, 371, 470, 491, 492, 628, 640, 692, 708, 723, 730, 797, 798, 801, 831, 858, 878, 1054
 Lenticular lime in Stephens County, Texas, STR II, 471
 Lenticular limestone at Driscoll Ranch, GC, 622; XVII, 818
 in Mercere formation, XXVIII, 17
 Lenticular member of Forest sands, benzene oil in, XXVII, 1616
 Lenticular porous producing zone in Lisbon field, XXIII, 281
 Lenticular quartzose sandstone, GC, 534; XVII, 532
 Lenticular reservoirs, PROB, 301, 326; XXIX, 1559
 origin in shore-line deposits, XII, 607
 Lenticular sand, PROB, 203, 209, 222, 292, 301, 314, 323, 324, 429, 461, 560, 561, 566, 729, 739, 747, 753, 783, 844, 863; STR II, 696; XI, 1097; XXV, 802, 804, 806
 Archer County, Texas, STR I, 429
 Bradford field, Pennsylvania and New York, STR II, 420
 Buckeye field, GC, 754; XIX, 398
 Cabin Creek field, West Virginia, STR I, 470
 Caddo field, Louisiana, STR II, 193
 California fields, XIII, 435
 cause of gas accumulation in Cole field, Texas, STR I, 402
 cause of oil accumulation in Charco-Redondo field, Texas, STR I, 407
 cause of oil accumulation in Randado field, Texas, STR I, 396
 Coalina field, PROB, 195
 Conroe field, GC, 805; XX, 752
 Copley pool, West Virginia, STR I, 455
 Cotton Valley field, XIV, 991
 Crinerville field, Oklahoma, STR I, 206
 Delaware Extension pool, Oklahoma, STR II, 362
 Depew area, Oklahoma, STR II, 377
 Driscoll pool, GC, 624; XVII, 820
 Earlsboro pool, Oklahoma, STR II, 316
 eastern coal field, Kentucky, STR I, 88
 Elk Hills field, California, STR II, 55
 Esperson dome, GC, 876; XVIII, 1651
 Francisco pool, Indiana, STR II, 140
 Government Wells field, GC, 638; XIX, 1138
 Hiawatha dome, Colorado, STR II, 114
 Hogback field, XIII, 124
 Kern Front field, PROB, 204
 Kern River field, PROB, 203
 Kevin-Sunburst field, Montana, STR II, 264
 Madison pool, Kansas, STR II, 151, 152
 Martinsville field, Illinois, STR II,

(Lenticular)

- 132, 137
 Maxton-Maxon, XXV, 798
 Midway-Sunset field, PROB, 199
 New York oil fields, STR II, 280
 northwestern Colorado, STR II, 98
 Ohio oil fields, STR I, 146, 147
 Peru, XII, 11
 Petrolia field, Texas, STR II, 552, 553
 porosity of, an important accumulation factor in Bradford field, Pennsylvania and New York, STR II, 679
 Raccoon Bend field, GC, 692, 694; XVII, 1475, 1477
 Salt Creek field, Wyoming, STR II, 596
 Seminole district, Oklahoma, STR II, 327, 334
 shoestring pools of Greenwood County, Kansas, STR II, 159
 Smith-Ellis field, Texas, STR II, 559, 564
 Stephens field, Arkansas, STR II, 10
 Tri-County field, Indiana, STR I, 33
 Ventura Avenue field, PROB, 209
 Vermilion Creek gas area, XIV, 1040
 Yates field, Texas, STR II, 487
 Lenticular sand body, structural bulge of, due to differential settling, XXII, 830
 Lenticular sand bodies, application of principle of differential settling to tracing of, XXII, 823
 Lenticular sand member of Thurman formation in Dora pool, XXIII, 696
 Lenticular sand pools, PROB, 340, 341 as barriers to flushing, XV, 921
 difficult to explain by gravitational assortment, PROB, 305
 Lenticular sand reservoir at Burbank field, Oklahoma, XXIX, 1538
 Lenticular sands, XXV, 812
 Caddo field, XXIII, 896
 Laredo district, XXI, 1429
 Moulton sand zone, XXIII, 917
 Quiriquire field, XXIII, 959
 Schuler field, XXVI, 1471
 of Jackson beds at Hoffman field, XXIV, 2131
 of McMurray formation, XXII, 1144
 of Starn formation, XXI, 1023
 Pennsylvanian, in Appalachian area, XXV, 796
 Permian and Pennsylvanian, in west Texas, FOP, 99; XXV, 1531
 productive in Garland City pool, XXII, 972
 productive in Jesse pool, XXII, 1565, 1567, 1568, 1577, 1578
 Lenticular sandstone, MEX, 89; XXV, 1757
 Colmar-Plymouth field, XXIII, 819
 Hendrick field, XIV, 931
 Keokuk pool, XXIII, 226
 Lenticular sandstones in Wasatch formation, XXV, 1152
 Lenticular sandy conglomerate in Modelo formation, XXVI, 189
 Lenticular shale in Osage County field, Oklahoma, STR II, 379
 in Petrolia field, Texas, STR II, 544
 Lenticular Strawn sands in Anderson and Kerr field, Cooke County, Texas, production from, XXI, 1024
 production from, XXIX, 764
 Lenticular structure of Pannonian formations in Hungary, XVIII, 937
 Lenticular Tertiary sands at Powder

(Lenticular)

- Wash and Hiawatha domes, FOP, 58; XXV, 1490
 Lenticular zones at Buckeye field, XXIV, 1959
 within Vicksburg, XXIII, 250
 Lenticularity, effect in preventing accurate appraisal of production until field is developed, XXII, 570
 of Dorcheat member, XXVIII, 605
 of lower Pico beds, XII, 248
 Lenticularity of producing formation, accumulation due to, in Aransas, STR II, 699
 in California, STR II, 699
 in Illinois, STR II, 700
 in Kentucky, STR II, 698
 in Ohio and Pennsylvania, STR II, 697
 in Oklahoma, STR II, 699
 in Texas, STR II, 698
 Lenticularity of sandstone beds in Powder Wash field, XXII, 1030
 significance of, XIII, 734
 Lenticularity and porosity of producing formations in Kentucky, XXIV, 969
 Lentil, XXIII, 1074, 1081
 Lentils in San Andres formation, XXVII, 496
 Lenz, C. V., XXI, 1073
 Leo sand, XXIII, 911
 Leo sandstone, XXII, 683; XXV, 1844
 Leucocene dominant mineral in Bethel sandstone, XXVIII, 114
 Leon, M. de, Survey, Texas (well 401), SBP, 335-349, 410
 Leon and Anderson counties, Texas, gas in, XVIII, 263
 Leon and Houston counties, Texas, Hurricane lentil in, XXIV, 1666-1667
 sections of lower Landrum member exposed in, XXIV, 1672-1675
 Leon pool, PROB, 293
 Leona formation, XXI, 497
 Leona sand, XXVI, 1473, 1483
 Leonard, A. G., XXVI, 336; XXVII, 1574
 Leonard, J. Sherman, XX, 403
 Leonard, Sherman, XIX, 1358
 Leonard and Guadalupe series, boundary between, XXV, 1681
 faunas of, characteristically Permian, PTNM, XXVI, 573
 Leonard and Wolfcamp series in Guadalupe Mountains region, sections, PTNM, 558; XXVI, 558
 Leonard and Word formations of Glass Mountains, volcanic sediments in, XXV, 79
 Leonard faunas, XXIII, 1698
 Leonard formation, XXIII, 1699; XXIV, 271
 of Glass Mountains correlated with Bone Spring limestone of Guadalupe Mountains region, PTNM, 653; XXVI, 653
 upper, section, XXIX, 1769
 Leonard-Levers field, GAS, 436, 438
 Leonard series, PTNM, 566, 630; XXIV, 42, 341; XXV, 80, 1684, 1686; XXVI, 248, 566, 630; XXVII, 753, 759; XXVIII, 1013
 correlations, XXIII, 1677
 Delaware basin facies of, PTNM, 653; XXVI, 653
 equivalents of, in Central Basin platform and Midland basin, PTNM, 691; XXVI, 691

(Leonard)

- in Glass Mountains, PTNM, 650; XXVI, 650
 in Guadalupe Mountains region, monoclinical flexures of, PTNM, 623, XXVI, 623
 in north-central Texas, XXIV, 97
 of Delaware basin, correlation of, PTNM, 685, XXVI, 685
 of Permian in Glass Mountains, XXIII, 1675
 Leonard time, map showing paleogeography of, PTNM, 739, 742, XXVI, 739, 742
 middle, XXVI, 230
 sedimentation during, in West Texas region, PTNM, 738; XXVI, 738
 Leonardon, XII, 101
 Leonardon, E. G., XVI, 1264
 memorial of Conrad Schlumberger, XX, 997
 Leonardon, E. G., and Schlumberger, C. and M., PROB, 956
 Leonardos, Othon Henry, and de Oliveira, Avelino Ignacio, XXIX, 518, 540
 geologia do Brasil, review, XXIX, 289
 Leoncito anticline, XXIX, 1125
 Leone sand, XXVI, 1257
 Leonard Petroleum Company (well 350), SBP, 292-335, 409
 Lepanto Gulf, RMS, 362
Lepidocyclina, locality, Adelaide Quadrangle, MSC, Fig. 14 (in pocket)
Lepidocyclina (Lepidocyclina) supera zone in Gulf Coast, XXII, 999
Lepidocyclina (Eulepidina) zone in Gulf Coast, XXII, 996
Lepidocyclina fragilis zone, XXVIII, 1323
Lepidocyclina (Lepidocyclina) mantelli zone in Gulf Coast, XXII, 999
Lepidocyclina limestones, XXII, 44
Lepidocyclina (polylepidina) zone in Gulf Coast, XXII, 1007
Lepidodendron flora, CD, 21
 Lepius, R., SD, 207
 Lerch, Otto, SD, 9, 10, 312, 343, 396; IX, 839, 840; X, 220, 260; XVI, 194; XXV, 84
 Leriche, M., V, 670, 671
 Lerke, Boris V., GAS, 459; XIX, 1417; XXIII, 1777
 LeRoy, L. W., MSC, 152; XIV, 361; XXI, 584
 Miocene foraminifera from Sumatra and Java, Netherlands East Indies, review, XXVIII, 1758
 small foraminifera from late Tertiary of Netherlands East Indies, review, XXV, 761
 LeRoy, L. W., and Cushman, Joseph A., MSC, 78, 192, 199, 204, 208, 213, 224, 226, 227, 232, 233, 248, 257, 261, 278, 283, 311, 344
 Leroy, L. W., and Van Tuyl, F. M., review, XXVII, 1393
 Leschot, J. R., XIV, 561
 Lesley, XV, 604
 Lesley, J. Peter, PROB, 6, 9, 10, 11, 13, 16, 18; XII, 804; XXII, 851; XXVII, 1198, 1199; XXIX, 1745
 Leslie, E. H., XIII, 350, 365
 Lesquereux, Leo, I, 29
 Lessees, rights and obligations of, XXII, 1083
 Lesser Antilles, arc of, XXIV, 1592
 section through arc of, XXIV, 1595
 Lester, XVII, 1499

- Lester, J. G., XXVII, 596
 Lester, Oliver C., XV, 1307
 simple derivation of working equations of magnetic variometers for vertical and horizontal intensity, XII, 855
 Lester, Oliver C., Jr., seismic weathered or aerated surface layer, XVI, 1230
 Lester, Oliver C., Jr., and Rosaire, E. E., seismological discovery and partial detail of Vermilion Bay salt dome, Louisiana, XVI, 1221
 Lester pool, XXIX, 763
 Letcher County, Kentucky (well 433), SBP, 349-379, 410
 Lethbridge area, Alberta, Bearpaw shale and contiguous formations in, ALTA, 99, XV, 1227
 Pierre epicontinental sea cycle of transgression and regression in, ALTA, 112-114; XV, 1240-1242
 Lethbridge-Brooks area of southern Alberta, subsurface study of Pale beds and Foremost formation in, ALTA, 69; XV, 1197
 Lethbridge coal measures in Alberta, ALTA, 99-101; XV, 1227
 Letsch pool, XXIV, 1002
 Letter to the geological departments in petroleum industry, XXVII, 237
 Letter classification of East Indian Tertiary, XXII, 29
 Letters, graphic representation of minimum height of, necessary for legibility for lantern-slide copy, XXVI, 1660
 Leuch, K., XXIII, 1723
 Leuchs, Kurt, RMS, 496; XI, 494; XXI, 1215, 1216; XXII, 34, 55
 Geologie von Assen, review, XXI, 1214
 Leucite, RMS, 602
 Leucocene, XXII, 556; XXIV, 643; XXVIII, 86
 Leuders field, Texas, XXI, 1022
 Leupold and Van der Vlier, XXII, 29, 30, 42
 classification of Tertiary of East Indies, XXII, 29
Levant sous mandat Français, premières recherches sur les hydrocarbures minéraux dans les États du, review, XIX, 1706
 Levantic, Europe, VI, 526
 Levee-flank depressions, RMS, 163, 167
 Levees, natural, RMS, 156; XXIII, 1210
 Level, changes of, in Baltic Sea, RMS, 311
 Level surfaces in the sea, RMS, 112
 in the sea, change of, due to winds, RMS, 326
 in the sea, definition of, RMS, 109
 Levels of water tables, solution effects of changes in, XX, 1397
 Levene, Clara M., and Schuchert, Charles, O. C. Marsh, pioneer in paleontology, review, XXIV, 1684
 Leverett, Frank, XVII, 921; XIX, 1187
 Leverett, M. C., XXVII, 76
Levés récents, le géologie des Alpes méridionales d'après les, XXIII, 1721
 Levi-Civita, T., XIV, 1209, 1210
 Levi coal seam in Clay County gas field, Kentucky, STR I, 86
 Levias limestone, XXII, 272
 Levias member, XXIV, 225
 Levings, W. S., aerogeology in mineral exploration, review, XXIX, 106
 Levings, W. S., Van Tuyl, F. M., et al., review of petroleum geology in 1944, review, XXIX, 1211
 Lewis and Chazy troughs, XXI, 1152
 Levorsen, A. I., GAS, 488, 514, 845, 1083; MEX, 13; PROB, 296, 309, 356, 431, 438, 587, 588, 591, 764, 766, 767, 772, 780; SBP, 257; STRAT, 318, 386; XIII, 25, 32, 33, 34, 412, 423, 573, 588, 594; XIV, 1071, 1537, 1552; XV, 1045; XVII, 865; XVIII, 1008, 1049; XIX, 503, 896; XX, 1112, 1118, 1459, XXI, 163, 704, 705, 768, 1241, 1243; XXII, 571, 833; XXIII, 236, 270, 1068, 1729; XXIV, 1440, 1444, 1452, 2023; XXV, 324, 327, 1203, 1708, XXVI, 36, 38, 62; XXVII, 932, 1175; XXVIII, 905; XXIX, 132, 1234, 1748
 announcement of Geochemical Exploration (soil analysis) round table meeting, XXIV, 402
 announcement on Research Notes, XXV, 177
 annual review of petroleum geology, XXVI, 1843
 convergence studies in Mid-Continent region, XI, 657
 cooperative cross sections, XIV, 949
 discovery thinking, XXVII, 887
 Ellenburger structure map of central Texas, XXV, 1600
 exploration methods, foreword, XXIV, 1353
 Ezequiel Ordoñez elected honorary member, XX, 234
 foreword, STRAT, ix
 foreword, symposium on Mexico, XX, 385
 foreword to possible future oil provinces of the United States and Canada, FOP, 1; XXV, 1433
 Greater Seminole district, Seminole and Pottawatomie counties, Oklahoma, STR II, 315
 origin of oil, XXV, 2086
 papers for the *Bulletin*, XX, 333
 Pennsylvanian overlap in United States, XV, 113
 petroleum geology, XXIV, 1355
 petroleum geology and The American Association of Petroleum Geologists, XX, 387
 relation of oil and gas pools to unconformities in Mid-Continent region, PROB, 761
 report of committee on stratigraphic nomenclature, XV, 700
 report of president for 1935, XX, 639
 Levorsen, A. I., report of representative on Division of Geology and Geography of National Research Council for 1940, XXV, 977
 for 1941, XXVI, 948
 for 1942-1943, XXVII, 698
 Levorsen, A. I., report of research committee for 1938, XXIII, 742
 for 1939, XXIV, 927
 for 1940, XXV, 972
 for 1941, XXVI, 946
 for 1942, XXVII, 697
 Levorsen, A. I., research committee, research notes announcement, XXIII, 757
 research committee conference, XXV, 337
 research committee conference (Levorsen) groups, XXIV, 401
 research problems, XXIII, 757
 reviews, XVIII, 1208; XXI, 275
 second-hand book dealers, XXVII, 996
 sediments from Gulf of Mexico, XXIII, 1123
 stratigraphic versus structural accumulation, XX, 521
 studies in paleogeography, XVII, 1107
 survey of college students majoring in geology, XXIII, 1280; XXV, 910; XXVI, 968, XXVII, 651; XXVIII, 629; XXIX, 571
 survey of colleges attended by members and associates of the association, XXIII, 1117, 1435
 survey of research opinion, XXIII, 436
 symposium of stratigraphic type oil fields, XXIII, 1434
 tectonic map of United States, XXIII, 1435
 time of oil and gas accumulation, XXIX, 1189
 Levorsen, A. I., Tuttle, Helen Fowler, Hedberg, Hollis D., and Rasmussen, Clayton, selected bibliography of articles describing stratigraphic type oil fields, STRAT, 858
 Levy County, west-east cross section through wells from Cedar Keys, to St. Augustine, St. Johns County, Florida, XXVIII, 1739
 Lewis and Burgener, XXI, 260
 Lewis, Frank E., PTNM, 660, 694, 702, 739, 742; XVI, 189, 194; XVII, 646; XXIV, 7, 8, 13; XXV, 1045, 1682; XXVI, 221, 238, 660, 694, 702, 739, 742, 1014; XXIX, 1775
 abstract, XXII, 1710
 position of San Andres group, West Texas and New Mexico, XXV, 73
 Lewis, Frank E., and Gould, Charles N., XXI, 1549
 Lewis, J. A., XXVI, 1723
 Lewis, J. E., GAS, 609
 Lewis, J. H., XX, 47
 Lewis, James O., III, 377, 433; V, 178, 363; VII, 609, 615, 619; VIII, 717; IX, 447; X, 405, 747, 748; XIX, 798, 884
 Delaware Extension pool, Nowata County, Oklahoma, STR II, 362
 review, XI, 766
 Lewis, James O., and Beal, Carl H., III, 421, 430, 435; XII, 360
 Lewis, James O., and Emmons, W. H., VIII, 719
 Lewis, James O., and McMurray, W. F., XVIII, 1457
 Lewis, J. Volney, PROB, 814; X, 1041, 1044, 1047; XIII, 1075
 review, XVII, 199
 Lewis, J. Whitney, XXVII, 1515
 geology of Cuba, XVI, 533
 occurrence of oil in igneous rocks of Cuba, XVI, 809
 probable age of aptychus-bearing formations of Cuba, XVI, 943
 Lewis, Paul F., XIX, 800
 Lewis, W. V., RMS, 208
 Lewis and Empire Oil and Gas Company, Fronkier 1 (well 278), SBP, 255-285, 407
 Lewis County, New York, Trenton in, XXII, 92

- Lewis field, GAS, 469, 470
 Lewis formation, IV, 109; VI, 204, 222
 Lewis Oil Company, State 2 (well 198), SBP, 194-243, 406
 Lewis overthrust, PROB, 700; XXVII, 427; XXIX, 449
 Lewis pool, PROB, 776; XXIII, 855, 856
 Lewis Run, PROB, 476
 Lewis Run sand in Bradford field, Pennsylvania and New York, STR II, 422, 424
 Lewis shale, XXII, 1029
 in northwestern Colorado, STR II, 98
 Lewis stereograms to show correlation of upper Permian sedimentary rocks of West Texas and New Mexico, XXIV, 13
 Lewis Woolman Collection of well samples, XXIX, 885
 Lewisburg field, Louisiana, XXIX, 799, 800
 Lewisville division of Woodbine formation, GAS, 667
 Lewisville field, Lafayette County, Arkansas, XXIV, 1093
 Lewisville fossiliferous zone of Woodbine formation, XXIX, 186
 Lexington and Highbridge groups in Ohio, GAS, 909
 Lexington cap rock, XXV, 55, 71
 Lexington coal, XXV, 37, 49, 55
 Lexington dome, PROB, 515, 517
 Lexington limestone, Big Sinking field, STRAT, 177
 Ley, Henry A., GAS, viii, ix; PROB, 410; SBP, 297; IX, 1209; X, 214; XII, 180; XIII, 594; XV, 1010; XVII, 1116; XXIV, 337
 age of producing horizon, Rice County, Kansas, X, 197
 American Association of Petroleum Geologists business committee, XXIII, 1113
 American Association of Petroleum Geologists method of electing officers, XXIII, 1260
 American Association of Petroleum Geologists, mutual responsibilities, XXIII, 1739
 barometric leveling, X, 1305
 cooperation between arms in prospecting, XXIII, 1741
 field trips, XXIII, 1116
 granite ridge of Kansas, X, 95
 Kirk gas sand in Graham district, Oklahoma, IX, 1024
 Lima-Indiana district, Indiana and Ohio, GAS, 843
 Mississippi lime west of Granite Ridge in Kansas, X, 96
 natural gas, GAS, 1073
 natural gas in eastern Kansas, GAS, 483
 occupational survey of membership, XXIV, 194
 prospecting in national economy, XXIII, 1880
 relation of quality of oil to structure at El Dorado, Arkansas, VII, 350
 report of president for 1939-1940, XXIV, 907
 research and the research committee, discussion, XXIII, 343
 response to address of welcome, twenty-fifth annual meeting of the Association, XXIV, 1159
 return to dynamic petroleum prospecting, XXIII, 1743
 reviews, XIV, 954; XV, 89, 90; (Ley)
 XXVII, 1019
 Sheridan test, Ellsworth County, Kansas, X, 199
 Society of Exploration Geophysicists, XXIII, 1592
 structure contouring, discussion, XIV, 103
 student awards, XXIV, 194
 subsurface observations in southeast Kansas, VIII, 445
 survey of geological curricula in universities and colleges in United States, XXIV, 602
 this Association, XXIV, 1162
 Ley, Henry A., and Willson, K. M., gas fields in northeast Texas embayment, GAS, 651
 Ley Bay, Germany, RMS, 195
 Leyendecker, Charles, XXIII, 217
 Lhuuy, Edward, XXV, 1209
 Liagora, RMS, 286
 Liaotung Peninsula, XXVIII, 1419
 Lias, MSC, 93
 lower, transgression, in Western Borneo, XXII, 26
 of Huasteca region, MEX, 9, 10
 Lias formation, CAL, 76, 302
 Liassic, PROB, 391
 in Germany, XVIII, 724
 Liassic sea, MEX, 93
 Liassic sedimentary rocks, XXVII, 1495
 Liberty County, Texas, Davis sand lens, Hardin field, STRAT, 564
 Esperson dome, GC, 857
 South Dayton salt dome, SD, 558
 Library research tool, new, XXIII, 1567
 Library service, periodical, at Association headquarters, XVIII, 1215
 Lichaidze, XXI, 1443
 Licharev, XXIV, 276, 297
 Licharev, B., XXII, 774; XXIV, 1129
 Lichty, L. C., GAS, 1108, 1114
 Licks, PROB, 2
 Liddle, Ralph Alexander, PROB, 415
 416; SBP, 297, 337; XI, 1276, XII, 952; XIII, 618, 621, 624, 883; XIV, 1431; XV, 244; XVII, 212, 216, 220, 222, 479, 747; XIX, 770, 784, 786, 788; XXI, 235, 1351; XXII, 1227; XXIII, 1854; XXVI, 126; XXVIII, 5, 7, 8; XXIX, 184
 discussion of limestone as source rock in Venezuela, XV, 244
 geology of Venezuela and Trinidad, review, XII, 445
 magnetometer survey of Little Fry Pan area, Uvalde and Kinney counties, Texas, XIV, 509
 tectonics of Maracaibo Basin, Venezuela, XI, 177
 Liddle, Ralph Alexander, Van oil field, Van Zandt County, Texas, XIII, 1557
 review, XXI, 810
 Lide and Greer, XXII, 722
 Lidgett, Albert, petroleum, review, XII, 1118
 Liebig, G. F., Jr., RMS, 463
 Liebig, G. F., Jr., and Kelley, W. P., XXVI, 847
 base exchange in relation to composition of clay with special reference to effect of sea water, XVIII, 358
 Liebre fault and San Gabriel fault, section along axis of syncline between, XXIII, 525
 Liebre fault zone, XXIII, 550
 Liebre Gulch, XXIII, 545
 Liege, Belgium, RMS, 471
 Liesegang's ring experiment, XXIX, 1164
 Life, dispersion explainable on basis of present arrangements of continents, CD, 138
 distribution of, requirement of connections between continents from the Cambrian on, CD, 66
 in Great Salt Lake, XXII, 1330
 in sea during glacial times, RMS, 303
 Life realms of self-locomotion, XXVI, 1760
 Light, RMS, 150
 absorbed as heat in sea, RMS, 82
 penetration of, in sea, RMS, 439
 reflected from sea, RMS, 82
 Light minerals in Oriskany sandstone, XXII, 556
 Light naphthene, wax-bearing petroleum, PROB, 183
 Light oil, occurrence of, MEX, 201-203
 survey of California reserves of, XXVII, 862
 Lighting arrangements for photographing megafossils, XXIX, 1498
 Lights, shadows, and contours, experiments with, and the resulting shadowgraphic contour maps, XXV, 2161
 Lignin humic acids, coal and coke formed experimentally from, XXIV, 1867
 Lignin-humus complexes, PROB, 30-32
 Lignins in sediments, RMS, 421, 435, 443
 Lignite, MEX, 125; SBP, 337
 in dolomite, XIV, 517
 Lignite beds of Tertiary in Dakota basin, XXVII, 1575
 Lignite sands of North Sea, RMS, 332
 Lignites, climatic significance of, XVIII, 1259
 Lignitic shale zone, XXV, 109, 117
 Ligonier syncline, V, 83
 Likharev, XXIV, 280
 Lilac index horizon of San Felipe formation, tuffaceous, MEX, 33, 63, 64, 223, Fig. 10 (in pocket)
 Liljegren, Katherine, XVII, 17
 Lilley, Ernest Raymond, GAS, 624; PROB, 436
 economic geology of mineral deposits, review, XXI, 529
 geology of petroleum and natural gas, XII, 1173
 Lilley, J. J., XXII, 1392
 Lilley, R. A., XII, 1157
 Lilley limestone, XXVIII, 531
 Lillis formation in California geology, XVII, 81
 Lima field, Ohio, VI, 381
 Lima-Indiana district, Indiana and Ohio, PROB, 59, 531, 544; GAS, 843
 unconformity at top of Trenton in, discussion, XIII, 688
 Lima-Indiana field, relationship of accumulation of oil to structure and porosity in, PROB, 521
 structure of top of Trenton limestone in, PROB, 522
 Limagne area, France, oil in, XVI, 825
 Limagne graben, XVI, 827, 1104
 Limans, XXIII, 1190
 Lime. (See Calcium carbonate)

- (Lime)
in shale, RMS, 509
in tidal deposits, RMS, 200
- Lime and dolomite, approximate extent of, occurring above Ellsworth shale in western Michigan, XXV, 718
- Lime Hill bed, XXIX, 57
- Lime secreting organisms, RMS, 285
- Limestone, RMS, 234, 243, 293, 369, SD, 169, 225, 435, 630, SBP, 197-199, 283, 285, 294, 353, 356, 413. (See also formation names)
- accumulation of oil and gas in, PROB, 365
- action of organic acids upon, XIII, 1467
- Agua Nueva. (See El Abra, San Felipe, Tamasopo, Tamaulipas)
- bituminous, SBP, 260
- blown from wells, MEX, 40, opp. 41, 165-167, 207
- capillary openings in, MEX, 169
- carbon content of, SBP, 29, 30
- dolomitic, in Westbrook field, Mitchell County, Texas, XI, 469, 472
- effect on carbon determinations, SBP, 24-25
- effect on carbon-nitrogen ratio, SBP, 35
- experiment showing action of acids on, XX, 1393
- in cap rock, IX, 1229
- in Helgoland, RMS, 331
- in North Sea, RMS, 335, 336
- in South Permian basin, origin, XVI, 202
- in Southern fields, MEX, 36
- lithographic, MEX, 28
- nodular, MEX, 31, 55, 60, 94
- of Buda age in Denton County, Texas, fossils from, XXVIII, 1538
- oölitic, MEX, 15, 16
- or dolomite, method employed in analysis of, by means of insoluble residues, XXI, 321
- Ordovician, of Baltic, RMS, 317
- oxidation factor of, SBP, 59
- Pine Prairie dome, Louisiana, IX, 754
- porcellaneous, MEX, 34
- relation of insoluble residues of, to clays, RMS, 488
- Silurian, of Baltic, RMS, 317
- stylolitic, MEX, 29, 34
- super-capillary openings in, MEX, 38, 41, 51
- Limestone and granite velocity determinations in Arbuckle Mountains, Oklahoma, XVIII, 105
- Limestone bathyal facies, MEX, 22, 24, 95
- Limestone beds in Osage County field, Oklahoma, STR II, 378
- Limestone breccia from cap rock at Hoskins dome, GC, 843; XX, 165
- Limestone-breccia conglomerates, MEX, 40, 96
- Limestone cap rock, PROB, 643
- Limestone conglomerates in bioherm structures, XXV, 2130
- Limestone County, Texas, columnar section from, to Atascosa County, Texas, XXIX, 1435
- (wells 389-392), SBP, 292-335, 410
- Limestone deep-water facies, MEX, 22, 23
- Limestone deposition, RMS, 4, 221, 234
- Limestone detritus, RMS, 539
- in Baltic, RMS, 317
- Limestone-dolomite contact, rapid ascent westward in Borger pool, XXIII, 1021
- Limestone facies (See Facies)
- Limestone fault breccia, PROB, opp. 390
- Limestone faunas and floras of Pennsylvanian, XIII, 473
- Limestone formations, introductory discussion of reservoir performance of, XXIX, 461
- Limestone Gap, section at, XXII, 904
- Limestone Gap shale, XXII, 901, 904
- Limestone highs of West Texas and southeastern New Mexico, XIII, 1034
- Limestone oil reservoir, porosity of, XXI, 617
- Limestone porosity associated with unconformity, XII, 1158
- Limestone production, PROB, 355
- deep, PROB, 352
- in New Mexico, 1936, XXI, 1037
- in West Texas, 1936, XXI, 1035
- Limestone reef in Hale sandstone, Hungry Mountain district, XXIV, 422
- of Capitan age, XXV, 78
- Limestone reef facies, MEX, 22-24, 36, 60, 222
- Limestone-reef fields, XXVII, 917
- Limestone reefs along margins of Delaware basin, PTNM, 634, XXVI, 634
- mode of origin of, PTNM, 636; XXVI, 636
- productive in Seymour field, XXIV, 1048
- role in accumulation of oil and gas, XXVIII, 906
- Limestone reservoir, classification of, Zwolle field, Louisiana, XV, 1293
- Limestone reservoir conditions in Turner Valley oil field, Alberta, Canada, XXIX, 1156
- Limestone reservoir rocks, PROB, 392
- in Mexican oil fields, PROB, 377
- Limestone reservoirs, character of, XXI, 616
- classification of, XII, 1153
- classification of, discussion, XIII, 179
- in the Permian basin, possible nature of, XXII, 915
- in western United States and Canada, origin, migration, and accumulation of petroleum in, PROB, 347
- manner in which formed, XXIX, 1539
- types of, XX, 1390
- Limestones, analyses of, MEX, 42
- as potential source beds of oil, XII, 556, 1066
- as source rocks, PROB, 54, 63
- development of porosity in, XX, 1389
- fractured, XII, 1155
- Franciscan, XXVII, 143
- gray, in Bone Spring formation near New Mexico-Texas line, XXI, 857
- jointing in, as seen from the air, XII, 861
- of Patton zone, variable in composition as well as porosity, XXIII, 304
- thin bedded, MEX, 31, 45, 46, 55
- with primary porosity, XII, 1155
- with secondary porosity, XII, 1155
- Limestones and dolomites productive in Michigan, XXII, 414
- Limfjord, RMS, 335
- Limitations, geological, to oil law, XXII, 565
- of nitrogen reduction ratio, SBP, 389-392
- Limón field, Cretaceous in, GAS, 999
- Limón pool, MEX, 34, 66, 78, 164, 193, 201
- Limón syncline, MEX, 192, 194
- black shale series in, MEX, 49
- Limón-Tanchicuín syncline, PROB, 392; MEX, 172
- Limonite, RMS, 258, 383, 466, 499, 627
- in rock salt, XXI, 1289
- Limonite sandstone of North Sea, RMS, 332
- Lináres Basin, Tamesí beds in, MEX, 78
- Linck, G., CD, 14
- Lincoln, D. F., XV, 673
- Lincoln and Claiborne parishes, Louisiana, Lisbon oil field, XXIII, 281
- Lincoln anticline, XXIV, 770
- Lincoln County, Oklahoma, Davenport field, STRAT, 386
- Lincoln County, Wyoming, geologic map and structure section of southern part of La Barge Ridge, XXV, 1738
- geology of southern part of La Barge region, XXV, 1729
- (well 231), SBP, 194-243, 407
- Lincoln fauna, MSC, 101
- of Washington, MSC, 79
- Lincoln fold, XXIV, 1003
- Lincoln formation, CAL, 148, 156; MSC, 26, 103, 111, 164, 196, 318
- type, MSC, 161
- Lincoln marble, II, 81
- Lincoln Parish, Louisiana, Ruston gas field, XXIX, 226
- Lincoln pool, XXV, 1128, 1129
- Lind, S. C., SBP, 2; XV, 611, 616; XX, 285; XXIV, 1542, 1543, 1546; XXVIII, 934, 941; XXI, 19
- Lind, S. C., and Bardwell, D. C., XXVIII, 924, 939, 947
- Lind, S. C., and Glickler, G., XXVIII, 939
- Lindberg, George D., XXII, 133
- Lindberg, George D., and Newcombe, Robert B., glacial expression of structural features in Michigan: preliminary study, XIX, 1173
- Lindgren, Waldemar, CAL, 17, 18, 132, 133; MEX, 166; SD, 708, VII, 4; IX, 728; XII, 132; XIII, 230; XV, 518; XVIII, 1299; XX, 279, XXII, 525; XXV, 2183; XXIX, 15, 1383
- Lindgren, Waldemar, and Turner, H. W., CAL, vi, 20, 35
- Lindner, Paul, PROB, 41
- Lindner, Paul and Unger, T., PROB, 41
- Lind's clustering theory, XXVIII, 936
- Lindsborg pool, Kansas, XXIII, 804
- Lindsborg South pool, XXVII, 809
- Lindsborg Southwest pool, XXVII, 809
- Lindsly, Ben F., XVIII, 352; XIX, 882, 886, 892; XXV, 1304
- Lindtop, Norbert T., PROB, 912; XII, 950, XIV, 149
- outline of water problems in New Grosny oil field, Russia, XI, 1035
- Lindtop, Norbert T., and Nikolaeff, V. M., oil and water content of oil sands, Grosny, Russia, XIII, 811
- Linear features of Permian of West Texas region, PTNM, 724-726; XXVI, 724-726
- Linear units, proposed new definition of, XXII, 1616
- Lineas generales de la constitucion geologica de la region situada al oeste del Golfo de San Juan*, review,

- (*Lisneas*)
 VIII, 684
 Linehan, C. M., XXV, 318
 Linehan, C. M., and Cole, Taylor, XXVI, 1026
 Ling, Hsiung Hsi, IX, 1297
 Lingle limestone, XXV, 681
 Linguoid ripples, RMS, 16
 Link, E., and Schober, R., XVIII, 63
 Link, Theodore A., GAS, 2, 9, 11, 41, 273; PROB, 700, 723; XI, 1233; XIV, 231, 521, 1047, XV, 1144, 1161, 1163, 1172, 1190, 1231; XVI, 479; XVIII, 243, 1176; XIX, 169, 170, 171; XX, 63, XXIV, 501, 1620, 1622, 1623, 1626, 1634, 1636, 1639; XXV, 2188
 Alberta syncline, Canada, XV, 491; discussion, XV, 971
 discussion of Athabaska oil sands, XIX, 169
en echelon tension fissures and faults, XIII, 627
 experiments relating to salt-dome structures, XIV, 483
 individualism of orogenies suggested by experimental data, XV, 385
 injustice of misleading citations—reply to R. T. Chamberlin's discussion, XIV, 633
 oil seepages in Belt series of Rocky Mountains near International Boundary, XVI, 786
 origin and significance of epi-anticlinal faults as revealed by experiments, XI, 853
 relationship between over- and underthrusting as revealed by experiments, XII, 825, 952
 review, XVIII, 551
 some applications of the strain ellipsoid, XIII, 1449; discussion, XIV, 231
 structure of Turner Valley gas and oil field, Alberta, XVIII, 1417
 types of Foothills structures of Alberta, Canada, XIX, 1427
 Link, Theodore A., and Childerhose, A. J., Bearpaw shale and contiguous formations in Lethbridge area, Alberta, ALTA, 99, XV, 1227
 Link, Theodore A., and Hume, G. S., Canol investigations in Mackenzie River area, Northwest Territories and Yukon, review, XXIX, 1669
 Linnaeus, XXV, 1214; XXVII, 945
 Linnean classification, MSC, 171
 of fossils, XXV, 1245
Linoproductus stage, fossils of, XXV, 383
 Linscheid, A., acceptance of David White memorial, XX, 632
 Lint River, RMS, 25
 Linton Block Coal IV, XXIII, 1390
 Lion Mountain sandstone, XXV, 1627
 Lion Oil Refining Company, XXII, 721, 964; XXVI, 1471
 Lion pool, XXIX, 744
 Lion Refining Company, XXIX, 744
 Lipen and Whitsett beds, GC, 487; XVII, 1310
 Lipinski field, Poland, XV, 16
 Lipman, C. B., RMS, 283, 291; XIV, 708
 Lipman, C. B., and Greenberg, L., XXVII, 1176
 Lipoclastic bacteria, RMS, 422
 Lipscamp limestone, XXIII, 851
 Liquefaction storage plant, XXVIII, 1573
 Liquefied gases, GAS, 1122-1124
 Liquid, definition, CD, 20
 Liquid head, constant, apparatus used in maintaining, XXVII, 71
 Liquid inclusions, RMS, 604
 Lurette gas field, Louisiana, GAS, 730, XXII, 743
 Lisama formation, XXIX, 1097
 Lisbon area, Louisiana, XXI, 1071
 Lisbon crude, analysis of, XXIII, 322
 Lisbon formation in Covington County, Mississippi, GC, 375; XIX, 1154
 Lisbon Oil Company, XXIII, 287, 320
 Lisbon oil field, Claiborne and Lincoln parishes, Louisiana, XXII, 722, XXIII, 281; XXV, 1036; XXVI, 1275
 analysis of cores, Patton producing zone, XXIII, 316
 bottom-hole pressures of wells in, XXIII, 318
 development and production history of, XXIII, 320
 diagrammatic sections, XXIII, 305
 gas-oil ratios of wells in, XXIII, 318
 isopach map of Patton pay zone in, XXIII, 315
 lenticular porous producing zone in, XXIII, 281
 lower Glen Rose-Travis Peak contact in, XXIII, 287
 Patton producing zone, XXIII, 290, 304
 peak production at, XXIII, 324
 pertinent data on, XXIII, 324
 photomicrographs of sections of cores of oolitic and coquina-type limestones from Patton zone, XXIII, 306-313
 pipe lines from, XXIII, 321
 production at, XXIII, 319, 322
 proration in, XXIII, 324
 reserve of, XXIII, 319
 rotary drilling in, XXIII, 319
 stratigraphic section, XXIII, 302-303
 stratigraphic sequence of Gulf Cretaceous, XXIII, 293
 stratigraphy at, XXIII, 284
 surface formations at, XXIII, 299
 structural contour maps, XXIII, 301, 302, 303
 unconformity between Midway and Arkadelphia in, XXIII, 297
 well spacing at, XXIII, 322
 wells in, XXIII, 283, 284, 287, 300, 306, 308, 310, 312, 314, 320, 321, 323
 Lisbon oil field and adjacent areas, Tertiary formations of, XXIII, 298
 Lissie, Reynosa and Upland Terrace deposits of Coastal Plain of Texas, XVII, 453
 Lissie and Beaumont formations of Gulf Coast of Texas, deposition of, XXIV, 693
 Lissie and Willis formations in vicinity of Harris County, Texas, thickness of, XXIII, 189
 Lissie-Beaumont contact, XXII, 1198
 Lissie-Citronelle group in Amelia field, XXIII, 1641
 Lissie deltaic belt, XXIX, 1312
 Lissie formation, XXI, 480, 495
 fauna of, non-marine, XXIII, 190
 Hitchcock field, STRAT, 643
 in coastal southeast Texas, XIV, 1301
 in coastal Texas and Louisiana, GC, 433, 449; XIX, 652, 668
 in Gulf Coastal Plain, XXIII, 188
 (Lissie)
 in southeast Texas, XIX, 668
 Lissie formation and Beaumont clay in south Texas, discussion, XVIII, 948
 Lissie gravel, IV, 130
 Lissie-Reynosa production from Gulf Coastal domes, GC, 5, XVIII, 504
 Lissie sand, XXII, 1192
 at Driscoll pool, GC, 622; XVII, 818
 Lissie surface structure in coastal Texas and Louisiana, GC, 463, XIX, 683
 Lissie terrace deposit, XXI, 499
 List of formations studied, SBP, 413-416
 Lister, Martin, RMS, 516, XXV, 1209
 Litchfield and Bauer, XX, 1318
 Litchfield oil and gas field, GAS, 832
 Lithified sediments, RMS, 445
 Lithium, RMS, 538
 as dispersing agent, RMS, 537
 in sea water, RMS, 143
 relative exchange power of, RMS, 535
 Lithium ions, RMS, 536
 Lithogenesis and paleogeography of marine Jurassic of Wyoming, XXI, 759
 Lithographic limestone, MEX, 28, V, 376, XXVI, 212
 Lithologic and faunal facies, MSC, 96
 Lithologic character of B, C, D, and E zones of pre-Redbed series in Texas Panhandle field, XXIII, 997
 of Oriskany formation, variation of, XXII, 551
 of sediments, variation of seismic velocities with, XXV, 1350
 of shale as an index of metamorphism, X, 625
 of strata in Hartshorne sandstone, McAlester shale, Savanna sandstone, and Boggy shale, XXI, 1413
 Lithologic classification, XXVI, 1699, 1726
 Lithologic criteria of relatively small importance in selection of systemic boundaries, XXIV, 349
 Lithologic extension of formations, time-equivalent *versus* discussion, XVI, 1039
 Lithologic-genetic homogeneity, MSC, 92
 Lithologic influences on acidizing, XXI, 623
 Lithologic sequences similar at four horizons in McAlester shale and Savanna sandstone, XXI, 1418
 throughout stratigraphic section in Arkansas Valley, repetition of, XXI, 1415
 Lithologic subsurface correlation in the Bend series of North-Central Texas, abstract, V, 99
 Lithologic types in Rocky Arroyo, XXVI, 92
 Lithologic units studied, basic data on, SBP, 412
 Lithology in Brazier section, XXIX, 1143
 of Appalachian oil sands, PROB, 843
 of Catahoula formation, GC, 407; XVII, 637
 of Franciscan, XXVII, 130
 Lithology and stratigraphy, subsurface, of Tuscaloosa formation in southeastern Gulf Coastal Plain, XXVII, 596
 Lithophorids, RMS, 388
 Lithosphere, response of, to tidal stresses, XXIX, 1631

- Lithothamnium chalk, XV, 155
 Lithothamnium limestones in Peru, XII, 18
 Little Bad Lands, XXVI, 357
 Little Beaver dome, GAS, 256; XXI, 991, XXII, 689, XXIII, 463; XXVII, 1299
 Little Belt Mountains, Swift formation along, XXIX, 1286
 Little Belt Mountains uplift, XXVII, 429; XXIX, 1265
 Little Buffalo basin, Wyoming, XXVII, 436
 geology and unit operation at, XVIII, 1471
 Little Buffalo basin field, GAS, 292, XXVIII, 796
 Little Cranberry Island, RMS, 212
 Little Creek oil field, XXVI, 1266
 Wilcox producing sands, XXVI, 1267
 Little Dunkard sand in Scenery Hill gas field, Pennsylvania, STR II, 444
 Little Elk-Big Elk-Shawmut uplift, PROB, 715
 Little Falls dolomite, XXII, 95
 Little Fry Pan area, Uvalde and Kinney counties, Texas, magnetometer survey of, XIV, 509
 Little Grass Creek field, GAS, 292
 Little Hatchet Mountains, New Mexico, formations of, equivalent to part of Bisbee group of Arizona, XXII, 536
 geologic map of, XXII, 528
 stratigraphic columns in Eureka and Sylvanite sections of, XXII, 530
 stratigraphic relations of formations in, XXII, 529
 stratigraphy of, XXII, 525
 structural features of, XXII, 538
 Little Kanawha oil region, Virginia, PROB, 5
 Little lime, VI, 466
 Little Long Lake, XXV, 830
 Little Lost Soldier dome, Wyoming, STR II, 642, 647-650; PROB, 343, 409; VII, 133, 143
 faults, X, 120
 Little Medicine tongue of Dinwoody formation, XXVIII, 1201
 Little Pine Mountain, SC, 88, 91; XX, 1634, 1637
 Little Polecat field, GAS, 292
 Little River field, Oklahoma, STR II, 316-327, 338, 343, 346
 Little River pool, PROB, 411, 777
 Little Rocky Mountains, PROB, 704
 laccolithic, XXVII, 427
 unconformities, VII, 7
 Little Salado Creek, CAL, 194
 Little Saline, Texas, SD, 256, 258, 260; X, 48
 Little Saline fault area, XXV, 683
 Little Saline limestone, XXV, 674, 675
 Little Sandy fault in eastern Kentucky, GAS, 924
 Little Sespe Creek, MSC, 305
 Little Sespe wells, PROB, 194
 Little Sister Bay, Wisconsin, RMS, 589
 Little Six Oil Company, GC, 884; XX, 535
 Little Tar Canyon, MSC, 165
 Littlefield, Max, XIV, 867, 874; XX, 99, 1087; XXVIII, 193, 196
 discussion of use of volumetric residues and gravimetric data in determining correlations of zones in Mississippi lime of Kansas, XXII, 1599
 (Littlefield)
 log of wildcat well in Pennington County, South Dakota, XXIII, 1234
 Littoral, MSC, Fig 5 (in pocket)
 Littoral assemblages of mollusks and echinoids, MSC, 134
 Littoral bottoms or deposits, XXIV, 1167
 Littoral deposits RMS, 213
 Littoral sands of Baltic, RMS, 312
 Littoral zone, MSC, 82, 84; RMS, 203, 289, 290
 Littorina, faecal pellets of, RMS, 518
 in Baltic, RMS, 316
 Lituolidae, MSC, 187
 Lituolinae, MSC, 187
 Lukiang disturbance, XXVIII, 1422
 Live Oak and Bee Counties, Texas, electrical-log profile showing Cockfield section through, XXV, 2017
 Live Oak Bar formation, XXIX, 1715
 Live Oak Canyon, CAL, 288
 Live Oak Creek, CAL, 140
 Live Oak field, gravity of oil in, XXV, 1049
 Livermore, CAL, 193
 Livermore Valley, MSC, 127
 Living organisms, adsorption of metals on, RMS, 148
 Livingston, H. K., and Plummer, F. B., XXV, 1875
 water cones and water sheaths in experimental oil wells, XXIV, 2163
 Livingston and northern Carroll counties, Missouri, Des Moines series in, section, XXV, 40
 Missouri series in, section, XXV, 40
 Livingston field, Texas, GAS, 727; GC, 179, 189; XIX, 365; XXV, 2015; XXVII, 734; XXIX, 790
 Ljungstedt, O. A., XXV, 1620
 Llajas formation, MSC, 243
 Llanada, MSC, 120, 124
 Llanito, Tamasopo limestone at, MEX, 61
 Llano-Burnet area, GAS, 630
 Llano-Burnet fold, trend of, GC, 263, XVII, 1206
 Llano-Burnet uplift, PROB, 572, 575, 577; STR I, 305; V, 545, 564; XIII, 428
 trend of, GC, 265; XVII, 1208
 Llano de Bustos, diorite in well at, MEX, 149
 Llano de Silva pool, MEX, 164, 193
 Llano Estacado, PTNM, 706; XXVI, 706; XXVII, 481
 northern, FOP, 95; XXV, 1527
 northern, structure section, FOP, 96; XXV, 1528
 Llano Estacado and Pecos Valley, XXI, 845
 Llano Estacado escarpment in Artesia field, New Mexico, STR I, 113
 Llano Estacado geosyncline, XIII, 1057
 Llano Estacado region, northern, map, FOP, 96; XXV, 1528
 Llano Grande, MEX, 130, Fig. 32 (in pocket)
 Huasteca beds in hacienda of, MEX, 130
 Llano Mountains, PROB, 611
 Llano region, Texas, field conference on Ellenburger strata, XXIX, 1064
 Llano uplift, West Texas, FOP, 98; GAS, 662; XXI, 1017, 1042, 1432; XXII, 1685; XXIII, 639; XXIV, 71, 99, 105; XXV, 1064, 1530, 1626, 1660, 1662; XXVI, 1040; XXVII, 771, XXVIII, 835, XXIX, 156
 Cambrian in, XXV, 1627
 Ellenburger group productive in, FOP, 99; XXV, 1531
 Mississippian in, XXV, 1647
 pre-Cambrian in, XXV, 1624
 Llano uplift area, grabens in, XXIV, 105
 Llanoria, XIII, 428; XV, 1048; XVIII, 1068; XXIV, 1045, XXVIII, 116, 118, 119, 317
 a land area in Gulf Coastal region in Mississippian and Pennsylvanian, XXIV, 845
 source of Pennsylvanian sediments of Ouachita Mountains and Arkansas Valley, XXI, 1419
 Llanoria and Ouachita Mountains, source of sediments of Arkansas-Oklahoma coal basin, XX, 1353
 Llanoria geosyncline, XVIII, 1019; XIX, 229; XXIX, 1306, 1336
 age of, XXIX, 1346
 Llanoria land mass, XXIII, 192; XXVI, bet. 224 and 225
 Llanoria-lower Wichita orogeny, XXIV, 100
 Llanos area of Colombia, source rocks and reservoir beds of petroleum in, XXIX, 1132
 Llanos province, XXIX, 1073
 Llanos trough, XXIX, 522
 of Venezuela, eastern section richly petroliferous, XXIX, 526
 Llanos trough and intermont basins of Colombia and Venezuela, XXIX, 520
 Lloyd, A. M., XXI, Pl. A, opp. 1084, Pl. D, opp. 1086; XXIX, 1417
 Lloyd, A. M., and Hammer, A. A., PROB, 697
 Quadrant formation of east-central Montana, X, 986
 Upper Cretaceous sedimentation and diastrophism in Montana, IX, 886
 Lloyd, A. M., and Sherwin, Melvin, XXVII, 1411
 Lloyd, A. M., and Thompson, W. C., XIV, 166, 972; XVI, 200
 correlation of Permian outcrops on eastern side of West Texas basin, XIII, 945
 Lloyd, B., RMS, 417; XX, 260, 267
 Lloyd, E. Russell, PTNM, 539, 569, 693; PROB, 358; XI, 45; XIII, 99, 1021, 1024, 1040; XIV, 975, 979; XVI, 202; XXI, 133; XXIV, 29, 134, 328, XXV, 75; XXVI, 218, 251, 539, 569, 693, 1632, 1646; XXVII, 523, 752; XXVIII, 831; XXIX, 1773
 abstract, XXII, 1709
 Capitan limestone and associated formations of New Mexico and Texas, XIII, 645
 coral reefs and atolls, discussion, XVII, 85
 discussion of demise of Capitan reef, XXIII, 1693
 discussion of Permian correlations, XXIII, 1710
 discussion of porosity at Goldsmith field, Texas, XXIII, 1551
 discussion of types of structural development, XI, 45
 editorial introduction to position of San Andres group, West Texas

- (Lloyd)
and New Mexico, XXV, 73
origin of porosity in reef limestone or dolomite, discussion, XIII, 1219
reviews, XII, 455; XIII, 691; XXVI, 1294, XXVII, 1010
- Lloyd, E. Russell, and DeFord, Ronald K., XXIV, 15, XXVI, 85, 219
foreword, West Texas-New Mexico symposium: Part II, PTNM, XXVI, 533
- West Texas-New Mexico symposium: Part I. Editorial introduction, XXIV, 1
- Lloyd, E. Russell, and Fisher, Cassius A., northern Cordilleran geosyncline and its relation to petroleum accumulation, XI, 19
- Lloyd, Ralph, GAS, 162
- Lloyd, Ollie, XXIII, 1053
- Lloyd, R. B., XII, 735
- Lloyd sand, XXIX, 891
- Lloyd zone in Ventura Avenue field, California, STR II, 33, 36; PROB, 755; GAS, 164, 165
- Lloydminster, XXIX, 654
- Lloydminster developments, XXVIII, 872
- Lloydminster field, Canada, FOP, 20; XXV, 1452; XXIX, 660
- Lloydminster shale, bentonitic beds of, XXIX, 1617
fossils of, XXIX, 1616
lithology, XXIX, 1616
pelagic foraminifera in, XXIX, 1617
- Lo Surdo, A., VII, 731
- Load, RMS, 238
total, computation of, RMS, 26
variation of, in streams, RMS, 25
- Load metamorphism probably cause of observed regional changes in fixed-carbon content of coal beds, XXVII, 1222
- Loading, PROB, 181
- Loading and unloading of parts of continents by Pleistocene ice sheets, XXIX, 1641
- Lobeck, Armin Karl, XX, 921
block diagrams, review, IX, 918
block diagrams and other graphic methods used in geology and geography, review, IX, 918
- Lobitos district, Peru, XII, 36
- Lobitos field, V, 591; XXIII, 963
- Lobitos oil fields, Peru, XXIX, opp. 509
- Local changes in the sea, RMS, 56
- Local structural aspects in search for oil, XXI, 206
- Localization of folds, experiments relating to factors causing, XII, 617
- Locating new domes, occurrence of sulphur waters in Gulf Coast of Texas and Louisiana, and their significance in, SD, 774
- Locating strategic minerals, need for geologists in, XXVI, 1302
- Location of oil fields by radiometric surveying, VII, 290
- Location of samples, SBP, 14-17, 403, 412
- Appalachian, SBP, 350
California, SBP, 87-90
California outcrop samples, SBP, 167-194
central California, SBP, 87-89
East Texas, SBP, 292, 293
Gulf Coast, SBP, 334-339
Los Angeles Basin, SBP, 87-89
Mid-Continent, SBP, 255, 256
Rocky Mountains, SBP, 192-195
- (Location)
Rocky Mountains outcrop samples, SBP, 192, 243
West Texas, SBP, 14, 285, 286
- Location of wells, SBP, 403, 412
- Lockman, C., XXIII, 1446, 1449
- Locke, Augustus, XIX, 839
- Lockett, J. R., PROB, 326, 539, 544; SBP, 357; STRAT, 385; XXII, 1183; XXIV, 2065; XXV, 795, 798, 818
general structure of producing sands in eastern Ohio, STR I, 138; XI, 1023
- Lockett, J. R., Stout, W., Lamborn, R. E., Ring, D. T., and Gillespie, J. S., natural gas in central and eastern Ohio, GAS, 897
- Lockett, Samuel H., SD, 9, 395; IX, 838
- Lockhart anticline, Utah, XI, 377
- Lockport, PROB, 115
- Lockport bed, XXIX, 683
- Lockport dolomite, XXV, 1141
gas in, XXVII, 846
- Lockport field, Louisiana, GAS, 732, 733
- Lockport formation, Big Sinking field, STRAT, 179
- Lockwood, C. D., XXVIII, 1251
- Lockwood, Robinson P., XVIII, 1086
role of cap rock in oil accumulation, XVII, 713
- Lockwood Lake, XXIII, 554
- Loco field, V, 32, 627, VI, 12
- Loco Hills field, XXVI, 1037
- Loco Hills pool, New Mexico, XXIV, 1040; XXV, 1063
- Loco pool, Oklahoma, GAS, 576
- Locust Point formation, XXIV, 796
- Lodgepole limestone, XXVI, 314, 317, 329
on Belt Creek, Woodhurst member of, XXVI, 316
- Paine member of, XXVI, 315
- Lodi Community area, XXIX, 980
- Lodi gas field, XXVIII, 743
- Lodje, Jo. R., XXV, 2020
- Lodo formation, XXIV, 1734-1736
type, Fresno County, California, Eocene foraminifera from, XXVII, 1269
- Loeblich, Alfred, XXV, 651, 654
- Loel, Walter, and Arnold, Ralph, new oil fields of Los Angeles Basin, California, VI, 303
- Loel, Wayne, CAL, 176; XVII, 732
- Loel, Wayne, and Arnold, Ralph, X, 753
- Loel, Wayne, and Corey, W. H., CAL, IX, 165, 169, 179, 183, 227, 297, 298; MSC, 9, 23, 33, 39, 73, 91, 97, 114, 152, 153, 171, 172; SC, 108, 118; XXVIII, 377; XIX, 521, 522, 524, 526, 527; XX, 219, 1664; XXV, 198, 216, 228
- Loess, grain size comparison of, with Great Salt Lake clay and dust, XXII, 1351
mechanical analyses of, XXIII, 1233
physiographic significance of, near McPherson, Kansas, XXIII, 1232
symposium on, XXIX, 846
- Loess deposit in southeast Louisiana, GC, 453; XIX, 672
- Loess deposits of Mississippi and Yazoo flood plains, XXVIII, 62
- Loetterle, G. J., XXIX, 1417
- Loffland Brothers, XXII, 300, 695
- Log, classified, of California's Kamp well in Dakota basin, XXVII, 1588
- (Log)
classified, of Carter Oil Company's Semling well in Dakota basin, XXVII, 1590
of wildcat well, Pennington County, South Dakota, XXIII, 1234
of wildcat well, Union County, Iowa, XXIV, 1495
- Log matching, superiority of systematic stratigraphy over, in effort to correlate beds in Illinois coal basin, XXIII, 1508
- Log section at Clay Creek dome, GC, 773; XX, 84
- Log work, sample, textural standard for, XXIX, 1195
- Logan, II, 71, 86
- Logan, Jack, GC, 150; XVII, 1501; XVIII, 26
- Logan, William, PROB, 3, 6, 12, 13, 71, 526
petroleum and natural gas in Indiana, review, V, 105
- Logan, William N., GAS, 813, 834, 847, 1069; XI, 601; XIV, 610; XV, 597, 598, 600, 606, 607; XVII, 129; XIX, 489; XX, 1191; XXI, 718; XXV, 684, 884; XXIX, 442, 656, 1739
- Logan, William N., Stephenson, L. W., and Waring, Gerald A., PROB, 666
- Logan and Lincoln counties, Oklahoma, Permian of, XVII, 241
- Logan County, Oklahoma (well 285), SBP, 255-285, 408
- Logan Creek section of Upper Cretaceous, Glenn County, XXVII, 295
- Logan group in Ohio, GAS, 903
- Logan Mountain, XXV, 2028
- Logan Quadrangle, Utah, Brazer (Mississippian) and lower Wells (Pennsylvanian) section at Dry Lake, XXIX, 1143
- Logan sand, XXV, 802
- Logan Sea, CAL, 75
- Logansport formation, XXIX, 56, 57
- Logarithmic curves for interpreting sedimentary data, RMS, 573
- Logarithmic frequency scale for mineral counts, RMS, 606
- Logarithmic grade units for plotting mineral frequencies, RMS, 607
- Logarithmic histogram, RMS, 561
- Logarithmic measures, RMS, 565
- Logarithmic moments, relation of, to geometric moments, RMS, 580
- Logarithmic paper, double, RMS, 589
- Logarithmic plotting, RMS, 584
- Logarithmic probability curve, RMS, 564
- Logarithmic quartile devices, RMS, 564
- Logarithmic stadia rod for topographic work and area measurements, review, XI, 93
- Logarithmic transformation equations for sedimentary problems, RMS, 584
- Logarithmic variables, RMS, 590
- Logarithms, RMS, 578
of sine alpha values, RMS, 619
- Logarithms and anti-logarithms, graphic table combining, review, XI, 641
- Logging formations by temperature measurements, difficulties, XXI, 802
- Logging rotary wells from drill cuttings, XII, 59
- Logging wells drilled by rotary method, VIII, 641

- Loggy Bayou member, XXIX, 59
 Logs, early, PROB, 11
 of wells, review of paper on rock classification by drillers, VI, 390
 of wells studied, SBP, 412. (See also Correlation)
- Lohman, Kenneth E., CAL, 254; MSC, 1, 5, 10, 61, XXIII, 38; XXV, 2023, XXVIII, 1679
 Lohman, Kenneth E., and Bramlette, M. N., MSC, 47, 61, 105
 Lohman, Kenneth E., Bramlette, M. N., and Klempell, R. M., MSC, 31, 45, Fig. 6 (in pocket)
 Lohman, Kenneth E., Eckis, R., and Klempell, R. M., MSC, 61
 Lohman, Kenneth E., Woodring, W. P., and Bramlette, M. N., stratigraphy and paleontology of Santa Maria district, California, XXVII, 1335
 Lohmann, H., RMS, 388, 409, 410, 438
 Lohms, PROB, 40
 Lokman, Kemal, *Türkiye Petrol Madenleri*, review, XVII, 1016
 Loma Blanca oyster bed in Zapata County, Texas, GC, 605, XIX, 1374
 Loma Blanca salt dome, I, 49
 Loma Blanca sandstone, fossils from, GC, 606; XIX, 1375
 Loma Blanca tongue, XXVI, 265
 Loma Chamal, Mesón echinoid at, MEX, 135
 (State of Tamaulipas), MEX, 135, 139
 Loma de San Juan, type locality of Dumble's San Juan limestone, MEX, 54
 Loma del Pozo, MEX, 5, 63, 164, 197, 199
 Loma del Pozo-Quebrache area, carbon dioxide gases in, GAS, 1004, 1005
 Loma Mata Gorda, Mesón corals in, MEX, 137
 Loma Novia member, XXIII, 1629
 Loma Novia sand, production from, Hoffman field, Duval County, Texas, XXIV, 2132-2135
 Loma Novio field, XXI, 1423
 Loma Novio sand, XXI, 1427
 Loman, Jack, XVI, 232
 Lomas y Llanos, MEX, 80, 179, 201, 203
 Lombard thrust, XXVII, 427
 Lombardi, M. E., VIII, 74
 Lomeric Peyotes, MEX, 18, 54, 161, 166
 Lomita formation, CAL, 254, 259, 264, 303, 304
 Lomita Quarry, CAL, 256
 Lompoc, MSC, 114, 133
 Lompoc field, California, GAS, 154, 158, 159; PROB, 208, 741, 758; XXVII, 1345, 1349
 conditions of occurrence of oil, STR II, 18
 Lompoc Quadrangle, MSC, 33
 Lompoc region, CAL, 188, 209
 London, RMS, 332, 597
 London Basin, MSC, 175
 London clay of North Sea, RMS, 332
 London field, south Texas, a geophysical test, XXI, 1046
 Lone Camp group, XXIV, 88; XXV, 1663
 Lone Star dome, GAS, 531
 Lone Star Gas Company, GAS, 576, 609, 633, 635, 652, 671; XXVI, 216
 Lone Star Salt Company, SD, 230
 Lonetree, North Dakota, method of (Lonetree)
 estimation of temperature, PROB, 1007
 Long Beach, California, CAL, 47, 228, RMS, 259, 260, SC, 114, XX, 1660
 earthquake, cracks produced by, XVII, 739
 earthquake of March 10, 1933, XVII, 732
 isogeothermal surface at, PROB, 994
 Long Beach anticline, CAL, 46, 47
 Long Beach field, California, GAS, 182-185, PROB, 218, 229, 742, 749, 970, 972, 973, 993; SBP, 87-153, 404, STR II, 62, VI, 303; XII, 643, 655, XXIII, 941
 (wells 79-86), SBP, 87-153, 404
 Long Beach field, California, and its problems, VIII, 403
 Long Beach Harbor fault at Wilmington oil field, XXII, 1063
 Long Canyon sandstone, XXIX, 993
 Long Island, RMS, 209, 231
 Long Lake in Anderson, Freestone, and Leon counties, Texas, XXII, 732
 Long Lake and Cayuga fields, north-east Texas, extended during 1936, XXI, 1067
 Long Lake anticline, GAS, 669
 Long Lake area, Anderson, Freestone, and Leon counties, XXIII, 893
 Long Lake dome, GAS, 671, 672
 Long Lake field, Anderson, Freestone, and Leon counties, Texas, GAS, 652, 671; XXIV, 1066, XXV, 1086; XXVI, 1054; XXVII, 920, XXVIII, 848
 production in, XXVII, 787
 Long Point, variations of temperature at, PROB, 996
 Long shots with an allidade, XIII, 1561
 Longhorn field, XXIII, 865
 Longitude, evidence of change meager, CD, 192
 Longitudinal ripples, RMS, 17
 Longitudinal seismic velocities, influence of geological factors on, XI, 1
 Longshore drifting, RMS, 213
 Longton anticline, GAS, 488, 499, 500
 Longton field, GAS, 499
 Longview, Texas (well 325), SBP, 292-335, 408
 Longwell, Chester R., XI, 798; XVII, 150; XXIII, 124, XXIV, 311; XXIX, 1801
 classification of faults, discussion, XXVII, 1633
 new aid in handling personnel problems in geology, XXVII, 1548
 objections to Wegener's hypothesis, discussion by van der Gracht, CD, 205
 some physical tests of the displacement hypothesis, CD, 145
 tectonic map of United States, XXVIII, 1767
 Longwell, Chester R., and Dunbar, Carl O., XXIV, 311
 problems of Pennsylvanian-Permian boundary in southern Nevada, XX, 1198
 Longwell, Chester R., Knopf, Adolph, and Flint, Richard F., outlines of physical geology, review, XVIII, 960
 textbook of geology, part I, physical geology, review, XVI, 1160
 Longwell, Chester R., Miser, H. D., and Paige, Sidney, XIII, 1444
 Longyear, Robert Davis, diamond drill in oil explorations, VI, 98
 diamond drills and diamond-drill equipment for oil structure investigation, X, 656
 example of deflecting diamond-drill holes, XIV, 1059
 Lonsdale, John T., XIV, 1197; XVI, 742, 745, 762, 763, XVII, 500, 506, XVIII, 1071, 1072, XIX, 214, 219, 337, 1028, 1358, 1377, 1378, XXI, 1289
 Lonsdale, John T., and Day, J. R., STRAT, 725, XVII, 491
 Lonsdale limestone, XXIII, 1522; XXVI, 1592
 Loofbourrow, Robert L., XIV, 1354
 Loomis, B. H., XVI, 558
 Loomis, Frederic B., XXVIII, 1196, 1215
 Loomis, Harve, I, 118
 Burkett-Seeley pool, Greenwood County, Kansas, VII, 482
 occurrence of limestone in north-eastern Garvin County, Oklahoma, VI, 54
 Loon River shales in Peace River field, gas in, GAS, 22
 Lopena field, XXI, 1429
 López, Felcísimo, XI, 1254
 Lopez, Ildefonso, MEX, 1
 Lopez, V. M., XXII, 1102
 Lopez, V. M., and Aguerrevere, S. E., XXII, 1103; XXIV, 1570
 Lopez oil field, Webb and Duval counties, Texas, STRAT, 680; XXI, 1423
 accumulation of oil, STRAT, 689, 692
 analyses of oil and water, STRAT, 695-697
 cost of drilling, STRAT, 694
 isopach map of producing sand in, XXVII, 543
 reserves, STRAT, 695
 Lopez sand, STRAT, 682, 683, 689
 Loping series, XXIV, 272
 Lordsburg Quadrangle, New Mexico, XXII, 526, 537
 Lorentz, XXVIII, 927
 Lorents-Lorenz formula for variation of refractive index, XXI, 1465
 Lorica structure, XXIX, 1129
 Lorraine formation, XXII, 94
 Lorraine shales, GAS, 98, 100
 Lorraine-Utica shale, GAS, 108, 110
 Los Algodones unconformity, XIII, 621, 623-625
 Los Angeles, CAL, 31, 42, 47, 50, 68, 69, 100, 122, 175, 195, 209, 229, 231, 257; MSC, 152; RMS, 513; SC, 47; XX, 1593
 earthquakes, CAL, 9, 39
 Pleistocene, coastal plain in, CAL, 267
 type locality of Repetto formation east of, CAL, 239
 Upper Miocene sandstone, CAL, 200
 Los Angeles and Ventura counties, geology and oil resources of, MSC, 101
 Los Angeles Basin, California, CAL, 45, 46, 228; MSC, 2, 17, 25, 71, 78, 127, 128, 134-136, 164, 165, 166, 180, 201, 223, 260, 281, 343, 345; PROB, 229, 738, 742, 748; SC, 1, 14, 44, 48, 49, 104, 114; XVIII, 329; XX, 1547, 1560, 1590, 1594,

- (Los Angeles)
 1595, 1650, 1660; XXII, 702, XXVI, 1137
 a contribution to geology of, X, 753
 an important regional structural basin, STR II, 703
 areal variation of properties of sediments in, SBP, 108
 comparison of bitumen content of samples from producing and barren wells in, SBP, 128
 detritus in, CAL, 243
 diatomaceous silts in, CAL, 245
 distribution of gravity in, XV, 1428
 east end of, SC, 140; XX, 1686
 foothills north and east of, SC, 71; XX, 1617
 fossil plants of, CAL, 208
 geologic formations in, GAS, 170-174
 geothermal variations in oil fields of, XIV, 997
 key to productivity of samples from, SBP, 146
 location of wells and outcrop sections in, SBP, 89
 locations of oil fields in, XXI, 978
 logs and oil zones of part of wells in, SBP, 91
 map of, SC, 113; XX, 1659
 marine Pleistocene beds in, CAL, 256
 Miocene, correlation with Coalinga, CAL, 212
 mollusk fauna of, CAL, 228
 new oil fields of, VI, 303
 nitrogen content of samples from, SBP, 115
 nitrogen-reduction ratio of samples from, SBP, 121
 oil fields of, XII, 627, 628; XIV, 1008
 organic content of samples from, SBP, 104
 oxidation factor of samples from, SBP, 123
 Pliocene of, CAL, 228, 229, 238, 241, 248, 253
 Pliocene conglomerates of, and their paleogeographic significance, XVIII, 786
 reduction number of samples from, SBP, 113
 relation of properties to texture of sediments in, SBP, 158
 relative volatility of samples from, SBP, 120
 Sespe beds in east end of, CAL, 147
 stratigraphy of, SC, 115; XX, 1661
 structural history of, SC, 133; XX, 1679
 subsurface correlation, MSC, 79
 summary of properties of samples from, SBP, 129
 Transverse Ranges, CAL, 9
 Venice or Playa del Rey field in, CAL, 199, 200, 263
 west end of, SC, 140; XX, 1686
 Los Angeles basin and adjacent areas, map of, XXIV, 650
 Los Angeles basin district, XIII, 435
 Los Angeles Basin earthquake of October 21, 1941, and its effect on certain producing wells in Dominguez field, Los Angeles County, California, XXVI, 388
 Los Angeles Basin oil fields, MSC, 32; XXIV, 1121
 map, XXVI, 389
 Los Angeles basin samples, assay number, SBP, 118-123
 bitumen content, SBP, 126-130
- (Los Angeles)
 calcium carbonate, SBP, 103, 106
 carbon content, SBP, 111-116
 carbon-nitrogen ratio, SBP, 125-126
 color, SBP, 117, 118
 comparison of properties of sediments, for producing and barren wells, SBP, 126-130
 correlation of samples, SBP, 91, 92
 detailed studies of, SBP, 153-165
 Dominguez field, SBP, 153-165
 nitrogen content, SBP, 115, 116, 118
 nitrogen-reduction ratio, SBP, 121-125
 oil zones, SBP, 99, 100
 organic content, SBP, 104-112
 oxidation factor, SBP, 123-125
 reduction number, SBP, 113-118
 reflectivity, SBP, 117, 118
 relation of, to oil zones, SBP, 146-167
 relative volatility, SBP, 120, 122, 123
 Santa Fe Springs field, SBP, 165-167
 stratigraphy, SBP, 90-100
 texture, SBP, 101-106
 volatility, SBP, 118-123
 (wells 1, 28-197), SBP, 41, 70, 73, 87-130, 153-167. (See also California samples)
 Los Angeles Basin Tertiary stratigraphy, columnar sections to illustrate, SC, 116; XX, 1662
 Los Angeles City field, GAS, 220
 Los Angeles coastal belt, XII, 518
 Los Angeles coastal belt, anticlines productive in, XI, 421
 physiography of, XI, 417
 Los Angeles coastal plain, CAL, 9
 in Pleistocene, CAL, 267
 Los Angeles County, California, MSC, 39, 98; XXI, 977
 geology of Del Valle oil field, XXVI, 183
 Los Angeles basin earthquake of October 21, 1941, and its effect on certain producing wells in Dominguez field, XXVI, 388
 outcrop sections P, R, S, SBP, 167-194, 411
 (wells 30-189), SBP, 87-167, 403-406
 Wilmington oil field, XXII, 1048
 Los Angeles County Board of Flood Control, RMS, 271
 Los Angeles County fields, PROB, 191, 192, 212-218, 228, 405, 749, 752, 994
 Los Angeles district, Puente formation of, CAL, 188, 189, 208, 211-213, 222
 Temblor formation in, CAL, 166
 Upper Miocene continental deposits in, CAL, 191
 Los Angeles embayment, SC, 24; XX, 1570
 Los Angeles fields, map showing new discoveries and extensions in 1938, XXIII, 938
 Los Angeles oil field, California, V, 181, 458; VI, 303
 ground-water contours, XVI, 346
 Los Angeles River, CAL, 1, 9
 Los Angeles Ranges, CAL, 47
 Los Arrieros shale member, XXVI, 266
 Los Bajos fault, age of, XXIV, 2107
 effect of, on migration of oil, XXIV, 2123
 geological sketch map of main oil field region of Trinidad, showing, XXIV, 2104
 mechanics of, XXIV, 2109
 of south Trinidad, B. W. I., XXIV,
- (Los Bajos)
 2102
 section along, XXIV, 2108
 vertical sections across, XXIV, 2106
 Los Bajos field, Trinidad, XXIII, 963
 Los Banos Creek section, XXIX, 983
 Los Cauzitos, Méndez shales at, MEX, 70
 Los Cerritos district, Long Beach field, California, possibilities of deep oil zone in, STR II, 73
 Los Cues, MEX, 71, 135, 136
 Los Esteros, MEX, 109, 131, 196
 Los Gatos, MSC, 203, 206, 212, 227, 247, 251, 272, 276, 288-290, 308, 310, 313, 314, 324, 331, 336, 338, 341; PROB, 185
 Monterey shale fauna from near, MSC, Fig. 14 (in pocket)
 Los Gatos-Boulder Creek road, MSC, 53
 Los Gatos Creek, CAL, 49
 Los Gatos Creek fault zone, SC, 67; XX, 1613
 Los Gatos Creek Valley, SC, 53; XX, 1599
 Los Jabillos sandstone, XXVIII, 15
 Los Laureles grade, MSC, 37, 133
 Los Naranjos, Mesón beds near, MEX, 133
 Los Naranjos fields, MEX, 4, Fig. 32 (in pocket); V, 85, 506
 dyke in Rio Tancochin at, MEX, 213
 Los Picachos field, XXIII, 865
 Los Reyes wells, MEX, 224
 Los Saucos Creek, CAL, 179; MSC, 2, 28, 32, 55, 85, 98, 108, 112, 113, 116, 117, 121, 152, 165, 185-189, 191, 192, 194, 195, 202-206, 208, 211, 213, 214, 216, 217, 222, 225-228, 230, 233, 240-244, 248, 251, 254, 257, 258, 260, 261, 264, 266, 268, 274, 275, 277, 285, 288-292, 299, 301, 302, 305-307, 309-312, 316, 317, 321, 323, 325, 329, 331, 333-335, 339, 341, 342, 344-347, 352, 353, Fig. 6 (in pocket)
 Miocene foraminifera from, MSC, 113
 Modelo opal shale of, MSC, Fig. 14 (in pocket)
 Modelo siliceous shale of, MSC, Fig. 14 (in pocket)
 Rincon shale from below bentonite bed, MSC, Fig. 14 (in pocket)
 Rincon shale of, MSC, Fig. 14 (in pocket)
 section, MSC, 86
Siphogenerina hughesi fauna of, MSC, Fig. 14 (in pocket)
Valvulineria californica zone fauna of, MSC, Fig. 14 (in pocket)
 Los Tanques, MEX, 56, 85
 Los Vaqueros area, CAL, 214
 Los Vaqueros Valley, MSC, 67
 Loskamp, Alvin P., XIV, 977
 Lospe formation, XXVII, 1338, 1343
 Loss of organic matter with time in sea and sediments, RMS, 439, 441
 Lost Cabin and Wind River vertebrate fossils in Wasatch beds, XXV, 2043
 Lost City limestone, II, 120; III, 260
 Lost Hills, CAL, 20, 46, 262
 Lost Hills anticline, PROB, 196
 Lost Hills field, California, PROB, 196, 746, 796; SBP, 130-153, 403; V, 181, 459; VI, 57; XXI, 984
 magnetometer survey, XV, 1368
 (well 21), SBP, 130-153, 403
 Lost Hills structure, PROB, 197, 407

- Lost Lake, Texas, GAS, 717
 Lost Lake salt dome, Texas, PROB, 651; XI, 633
 Lost Soldier anticline, faulting in, GAS, 320
 Lost Soldier district, Carbon and Sweetwater counties, Wyoming, PROB, 409, 687, 688, GAS, 305
 oil and gas fields, STR II, 636
 unconformities, VII, 576
 Lost Soldier dome, PROB, 163
 Lost Soldier-Ferris district, Wyoming, oil and gas field of, review, IX, 363
 Lost Soldier field, Wyoming, PROB, 169, 343, 730, 938, 941, 991; SBP, 194-243, 406; XXIII, 921; XXV, 1150; XXVII, 455, 1321; XXVIII, 798
 Frontier water in, XXIV, 1243
 Muddy and Cloverly waters in, XXIV, 1260
 Sundance water in, XXIV, 1277 (well 228), SBP, 194-243, 406
 Lost Soldier oils, representative, index graphs of, XXVII, 1321
 Lost Soldier-Rawlins district, Wyoming, oil fields of, VII, 131
 Lost Springs field, PROB, 772
 Lost Springs pool, FOP, 84; XXV, 1516; XXVIII, 772
 Lott, Falls County, Texas, XXII, 730
 Lotze, Franz, SC, 130; XX, 872, 1676
 rock salt and potash salts, geology, review, XXIII, 254
 Lotze, Franz, Carle, W., and Seidel, G., *germanotypen Tektonik*, review, XXIII, 1419
 Louann tongue, XXVII, 1422
 Louden (Beecher City) field, Illinois, XXIII, 814; XXVI, 1092
 formed during pre-Pennsylvanian diastrophism, XXIV, 222
 Loudon pool, Illinois, XXIV, 961
 Louderback, George D., CAL, ix, 17, 41, 58, 59, 193, 194, 278; MSC, 88, 91, 133; PROB, 736; RMS, 648, 660, 661; VII, 616; VIII, 789; IX, 232, 1297; XII, 971; XVI, 2, 15, 16; XVII, 1011; XX, 863, 869, 872; XXV, 197; XXVI, 1798; XXVII, 160, 1342; XXVIII, 968
 Louderback, George D., and Arnold, Ralph, XXVII, 117
 Louderback, George D., and Sharwood, W. J., XXVII, 160
 Louderback, George L., XIX, 521, 523
 Loughlin, G. F., XVII, 353
 Louisiana, PROB, 60, 340, 341, 417, 578, 579, 609, 632, 636, 637, 651, 654, 661, 662, 667, 675, 780, 781, 893; RMS, 32, 153-194; SD, 1, 170, 219, 263
 Acadia Parish, Jennings oil field, X, 72
 aggradation in, XXIII, 1206
 an example of non-ownership states, XXII, 1083
 Anse la Butte dome, St. Martin Parish, XXVII, 1123
 areal variation of organic carbon content of Barataria Bay sediments, XXIII, 582
 Arkadelphia formation, X, 232
 Avery Island, IX, 761-774
 Barataria area, Jefferson Parish, XXIV, 1088
 Barataria field, Jefferson Parish, XXV, 322
 Bayou Bouillon salt dome, St. Martin Parish, SD, 345; IX, 1283
 (Louisiana)
 bearing of cap rock on subsidence on Clay Creek salt dome, Washington County, Texas, and Chestnut dome, Natchitoches Parish, discussion, XV, 1105
 Belle Isle salt dome, St. Mary Parish, GC, 1033; IX, 783-792; XIX, 644
 Belle Isle torsion-balance survey, St. Mary Parish, XV, 1335
 Bellevue oil field, STR II, 229; VII, 645
 bentonite in Upper Cretaceous of, VIII, 342
 Bingen group, X, 228
 Bistineau dome, X, 252-255
 bottom sediments of Lake Pontchartrain, XXIII, 1
 Buckner formation in, sections, XXVII, 1453, 1454
 Caddo field, section of formations, STR II, 188
 Cane River beds in, GC, 391; X, 235, 250, 264, 281; XVII, 622
 Cartersville-Sarepta and Shongaloo fields, Bossier and Webster parishes, XXII, 1473
 Cartersville-Sarepta field, STRAT, 873
 Catahoula-Fleming contact in, GC, 414; XVI, 608; XVII, 645
 Cedar Creek dome, X, 282-287
 Cenozoic in, XXIV, 2073, XXIX, 1171
 chalk, X, 263
 check list of foraminifera and ostracoda from upper Midway sediments of, XXV, 740
 Chestnut dome, Natchitoches Parish, XV, 277
 Claiborne group, X, 225, 234, 250
 classification of Zwolle field as limestone reservoir, XV, 1293
 coastal, discoveries in 1941, XXVI, 988
 coastal, Eocene in, XXV, 1365
 coastal, exploration in, XXVII, 735
 coastal, new fields discovered during 1937, XXII, 742
 coastal, Oligocene discoveries in, XXVII, 736
 coastal, production and development in, XXVII, 737
 coastal, reserves in, XXVII, 738
 coastal district, salt domes in, XX, 726
 coastal oil fields, V, 333
 Cockfield formation in, GC, 396, 397; XVII, 626, 627
 columnar sections of Upper Jurassic formations in North Lisbon field, Claiborne Parish, XXVII, 1426
 Comanche in, XXII, 1666
 Comanche in Homer field, STR II, 201
 Comanche in Pine Island field, STR II, 170, 171
 Comanche Cretaceous in Lisbon field, XXIII, 284
 Comanchean, X, 225, 227
 Coochie Brake dome, geology, X, 288-290
 Cook Mountain beds in, GC, 394; XVII, 624
 cores from deep well at Rodessa, Caddo Parish, XXII, 764
 correlation of Claiborne of East Texas with Claiborne of, XIII, 1335
 correlation of Upper Cretaceous in, (Louisiana)
 STR II, 208
 Côte Blanche dome, IX, 780-783, X, 286
 Cotton Valley formation in, section, XXVII, 1462
 Cotton Valley oil field, STRAT, 873, VIII, 244, IX, 875, XXIV, 1093, 1099
 Cretaceous in, X, 225, 227, 262, XXII, 1478, 1507, 1660
 Cretaceous in Richland Parish field, XII, 993
 Cretaceous of northwestern, V, 298
 cross sections showing interpretations of Miocene of, XXIV, 442, 445-447, 450-451, 454, 455, 457, 459, 460, 462-463
 Darrow salt dome, Ascension Parish, XXII, 1412
 De Soto-Red River oil and gas field, STRAT, 873
 deep sand development in Cotton Valley field, Webster Parish, XIV, 983
 development in 1936, XXI, 1068
 difficulty of subdividing Quaternary in, GC, 422; XVII, 653
 discovery of oil in Bodcaw sand, Cotton Valley field, Webster Parish, XXII, 1603
 discovery of Valentine (LaRose) dome by reflection seismograph, GC, 1040, XVIII, 543
 Dixie oil pool, Caddo Parish, STRAT, 873; XIV, 743
 Drake's dome, X, 271-275
 East Hackberry salt dome, Cameron Parish, XV, 247
 Edgerly oil field, SD, 470; IX, 497
 engineering studies and results of acid treatment of wells, Zwolle oil field, Sabine Parish, review, XIX, 127
 Eocene in, X, 7, 225, 227, 232, 281; XXIII, 298, 1507; XXIV, 2088; XXV, 1374; XXIX, 25, 37, 1171
 Eocene in Bellevue field, STR II, 241
 Eocene in Homer field, STR II, 198
 Eocene in Pine Island field, STR II, 169
 Eocene in Urania field, STR I, 93
 Eola field, Avoyelles Parish, XXIV, 1083
 fields of deep dome type in Gulf Coast salt-dome area, GAS, 730
 fields producing gas in, GAS, 710-712, 717, 718
 Five Islands, SD, 356; IX, 756
 Five Islands, problems presented by, IX, 792
 folding effects in, VII, 180
 foraminifera of, XXV, 739
 formations in, GC, 437; XIX, 656
 fossiliferous localities of Midway group in, XXV, 734
 fossils, IX, 83, 85; X, 83
 gas in lower Glen Rose at Converse field, XXI, 1072
 gas in Union Church area, Bienville Parish, XXI, 1071
 gas production at Sibley, XXI, 1071
 gas production from Spring Hill-Sarepta gas field, Webster and Bossier parishes, VII, 555
 geologic map, XXIX, 1170
 geology of Bellevue oil field, Bossier Parish, XXII, 1658
 geology of Catahoula Parish, XIV, 433

(Louisiana)

- geology of Eola oil field, Avoyelles Parish, XXV, 1363, 1597
 geology of Tetepate oil field, Acadia Parish, XXII, 285
 geology and geophysics of southeast flank of Jennings dome, Acadia Parish, with special reference to overhang, GC, 961; XIX, 1308
 Glen Rose Comanche from Pine Island field, STR II, 171
 Golden Meadows field, La Fourche Parish, XXIV, 1090
 Grand Lake, Cameron Parish, XXIV, 1087
 ground water and geologic structure of Natchitoches area, XXIX, 23
 ground-water geology of Camp Polk and North Camp Polk, XXIX, 1169
 Gulf Coast salt-dome area, GAS, 684
 Hackberry foraminiferal zonation at Starks field, Calcasieu Parish, XXIII, 1835
 Happytown, St. Martin Parish, XXIV, 1085
 Haynesville field, VI, 53, 371; XXVI, 1264
 Haynesville field, explanation of large initial production of some wells in, VII, 295
 Haynesville pool, V, 629; VI, 188
 Henderson dome, XXIV, 1085
Heterostegina zone at Bayou Mallet, Acadia Parish, XXI, 1058
 Holly field, De Soto Parish, XXIX, 96
 Homer field, STR II, 196
 important areas under exploration in 1936, XXI, 1062
 improvements within established fields in, during 1940, XXV, 1014
 interior salt domes of, SD, 269; X, 217
 intermediate domes in Gulf Coast salt-dome area, GAS, 717
 isometric projection map of Homer field, STR II, 220
 Jackson formation in, GC, 399; XVII, 629
 Jefferson Island, IX, 758-760
 Jefferson Island salt dome, Iberia Parish, GC, 983; XIX, 1602
 Jennings dome, Acadia Parish, evidence of major flank faulting, XXI, 1059
 Jennings oil field, Acadia Parish, SD, 398
 geology, X, 74-88
 Jurassic in, XXVIII, 276
 Kenilworth area, St. Bernard Parish, XXIV, 1089
 King's dome, X, 256-261
 La Pice, St. James Parish, XXIV, 1087
 La Place area, St. John the Baptist Parish, XXIV, 1088
 Lafitte field, Jefferson Parish, XXI, 1061
 LaFourche Crossing, LaFourche Parish, XXIV, 1088
 late Recent history of Côte Blanche salt dome, St. Mary Parish, GC, 1026; XX, 179
 Lisbon oil field, Claiborne and Lincoln parishes, STRAT, 873; XXI, 1071; XXIII, 281
 Lower Cretaceous, X, 7
 Lower Cretaceous, Bellevue field, STR II, 237, 238

(Louisiana)

- Lower Cretaceous in Caddo field, STR II, 186
 Lower Cretaceous in Homer field, STR II, 201
 Lower Cretaceous, section, Bellevue field, STR II, 238
 lower Trinity marine production at Cotton Valley, XXI, 1069
 magnetic vectors in, XVI, 1183
 magnetometer study in, discussion, XIV, 1087
 magnetometer study of Caddo-Shreveport uplift, XIV, 175; discussion, XIV, 327
 Many salt dome, IX, 170
 map of northeastern, showing location of newly discovered salt domes, XXIV, 484
 map of south-central, showing relation of Eola to adjacent fields, and to regional sub-sea Wilcox structure, XXV, 1364
Marginalina-Frio sands at Bayou Mallet, Acadia Parish, XXI, 1058
 maris, X, 263
 Midway formation, X, 232, 264
 Midway formation in Prothro dome, X, 249
 Midway sedimentation in, GC, 384; XVII, 615
 Miocene in, STRAT, 213; XXII, 291, 1418, 1421; XXIII, 879; XXV, 1371; XXVII, 1104; XXIX, 795, 796
 Miocene in Anse la Butte dome, XXVII, 1133
 Miocene in Homer field, STR II, 217
 Miocene fossils, IX, 88, 97
 Miocene sand productive in, XXIII, 883
 Mississippi, and Alabama, map showing datum planes for regional subsurface contours of Gulf Coast area of, XXIII, 1407
 Monroe gas field, GAS 741; STRAT, 874; VII, 565; review, VI, 155
 Nacatoch formation, VII, 647; X, 232
 Neale field, Beauregard Parish, XXIV, 2036
 nepheline basalt in Richland Parish gas field, XII, 985
 north, correlation of Upper Jurassic formations in North Lisbon and Bellevue fields, XXVII, 1428
 north, Cretaceous in, XXVI, 1251
 north, developments in 1939, XXIV, 1028
 north, discoveries in 1942, XXVIII, 269, 274
 north, Eocene in, XXVI, 1251
 north, extensions and development, XXV, 1036
 north, field developments in 1942, XXVIII, 333
 north, fields in, XXV, 1033
 north, gas fields, XXVI, 1261
 north, geologic structure map, STR II, 185
 north, Jurassic in, XXVI, 1251
 north, new fields discovered in 1944, XXIX, 806
 north, oil fields, XXVI, 1260
 north, oil fields, drilling activities during 1942, XXVIII, 270
 north, results of tests for Smackover limestone production in, XXV, 1029
 north, review of oil and gas development in, II, 61

(Louisiana)

- north, review of oil and gas pools in, VI, 179
 north, salt dome basin, XXVIII, 277
 north, salt-dome discoveries in 1942, XXVIII, 561
 north, structures, El Dorado oil field, Arkansas, and its relation to, VI, 193
 north, wildcat dry holes, XXVIII, 272
 north, wildcat wells drilled in, 1942, XXVIII, 554
 Louisiana, north, and south Arkansas, deepest formations tested by wildcat wells drilled in 1940, XXV, 1027
 developments in 1937, XXII, 719
 developments in 1938, XXIII, 896
 developments in 1939, XXIV, 1092
 developments in 1940, XXV, 1024
 developments in 1941, XXVI, 1250
 developments in 1942, XXVIII, 257
 developments in 1944, XXIX, 803
 discovery wells drilled in 1939, XXIV, 1098
 discovery wells drilled in 1940, XXV, 1032
 dry holes and tests drilled in 1940, XXV, 1028
 graph showing geophysical activities in 1943, XXIX, 812
 graph showing geophysical activities in 1944, XXIX, 813
 important dry holes drilled in 1939, XXIV, 1094
 important wildcats and dry holes completed in 1944, XXIX, 809
 layers of geology in, XXVII, 911
 map, XXV, 1034
 map of oil and gas fields of. Structure contours on base of massive anhydrite of Glen Rose formation, XXIII, 900-901
 map showing locations of fields producing from Jurassic formations, XXVII, 1408
 map showing oil and gas fields, XXVI, 1252
 oil, gas distillate, and gas fields, map, XXVIII, 264
 production in, XXVI, 1250; XXVIII, 257
 production in 1940, XXV, 1024
 wells and feet drilled in 1942, XXVIII, 258
 Louisiana, North Elton area in Allen Parish, XXIV, 1085
 northeast, three new interior salt domes in, XXIV, 483
 northeast and northwest, salt-dome basins, southward plunging anticline separating, XXIV, 1895
 northeastern, late Paleozoic age of Morehouse formation of, XXVI, 1672
 northern, yearly production in, showing discovery of various pools, XXV, 1026
 Louisiana, northern, and eastern Texas, columnar sections of Upper Jurassic formations in, XXVII, 1425
 Louisiana, northern, and southern Arkansas, analysis of deepest formations penetrated in wildcat wells drilled in 1939, XXIV, 1094
 analysis of producers and dry holes drilled in 1939, XXIV, 1092
 analysis of producers and dry holes drilled in 1940, XXV, 1027
 notes on stratigraphy of producing

(Louisiana)
 sands in, VII, 362
 oil and gas fields discovered in 1940, XXV, 1031
 oil and gas fields of, XXIV, 1096-1097
 relations of Upper Jurassic formations in, XXVIII, 612
 time relations of Upper Jurassic formations in, XXVII, 1430
 Louisiana, northern, southern Arkansas, and northeastern Texas, subsurface pre-Upper Cretaceous stratigraphy of, XXVIII, 578
 Louisiana, northwest, and southwest Arkansas, stratigraphy of Midway group (Eocene), XIX, 696
 Louisiana, northwestern Cretaceous of, V, 298
 northwestern, Midway microfauna of, XXV, 738
 northwestern, and southwestern Arkansas, Comanche strata, XXV, 1030
 oil and gas fields in northern, II, 61; IV, 136; VI, 179
 oil at Belle Isle, IX, 792
 oil fields in, SBP, 410
 oil reserves, V, 411; VI, 44
 Oligocene in, XXII, 1422; XXIV, 1088, XXV, 1371; XXVII, 1104
 Oligocene oil at Choctaw dome, XXIII, 886
 Olla field, La Salle Parish, XXV, 747
 paleontology of Jefferson Island, IX, 760
 Paradise area, St. Charles Parish, XXIV, 1088
 parishes productive in, XXVI, 1260
 Pennsylvanian in, XXVIII, 277
 Perkins area in Calcasieu Parish, XXIV, 1085
 petroleum production in northern, IV, 131
 phases of sedimentation in Gulf Coastal Prairies of, XIV, 903
 Pine Island deep sands, STR II, 168
 Pine Island gas, IX, 171
 Pine Prairie dome, IX, 739, 744
 Pleistocene in, X, 227; XVII, 653; XXII, 291, 1421
 Pleistocene in Bellevue field, STR II, 242
 Pleistocene and Recent in, XXIX, 43
 Pleistocene and Recent in Camp Polk, XXIX, 1185
 Pliocene in, XXII, 743, 1421; XXVII, 1104, 1141
 Potash field, Plaquemines Parish, XXIV, 1090
 Price's dome, X, 265-271
 production in East Carroll Parish, XII, 765
 production of gas in, GAS, 770, 771
 profiles, PROB, 607
 Prothro dome, IX, 904; X, 245-252
 Quaternary in, X, 227
 Rayburn's dome, X, 260-265
 Recent in Bellevue field, STR II, 242
 review of Tertiary stratigraphy of, discussion, XVII, 869
 review on salt domes, VI, 385
 Richland gas field, Richland Parish, GAS, 773, 783; STRAT, 874; XV, 939
 Rodessa field, XXIV, 1099
 Ruston gas field, Lincoln Parish, XXIX, 226
 Sabine group in, GC, 386; XVII, 617
 Sabine Uplift, IV, 117

(Louisiana)
 St. Maurice beds, X, 237, 281
 salines in, X, 218
 section of formations in Caddo field, STR II, 188
 section of Lower Cretaceous at Bellevue field, STR II, 237, 238
 Section 28 salt dome, St. Martin Parish, SD, 352; IX, 1290
 seismological discovery and partial detail of Vermilion Bay salt dome, XVI, 1221
 shallow-dome fields in, GAS, 710
 Shongaloo field, STRAT, 873
 Shreveport field, Caddo Parish, XXII, 1277; XXIV, 1099
 Sligo gas field, XXI, 1069
 Smackover formation, sections, XXVII, 1444
 source beds in, PROB, 59
 south, bibliography on deep-seated domes in, XXVIII, 1312
 south, deep-seated domes, structure of, XXVIII, 1249, 1549
 south, map showing new fields and other developments in 1944, XXIX, 793
 south, Miocene chief source of new oil in, XXVI, 988
 south, Miocene fossils of, XXIV, 464-475
 south, Miocene production in, XXVIII, 1251
 south, Miocene stratigraphy in, XXIV, 436
 south, oil production in old gas fields in 1944, XXIX, 796
 south, Oligocene stratigraphy in, XXIV, 436
 south, Pleistocene gravels unconformable on Miocene in, XXVIII, 1251
 south, salt domes, XXVIII, 1255
 south, stratigraphic section, SD, 410; X, 84
 south, subsurface Miocene of, XXIV, 435
 south, and coastal southeast Texas, post-Fleming surface formations of, GC, 432; XIX, 651
 south-central, salt domes of, map, GC, 984; XIX, 1603
 southwestern, sketch map of, showing relation of Tepetate field to adjacent fields and prospects, XXII, 286
 Sparta sand in, GC, 393, X, 236, 287; XVII, 623
 Spring Hill-Sarepta gas field, Webster and Bossier parishes, VII, 546
 stratigraphic reservoirs in University oil field, East Baton Rouge Parish, STRAT, 208
 stratigraphy, VI, 180
 structure in Caddo field, STR II, 183
 structure of northwestern, STR II, 187
 structure of Pine Island field, STR II, 175, 176
 subsurface study of Jennings field, Acadia Parish, XXVII, 1102
 Sugar Creek field, Claiborne Parish, XXI, 1071; XXII, 1504
 Sulphur salt dome, SD, 452; IX, 479; XIV, 1079
 Tertiary in, X, 227, 264; XXII, 1477, 1507; XXIII, 297; XXIX, 25
 Tertiary in Homer field, STR II, 209
 Tertiary in Pine Island field, STR II, 169

(Louisiana)
 Tertiary in Urania field, STR I, 93
 Tertiary History of region of Sabine uplift, XV, 531
 Tertiary stratigraphy of, GC, 383, MSC, 179, XVII, 613
 Louisiana, Texas, Mississippi, and Alabama, correlation chart for lower Claiborne, Wilcox, and Midway groups of, XXIX, 47
 Louisiana, thickness of Vicksburg in Catahoula Parish, GC, 403, XVII, 633
 unconformities, IX, 750; X, 235
 Upper Cretaceous in, X, 7, 227
 Upper Cretaceous in Bellevue field, STR II, 237
 Upper Cretaceous in Caddo field, STR II, 189
 Upper Cretaceous in Homer field, STR II, 207
 Upper Cretaceous in Pine Island field, STR II, 169
 Upper Miocene productive at Lirette, XXII, 743
 Urania field, STRAT, 874; STR I, 91
 Vacherie dome, X, 238, 245
 Venice field, Plaquemines Parish, XXIV, 1090
 Vermilion Bay, Iberia Parish, XXIV, 1087
 vertical variation of properties of sediments in Bosco oil field, Acadia Parish, SBP, 348
 Vicksburg formation in deep test, Acadia Parish, XVI, 609
 Vicksburg group in, GC, 402, XVII, 632
 Ville Platte area of Evangeline Parish, XXII, 737, 738
 Vinton salt dome, Calcasieu Parish, XII, 385
 volcanic ash from Calcasieu Parish, X, 93
 volcanic ash in northern, VIII, 524
 volcanic rocks in Cretaceous of, VIII, 344
 Weeks Island dome, IX, 774-780
 wells in, SBP, 410
 Welsh oil field, SD, 437; IX, 464
 West Charenton field, St. Mary Parish, XXIV, 1090
 western, exposures of Vicksburg Oligocene fauna in, XXIII, 246
 Wilcox formation, X, 233, 257, 264, 281
 Wilcox oil at Eola, XXIV, 1082
 Wilcox sand productive at Ville Platte field, Evangeline Parish, XXIV, 1090
 Winnfield dome, cap rock, X, 277-283
 Yegua formation in, GC, 396; X, 237, 281; XVII, 627
 Louisiana and Arkansas, Comanche in, XXV, 1697
 Eocene in, XXVII, 911
 geology, plans for compilation of, VIII, 350
 Lower Cretaceous in, XXVII, 911
 relation of Upper Cretaceous to Eocene structures in, VII, 379
 stratigraphy of producing sands, VII, 362
 Upper Cretaceous in, XXVII, 911
 Louisiana and Arkansas Railroad, RMS, 169
 Louisiana and Mississippi, geology of, STRAT, 605
 Louisiana and southeast Texas, Gulf

- (Louisiana)
 Coast of, review of developments in 1938, XXIII, 871
 Louisiana and Texas, areal geology of Midway and Wilcox sediments of Sabine uplift, XXIX, 48
 coastal, downdip Wilcox (Eocene) of, XXIV, 1891
 coastal, map showing location of Wilcox wells, subsea depths to top of Wilcox and 1,000-foot contour intervals based on this datum, XXIV, 1896
 deep coastal zone of Oligocene-Miocene production in, XXI, 1056
 distribution of Jurassic fossils of Cotton Valley formation, XXVII, 1470
 extensions to proved fields found in 1937, XXII, 747
 interior salt domes of, geology, X, 6
 Love Creek, MSC, 53, 231, 249, 269, 272, 288, 311, 314, 324
 mechanics of formation of Gulf Coast salt domes of, GC, 20, XVII, 1025
 mechanics of formation of salt domes with special reference to Gulf Coast salt domes of, XVII, 1025
 Midway-Wilcox surface stratigraphy of Sabine uplift, XXIX, 45
 Monterey shale faunules from, MSC, Fig. 14 (in pocket)
 occurrence of sulphur waters in Gulf Coast of, and their significance in locating new domes, SD, 774; IX, 35
 oil-producing horizons of Gulf Coast in, GC, 1; XVIII, 500
 overhanging salt on domes of, GC, 141; XVII, 1492
 petroleum potentialities of Gulf Coast petroleum province of, XIV, 1379
 producing geologic ages on Gulf Coastal domes, GAS, 694
 productive areas of 1936 in, largely due to geophysical prospecting, XXI, 1056
 Recent littoral foraminifera from, MSC, 13
 résumé of facts and opinions on sedimentation in Gulf Coast region of, XXIX, 1304
 secondary salt-dome materials of coastal plain of, XIV, 1469
 Sparta-Wilcox trend, XXIV, 701
 structural axes indicated by Midway and Wilcox surface sediments, Sabine uplift, XXIX, 49
 subsurface stratigraphy of coastal plain of, IX, 79
 tentative foraminiferal zonation of subsurface Claiborne of, GC, 425; XIX, 689
 Louisiana and Texas Gulf Coast, map of, XXIV, 2072
 recent developments in, XVII, 558
 Louisiana and Texas Gulf Coast sediments, heavy-mineral zones of, XXIV, 2069
 Louisiana and Texas salt-dome cap-rock minerals, GC, 119; XVIII, 212
 Louisiana and Texas salt-dome cap rocks, aragonite in, XXII, 217
 Louisiana and upper Texas, Gulf Coast of, review of developments in 1939, XXIV, 1079
 in 1940, XXV, 1004
 in 1942, XXVII, 730
 in 1943, XXVIII, 853
- Louisiana coastal district, salt domes in, GC, 109
 Louisiana Conservation Department rulings, XXIII, 319, 322
 Louisiana core data, XXV, 869
 Louisiana Delta sand, XXVI, 1266
 Louisiana discoveries during 1940, XXV, 1010
 Louisiana earthquake of October 19, 1930, review, XV, 291
 Louisiana Exploration Company, SD, 464
 Louisiana fields, gravity of oil from, XXVI, 1263-1267, 1273, 1274
 new coastal, Cameron Meadows and Iowa, XVI, 255
 Louisiana formation, XXV, 1655
 Louisiana Geological Survey, XXIX, 23
 Louisiana Gulf Coast, developments in 1944, XXIX, 792, 799
 map showing relationships of Anse la Butte dome, XXVII, 1124
 Miocene in, XXIX, 796
 Louisiana limestone, XXIV, 792; XXV, 2112
 Louisiana lithographic limestone in Missouri, XXIV, 784
 Louisiana maps and sections, list of, XXII, 460
 Louisiana Midway Eocene mollusca, check list of, XXV, 737
 Louisiana Oil and Refining Company, SD, 429, 435
 Louisiana Oil Refining Corporation, SD, 274, 309, 311; XXII, 1484, 1659
 Louisiana Petroleum Company (well 347), SBP, 292-335, 409
 Louisiana Power and Light Company, GAS, 770
 Louisiana productive areas discovered in 1937, XXII, 736
 Louisiana salt dome fields located by reflection seismograph survey, XXVIII, 1258, 1259, 1263, 1266, 1269, 1274, 1280, 1283, 1286, 1292, 1298
 Louisiana salt domes, V, 227; VI, 385; IX, 1230; X, 1, 14; XX, 726, 732
 Louisiana Salt Islands, SD, 14
 Louisiana salt plugs, water-insoluble residues in rock salt of, XXI, 1268
 Louisiana salt structures, IX, 832
 Louisiana samples (wells 406-409), SBP, 335-349, 410. (See also Gulf Coast samples)
 Louisiana State Department of Conservation rules for drilling wells in Monroe field, GAS, 767
 Louisiana State University, RMS, 32, 153
 Louisiana stream patterns, XXIII, 1199
 Louisiana wildcat drilling, XXV, 1002
 Louisville Gas and Electric Company, GAS, 820
 Louisville limestone in Sumner County field, Tennessee, STR I, 251
 Lounsbury, D. E., STRAT, 698
 Lounsbury, D. E., and Isenberger, N. P., memorial of Donald Frost Newell, XXIX, 1368
 Lounsbury, D. E., and James, Bela, reservoir rock, Noodle Creek pool, STRAT, 718-721
 Lounsbury, D. E., and Stark, C. O., XXVIII, 579
 Loup Fork, CAL, 303
 Love, A. S., MEX, x
 Love, John David, XXIII, 1451, 1476;
- (Love)
 XXV, 134, 2029, 2041; XXVII, 425
 Love, W. W., and Fitzgerald, P. E., importance of geological data in acidizing of wells, XXI, 616
 Love, W. W., and Howard, W. V., PROB, 360, 368
 Love, W. W., and Murray, A. N., XX, 1392, 1396, XXI, 619
 action of organic acids upon limestone, XIII, 1467
 Love County, Oklahoma, STRAT, 793
 Love-Latta pool, GAS, 477
 Love Petroleum Company, GAS, 890
 Lovedale gypsum, XVII, 1307
 Lovejoy, J. B., STRAT, 802; XIX, 1536; XXI, Pl. D, opp 1086
 discussion of Fredericksburg group in Texas, XIX, 1536
 Lovejoy, John M., MEX, ix; X, 1076, 1090, 1099
 memorial of Herbert George Officer, XXI, 972
 Loveland, Colorado (well 238), SBP, 194-243, 407
 Lovell, Oklahoma (well 285), SBP, 255-285, 408
 Lovell Lake field, Texas, XXIX, 790
 Lovell pool, Oklahoma, PROB, 411
 Lovell's Lake field, XXIII, 880
 Lovell's Lake oil field, Jefferson County, Texas, geochemical log, dry hole, about 3,500 feet outside present limits of production, XXIV, 1424
 Lovely, H. R., XXIX, 1748
 classification of oil reservoirs, discussion, XXVII, 224
 Lovering, T. S., GAS, 309, PROB, 684, 685; XIII, 852; XV, 1099; XVII, 110, 353, 354, 863; XXII, 133, 1307, XXVI, 1377, 1395; XXVIII, 302
 minerals in world affairs, review, XXVIII, 565
 Lovering, T. S., and Johnson, J. Harlan, XVIII, 533; XIX, 974, 1009; XXVI, 1377
 meaning of unconformities in stratigraphy of central Colorado, XVII, 353
 Lovering, T. S., Aurand, H. A., Livingston, C. S., and Wilson, J. H., STRAT, 24
 Lovington area in New Mexico, XXIII, 839
 Lovington field, Lea County, New Mexico, XXIV, 1030
 Lovington pool, Lea County, New Mexico, XXIV, 1042
 Low-angle overthrust faulting, mechanics of, as illustrated by Cumberland thrust block, Virginia, Kentucky, and Tennessee, XVIII, 1584
 Low-gravity oil at Anse la Butte dome, XXVII, 1125
 Low-head sands, PROB, 955
 Low Isles, Australia, RMS, 365
 Low Point, MSC, 77
 Low pressure areas in Turner Valley field, GAS, 51
 Low-temperature origin of petroleum and natural gas in Pennsylvania fields, PROB, 450
 Lowe, Albert, VII, 662
 Lowe, Ephraim Noble, VII, 684; XIV, 910; XIX, 1154, 1655; XXII, 314; XXIII, 1400
 memorial of, XVIII, 428

- (Lowe)
oil and gas prospects in Mississippi, V, 490
Lowe granodiorite, map showing area of, in Arroyo Seco, Los Angeles County, California, XXIX, 1238
Lowe granodiorite pebbles from Arroyo Seco, sphericity and roundness of, XXIX, 1240
Lowe sand, XXVI, 1259
Lowenstein, Curt, XXIII, 1053
Lower Bend shale, III, 35, 139, 175, 188, 229, 237; V, 376, 553, VI, 150
Lower Blairmore formation, Cut Bank field, STRAT, 338
Lower Blairmore sands, Border-Red Coulee field, STRAT, 299
Lower Brazil Block coal, XXIII, 1387
Lower California, CAL, 22, 111, 188, 268; XX, 1279; review, VI, 60
Lower Castile beds, XXIII, 1676
Lower Castile evaporites in Delaware basin, XXIV, 61
Lower Colorado, Turner Valley field, GAS, 45
Lower Cosmos sand, Border-Red Coulee field, STRAT, 292, 320
Lower Cretaceous, Arkansas, V, 15
Bellevue field, Louisiana, section, STR II, 237, 238
Colombia, XXIX, 1084
Louisiana, V, 305
Montana, V, 261
Oklahoma, XXI, 12
possible source of salt, SD, 37
Rumania, SD, 93
Texas, V, 8
Vermilion area, XXIX, 1627
Wyoming and Montana fields, XVI, 866
Lower Cretaceous and basal Eocene productive in Barco area, XXIX, 1124
Lower Cretaceous and Jurassic formations of southern Arkansas, XXV, 329
Lower Cretaceous ammonites, XXIV, 1618
Lower Cretaceous basement sands unconformable on Triassic red shales in Goldsmith field, Texas, XXIII, 1527
Lower Cretaceous formations of Coastal Plain of Arkansas, Louisiana, and Texas, correlation of, XXIX, 1418
subsurface, of South Texas, XXIX, 1416
Lower Cretaceous Fredericksburg-Washita boundary of north Texas, bearing of foraminifera and ostracoda on, XXVII, 1060
Lower Cretaceous-Marmolejo formation, XXVIII, 458
Lower Cretaceous paleogeography, SC, 9; XX, 1555
Lower Cut Bank sand, Cut Bank field, STRAT, 357
Lower Eocene, SC, 19; XX, 1565. (See Eocene, lower)
a time of restricted seas, SC, 27; XX, 1573
Lower Freeman-Hampton sand in Archer County fields, Texas, STR I, 426; X, 465
Lower Fruitvale, Edison field, STRAT, 3
Kern Front field, STRAT, 11
Lower Glen Rose formation productive (Lower)
in Lisbon field, XXIII, 288
Lower Gray tuffs, XXVIII, 1460
in Tupungato field, structure of, XXVIII, 1470
Lower Hartshorne coal, structural movements during period of deposition, XXI, 1412
thicknesses, XXI, 1411
Lower Heavy Oil zone in Ventura Avenue field, GAS, 162, 164
Lower Hess formation, V, 548
Lower Languedoc basin, XVI, 1117
Lower Lajas beds, SC, 26; XX, 1572
Lower Mackenzie field, V, 526
Lower Magdalena formation, V, 545
Lower Magnesian rocks in Ohio, XXIV, 686
Lower Mesozoic epeirogeny, SC, 6, XX, 1552
Lower Mesozoic Franciscan rocks, SC, 55, XX, 1601
Lower Mesozoic geosynclinal stage, SC, 7; XX, 1553
Lower Miocene. (See Miocene, lower)
Lower Miocene foraminiferal zones, SC, 43; XX, 1589
Lower Miocene paleogeography, SC, 37; XX, 1583
Lower Mississippi drainage basin, some Silurian correlations in, XXVI, 1
Lower Mississippian. (See Mississippian, lower)
in Illinois, XXIV, 225
in western Michigan, study of sedimentation and stratigraphy of, XXV, 713
Lower Mississippian age, probable, of Caballos novaculite, New Mexico, XXIV, 1679
Lower Missouri and upper Des Moines series, references on, XXV, 72
Lower Missourian and upper Desmoinesian rocks in northeastern Oklahoma and southeastern Kansas, XXVII, 632
Lower Mya zone, CAL, 235
Lower O'Hara member of Ste. Genevieve formation, XXIII, 1503
Lower Ordovician. (See Ordovician, Lower)
Oklahoma, V, 421
Lower Ordovician and Upper Cambrian subsurface subdivisions in north-central Texas, XXIX, 413
Lower Ordovician formations, some, of Ozark uplift, stratigraphy of, XXIX, 296
Lower Ordovician sandy zones ("St. Peter") in middle Tennessee, XXIV, 1641
Lower Paleozoic unconformities, discussion, XIV, 947
Lower Peninsula, Michigan, STRAT, 239
structure of, XXIV, 1952
Lower Permian. (See Permian, lower)
Lower Permian, arguments for classifying Sakmarian, Wolfcamp, and equivalent rocks as, XXIV, 327
Texas, V, 14
Lower Pleasanton sandstones, correlation of, XXV, 30
Lower Pliocene. (See Pliocene, lower)
in eastern end of Puente Hills, San Bernardino County, California, XIV, 1445
Lower Silurian. (See Silurian, Lower)
so-called, fossils of Venezuela, discussion, XII, 951
Lower Simpson in Oklahoma City field, XVI, 992
Lower Terminal zone, XXII, 709
Lower Trinity, Texas, V, 20
Lower Wewoka sand, Dora pool, STRAT, 422
Lower Wichita, Texas, V, 548
Lower Wilcox in Butler salt dome, SD, 266
Lowest transportation velocity in streams, RMS, 12, 27
Lowman, Shepard W., GAS, 439; PROB, 764, 772; STRAT, 443, 445; XIV, 947; XVIII, 568; XIX, 503, 517; XX, 1087; XXV, 1234, 1250, XXVI, 54; XXIX, 152, 179
Chazy-Sylvan unconformity at Big Lake, Texas, discussion, XIV, 1227
pre-Pennsylvanian stratigraphy of Big Lake field, Reagan County, Texas, XIV, 798
research committee program, XXIX, 1512
selected references on research, XXIX, 1668
Silurian at Big Lake, XIV, 618
Lowman, Shepard W., and Harlton, B. H., XXV, 1646
Lowman, Shepard W., and Ware, John M., XXIX, 148
Lowrie and Fish, XI, 375, 811
Lowrie, H. W., Jr., VII, 384
Lowry, C. A., SD, 350
Lowry, L. R., XXIII, 1053
Lowry, R. L., Jr., and Williams, B. F., XVII, 513
Lowson, M. H., XVII, 233
Lowville formation, V, 651
Lox structure, Frontier water in, XXIV, 1245
Loy, S. K., IX, 235; X, 633
Lozano, XI, 1181
Lozano, Enrique Diaz, MEX, 38; PROB, 391; XXVII, 1498
Lozo, Frank E., Jr., XXVIII, 1013; XXIX, 175, 178, 179
bearing of foraminifera and ostracoda on Lower Cretaceous Fredericksburg-Washita boundary of north Texas, XXVII, 1060
Luangwa graben, XXI, 114
Lubbock pool, XXVI, 1017; XXVII, 759
Lubeck, Germany, RMS, 363
Lubitsch, XIV, 564
Lubitsch method of orienting cores, XIV, 564
Lubricants, California, VIII, 567
Lubricating distillates, PROB, 117, 118, 121, 123, 128
Lubricating fractions, PROB, 110, 140
Lubricating-oil requirements for war needs, XXV, 1269
Lubrication, symposium reprints, American Chemical Society, X, 1003
Luby field, Nueces County, Texas, XXII, 755
Lucas, IX, 349; XXIV, 1393
Lucas, Anthony F., SD, 11, 19, 21, 27, 358, 386, 389, 397, 496, 782; VII, 606, 623; IX, 758, 775, 784, 841, 843, 849, 851, 852, 853, 857, 862; XV, 1336; XVIII, 502; XIX, 491; XXI, 475, 1272
memorial of, V, 688
theory of origin of salt domes, IX, 849

- Lucas *et al.*, SD, 443
 Lucero formation, Cuba, II, 142
 Lucien field, Oklahoma, XXI, 1013; XXVIII, 239
 Lucien pool, PROB, 767
 Lucius, M., XV, 629
 Lucke, XXV, 800
 Lucke, John B., RMS, 216, 645, 662
 planned geologic field experience, discussion, XXIII, 1573
 study of Barnegat Inlet, review, XVIII, 1208
 Lucke's jet-boring sampler, RMS, 645, 646
 Ludian, SC, 17; XX, 1563
 Ludlow beds, XXVI, 1560
 Ludlow member, XXVI, 356; XXVII, 1575, 1581
 Ludwig anticline, GAS, 560
 Lunders, K., RMS, 197
 sediments of North Sea, RMS, 322
 Lueders limestone, I, 94; XXIV, 42
 Lugeon, XVI, 1118; XX, 936; XXIII, 1723
 Lugn, A. L., RMS, 636, 637; XVIII, 1599; XXVI, 1517, 1518
 pre-Pennsylvanian stratigraphy of Nebraska, XVIII, 1597
 Lugn, O. L., Condra, G. E., and Schramm, E. F., deep wells of Nebraska, review, XV, 976
 Lugn sampler, RMS, 636
 Luisian, MSC, opp. iii, 78, 114, 120, 127, 128, 153, 158, 159, 163, 164, 183, 199, 206, 237, 256, 264, 315, 347, 353, Figs. 4, 5, 6, 14, and Table I (in pocket)
 an organic shale, MSC, 123
 conformable above Relizian Stage, MSC, 123
 fauna of, a medium-depth fauna, MSC, 124
 foraminifera from, MSC, Pl. XVII
 lower, MSC, 26, 125, 184, 198-200, 202, 203, 206, 207, 210, 212, 215, 218, 219, 222-225, 227, 229-234, 237, 243, 244, 247-251, 255-258, 261, 262, 264-266, 268-276, 284, 285, 287-291, 300, 301, 304, 308-314, 320-326, 328, 330-333, 335-341, 343, 344, 346-348, 350
 lower and middle, of Reliz Canyon, foraminifera from, MSC, Pls. XII, XIII
 lower, and upper Relizian of Reliz Canyon, foraminifera from, MSC, Pl. XI
 of Reliz Canyon, foraminifera from, MSC, Pl. XIV
 Relizian, and Mohnian foraminifera, MSC, 166
 typical, foraminifera in, MSC, 123
 upper, MSC, 195, 200, 203, 206, 207, 209, 210, 212, 213, 215, 219, 221, 223, 224, 230, 231, 233, 237, 239, 242, 244, 245, 247-251, 253-258, 261, 262, 264-266, 268-272, 274-278, 281-285, 287-291, 296-298, 307-311, 313, 314, 319, 321, 323, 324, 326, 328, 330-333, 335-337, 339-344, 346, 348-350
 upper, of Reliz Canyon, foraminifera from, MSC, Pl. XV
 uppermost, lower Mohnian, and lower Delmontian of Reliz Canyon, foraminifera from, MSC, Pl. XVI
 Luisian and Relizian foraminifera, MSC, 165
 Luisian and upper Relizian stages, faunas of, MSC, 19
 Luisian age, MSC, 166, 167
 Luisian fauna notably distinct from other recorded Miocene faunas, MSC, 124
 Luisian foraminifera, MSC, 124
 Luisian Monterey shale, MSC, 133
 Luisian-Relizian contact, MSC, 124
 Luisian shale, MSC, 166
 Luisian species of foraminifera, MSC, 128
 Luisian stage, MSC, 68, 69, 91, 115, 117, 121-123, 128, 154, 155, 160, 172, 176, 181, 203, 236, 291; XXVII, 1345
 type area of, MSC, 122
 Luisian zone of Kleinpell (Miocene) (Tmf, Tmm), SBP, 91, 92, 95, 97-167, 168-194, 416
 outcrop section, G, SBP, 167-194, 411
 Lukasiewicz, Ignacy, XV, 14
 Lukert, L. H., XXIII, 1353
 Lula structure, XXI, 1008
 Luling, Texas (wells, 397, 398), SBP, 292-335, 410
 Luling fault, GC, 266; XI, 835; XVII, 1209; XXII, 751
 in Guadalupe and Caldwell counties, XXIX, 1734
 Luling fault plane, Luling field, Texas, STR I, 257
 Luling fault zone, XIII, 428; XXIX, 1734
 Luling field, Texas, STR I, 256; PROB, 60, 418, 781; VIII, 775; IX, 532, 640-653; XI, 848
 example of triple fault trap reservoirs, XXIX, 1574
 Gideon well No. 3, XVI, 206
 Luling-Mexia trend, XXIX, 1307
 Luling oil field, Caldwell County, Texas, VIII, 775; XXIX, 1734
 Lull, Richard S., XXVIII, 1196, 1215
 Luman, E. D., STRAT, 436
 Lumby, J. R., RMS, 104
 Lumparen I and II in Baltic, RMS, 316
 Lunda, A., and Pettijohn, F. J., XXIX, 1245
 Lundberg, H., and Zuschlag, Th., XVI, 1265
 Lundberg, Sven, XIV, 583
 Lundqvist, G., *Bodenablagerungen und Entwicklungstypen der Seen*, review, XII, 867
 Lundy, W. T., XX, 157
 Lunlunta field, XXVIII, 1458
 Lunz, G. R., Jr., XXVIII, 994, 1011
 Lupher, R. L., XXIX, 1386
 Lupton, Charles Thomas, VI, 43, 219, 222; VII, 395; IX, 899; XI, 1327; XII, 1016
 geological section in western Kansas, VI, 549
 memorial of, XX, 513
 memorial of John Walter McKim, XII, 459
 results and prospects of deeper drilling in Rocky Mountain fields, VII, 400
 Lupton, Charles Thomas, and Hewett, D. F., IV, 39
 Lupton, Charles Thomas, and Lee, Wallace, VII, 9; XXVI, 1339
 geology of Cat Creek oil field, Fergus and Garfield counties, Montana, V, 252, 327
 Lupton, Charles Thomas, Lee, Wallace, and Van Burch, Lisle Reed, oil possibilities of western Kansas, VI, 69
 Lusk, Ralph G., XIV, 1065
 (Lusk)
 significance of structure in accumulation of oil in Tennessee, STR I, 243; XI, 905
 Lusk, Ralph G., Mather, K. F., and Gilluly, James, GAS, 368
 Lusk field, III, 358
 Luster, surface, of particle, XXVI, 1714
 Luta limestone, II, 75
 Lutetian, Europe, VI, 526
 Luther, XXI, 311
 Luther, D. D., XV, 673; XVI, 675
 Luther dome, XX, 1174
 Lutz, Carl, GAS, 60
 Luyano marl, Cuba, II, 141
 Luzon, MSC, 65
 Lycoming Natural Gas Company (well 413), SBP, 349-379, 410
 Lycoming Natural Gas Corporation, GAS, 981
 Lyden, J. P., XVII, 1436
 Lyder, E. E., XVII, 1231
 Lyder, E. E., and McKee, R. H., XIII, 309; XVI, 1031; XVII, 1232
 Lyell, XVIII, 375; XXVI, 766
 Lyell, Charles, MSC, 81, 171, 172, 175; VIII, 487; XII, 138; XIX, 526, 532, 1650
 definition of Miocene, XIX, 532
 Lylean terminology, MSC, 181
 Lyleian method of correlation, MSC, 173
 Lykes field, XXVII, 744
 Lykins formation, II, 84; XXIII, 1155, 1164
 Lyman, Benjamin Smith, PROB, 18, 19
 Lyman, C. S., CAL, v
 Lyman, Theodore, XXVI, 1189, 1190
 Lynch, S. A., cooperation between advanced students and men of the petroleum industry, XXIV, 604
 Lynch, W. F., XX, 884, 886, 899, 904
 Lyndale Survey, Texas (well 327), SBP, 292-335, 408
 Lyne, H. S., oil well in Australia, XIV, 945
 Lynn area, XXVII, 768
 Lynton, Edward D., XXIII, 664, 679
 laboratory orientation of well cores by their magnetic polarity, XXI, 580
 some results of magnetometer surveys in California, XV, 1351
 Lyon, D. A., XXII, 1307
 Lyon, G. F., MEX, I, 150
 Lyons, John B., XXIX, 1268
 Lyons, J. T., Jr., SD, 329
 Lyons field, VI, 260
 Lyons gas field, Kansas, contoured on top of Arbuckle lime, XXIV, 1792
 Lyons pool, STRAT, 122, 132
 Lyons-Quinn pool, PROB, 411
 Lyons sandstone, II, 84
 Lyons series, fossils of, XXV, 380
 in Northwest Basin, Australia, XX, 1037
 Lytle, C. F. (well 374), SBP, 292-335, 409
 Lytton Springs, variations of temperature at, PROB, 996
 Lytton Springs oil field, Texas, X, 953; XI, 849; XVI, 754
 Lytton Springs oil field fault, XI, 835
 M
 Maas, George, and White, E. E., XIII, 1147
 Maas compass, XIII, 1147
 Mabank area, Henderson County, Texas, XXIV, 1062

- Mabee field, XXIX, 746
 Mabee pool, XXVIII, 815
 gravity of oil at, XXVIII, 817
 Mabrey, C. XVII, 1253, 1254, XX, 287
 Mabou area, XXIX, 656
 Mabrey, Ronald, XXIII, 1394
 Macabou limestone, XXIV, 1596
 Macarena, XXIX, 1131
 Macarena uplift, XXIX, 522
 MacArthur, Donald, MSC, 25, 203, 230, 264, 266, 291, 300, 308, 313, 324
 Macassar, Strait of, XXII, 60
 Maccabees fault, post-Miocene, XXII, 303
 MacCarthy, G. R., RMS, 36, 210, 212, 213, 216, XII, 916
 MacCormack, E. N., XII, 3
 MacCrady series, XXV, 801
 MacDer gas field, XXIX, 744
 MacDonald, Donald Francis, notes on stratigraphy of Panama and Costa Rica, III, 363
 some factors of Central American geology that may have a bearing on origin of petroleum, IV, 263
 MacDonald, Donald Francis, and Hill, R. T., XXVI, 1649
 MacDonald, Donald Francis, and others, notes on stratigraphy of Panama and Costa Rica, III, 363
 MacDonald, Gordon A., RMS, 245, 249, 250, 258, 278, 281; XXV, 194; XXVIII, 517
 MacDonald, Gordon A., and Shepard, F. P., sediments of Santa Monica Bay, California, XXII, 201
 MacDougall, J. R., CAL, 23, 237
 Macedonia field, XXVIII, 263
 Cotton Valley gas-distillate and oil production in, XXVIII, 263
 Smackover limestone gas-distillate production in, XXVIII, 263
 Macedonia gas-distillate field, XXVI, 1255
 Maceló area, XXIX, 553
 Macelwane, J. B., introduction to seismology, Part I, geodynamics, review, XXI, 1206
 MacFadyen, W. A., geology of British Somaliland, review, XVIII, 1212
 water supplies in Iraq, review, XXIV, 751
 MacGillavry, H. J., XXVIII, 1119, 1140
 MacGinitie, G. E., XX, 261
 MacGregor, J. R., XXI, 584
 Mache, H., XV, 200
 MacKay, B. R., XI, 243, XVIII, 294, 296, 1390, 1391; XIX, 1448, 1450, 1451, 1453, 1466
 Mackay, Donald K., and Woolsey, Vernon, XVI, 754
 Mackenzie, Alexander, XXII, 1133
 MacKenzie, J. D., XVI, 797, 798
 Mackenzie, W. D. C., XXVI, 327; XXIX, 1157, 1163
 Paleozoic limestone of Turner Valley, Alberta, Canada, XXIV, 1620
 Mackenzie Basin, V, 86
 Mackenzie redbeds tongue of Phosphoria formation, XXIII, 91
 Mackenzie River area, Northwest Territories and Yukon, Canol geological investigations in, XXIX, 1669
 Mackenzie River region, Canada, occurrence of petroleum in, review, VII, 303
 Mackenzie River Valley, Lower, oil-bearing rocks of, review, V, 524
 Mackie, W., RMS, 42, 594; XXVIII, (Mackie) 109
 Mackin, J. Hoover, XXIII, 1451
 Macksburg coal, XXII, 103
 Macksburg sand, lenticular in Ohio, XXV, 797
 Macksburg sand field, PROB, 501
 Macksburg sandstone, counties in Ohio having gas production from, GAS, 901, 902
 MacLaurin, J. G., X, 1258
 Maclean, I. S., and Hoffert, D., PROB, 41, 42
 MacNaughton, Lewis W., XII, 528, 538; XIII, 1347, 1348; XVII, 1293, XXIII, 147, XXVII, 20
 recent developments in south Mid-Continent, XXIV, 1025
 MacNaughton, Lewis W., and Deegan, Charles J., E. DeGoyler, honorary member, XXIX, 397
 MacNeil, Donald J., STRAT, 339
 stratigraphy and structure of Moose Mountain area, Alberta, XXVII, 38
 MacNeil, F. Stearns, GC, 533, 536; XVII, 534
 Oligocene stratigraphy of southeastern United States, XXVIII, 1313
 Macon County, Tennessee, GAS, 868
 Macoun, John, XXII, 1134
 Macovei, G., Mrazec, L., and others, *Guide des Excursions Deuxieme Reunion en Roumanie, Association pour l'Avancement de la Geologie des Carpathes*, review, XIII, 182
 Macovei, Georges, petroleum deposits, review, XXIII, 256
 Macovei, Gh., SD, 112, 122; IX, 1190
 Macovei, S., XVI, 1065
 Macpherson, E. O., X, 1230, 1249, 1250
 MacQuarie Ridge, in Indian Ocean, RMS, 398, 400
 Macready, George A., IX, 1001; XIII, 1152
 orientation of cores, XIV, 559
 Macready orientation core drill, XIV, 577
 MacRoberts, D. T., XXII, 1441
 Macrofauna, Marthaville, XXIX, 61
 Macrofossils, RMS, 530
 Eocene, XXIX, 81
 in Upper Cretaceous formations, XXII, 1652
 Ordovician, in shale overlying *Scolithus* sandstone in Bear Lodge Mountains, XX, 1333
 Macroscopic fossils at Stratton Ridge dome, SD, 668-672
 MacVicar, J., XVIII, 1390, 1391
 Madagascar, RMS, 399, 400, 404
 petroleum reserves of, review, XV, 87
 Madagascar and its oil lands, review, XIII, 694
 Madagascar Basin, RMS, 398, 401
 Madden, C. E., GAS, 651
 Maddox, D. C., Maddox spoon, XXIX, 281
 Maddox, G. C., XXIII, 1825, 1830
 Maddox spoon, XXIX, 281
 Madgwick, Thomas G., GAS, 41; XI, 494
 Madill anticline, Aylesworth pool on, XXVII, 803
 Madill field, PROB, 778; III, 359
 Madison, Wisconsin, RMS, 525
 Madison and Macoupin counties, Illinois, Coal Measures in, XXIII, 1382
 Madison beds, dolomitization of, (Madison) XXVI, 327
 geologic history of, XXVI, 324
 porosity and permeability of, XXVI, 326
 reservoir zones in, XXVI, 326
 Madison dolomitic limestone, XXIII, 964
 Madison formation, XXI, 991, XXV, 1734
 Red Coulee field, Alberta, ALTA, 38, 41; XV, 1166, 1169
 Spring Coulee region, Alberta, ALTA 148, 151; XV, 1276, 1279
 waters of, PROB, 950
 Madison group, distribution, XXVI, 308
 divisions, XXVI, 313
 economic significance of, XXVI, 307
 fauna of, XXVI, 311
 geologic age, XXVI, 311
 in Montana, sections, XXVI, bet 328 and 329
 insoluble-residue characteristics from sections of, XXVI, 330
 isopach map of, showing thickness subsequent to late Paleozoic and early Mesozoic erosion, XXVI, 306
 near Gallatin Gateway, southwestern Montana, XXVI, 312
 of Mississippian of Montana, stratigraphic and insoluble residues of, XXVI, 305
 on Belt Creek, XXVI, 314
 sections, XXVI, 310
 stratigraphic relations, XXVI, 309
 Madison limestone, FOP, 20; PROB, 61, 158, 160, 161, 348-350, 682, 684, 687, 692, 698, 705, 706, 725, 928, 935; IV, 38, V, 188, 258; VI, 148, XXI, 993; XXII, 683, 684, XXIII, 472, 486, 1449, XXV, 130, 1452; XXVII, 855; XXVIII, 792, 797; XXIX, 1599
 Alberta, ALTA, 17; XV, 1145
 Border-Red Coulee field, STRAT, 303, 319, 320
 (Cm) (Mississippian), SBP, 193, 199-243, 413
 Colorado, XVIII, 538
 Cut Bank field, STRAT, 343
 description of residues from, XXVI, 332-335
 Front Range in Colorado, XVII, 391
 Grass Creek field, Wyoming, STR II, 629
 Kevin-Sunburst field, Montana, STR II, 259, 263; XIII, 796; XVI, 868
 lithology of, XXVI, 315
 Lost Soldier district, Wyoming, STR II, 638
 measured sections, XXVI, 319-324
 Montana, helium in, GAS, 1057
 Montana and Wyoming, GAS, 250, 273, 289
 productive of oil and gas in Turner Valley field, Alberta, FOP, 42; XXV, 1474
 Rocky Mountain states, oil and gas in, PROB, 159, 160, 167
 Madison limestone and Bighorn dolomite, cliff-forming formations in Wind River Canyon, XXIII, 482
 Madison limestone waters, XXIV, 1305; XXVI, 1362, 1364
 in central fields of Montana, XXVI 1367
 in Montana, XXVI, 1365
 in north-central fields of Montana, XXVI, 1366

- (Madison)
in Sweetgrass arch fields, XXVI, 1365
in Wyoming fields, analysis of, XXIV, 1304
Madison limestones, typical insoluble residues from, XXVI, bet. 328 and 329
Madison oil at Frannie, Wyoming, XXVII, 471
Madison pool, Kansas, STR II, 150
Madison Township, Ohio (well 422), SBP, 349-379, 410
Madison waters, characteristics, XXVI, 1367
in Big Horn basin, XXIV, 1306
in Big Horn basin characterized by secondary salinity and secondary alkalinity, XXIV, 1308
in Garland dome, XXIV, 1305
in Montana, PROB, 929, 939, 940
in Powder River basin, XXIV, 1306
in Wyoming, PROB, 942
representative, in Wyoming fields, XXIV, 1306
Madreporean corals, RMS, 288, 289
Madulce Ridge, Cretaceous sandstone and conglomerate, SC, opp. 90; XX, opp. 1636
Maebius, Jed B., XXII, 133, 394; XXV, 733; XXVIII, 196
Maebius, Jed. B., and Hake, Benjamin F., XXIV, 1964, 2150; XXVII, 574, 595; XXVIII, 182, 183
Maegdefrau, E., RMS, 457
Maetic, Europe, VI, 526
Maestrichtian, MEX, 17, 60, 67, 69, 72, 73, 85, 93
Holland, V, 7, 27
in Europe, Navarro group correlated with, XXV, 642
in Southern fields, MEX, 67
lower, MEX, 72, 74
Magallanes basin, XXIX, 557
oil possibilities of, XXIX, 505
Magdalen Islands, FOP, 122; GAS, 105; XXV, 1554
references on oil prospects in, FOP, 123; XXV, 1555
Magdalena and Abo, PTNM, 534; XXVI, 534
Magdalena Bay, Lower California, Pleistocene fauna of, XXI, 532
Magdalena formation, XXI, 1250; XXIV, 173; XXVI, 828
at Silver City unconformable on Lake Valley limestone, XXIV, 166
of Franklin Mountains, description, XXIV, 165, 166
section of, XXIV, 167
sketch showing relation to underlying sediments, XXIV, 170
Magdalena graben, XXIX, 1091
Magdalena group, PTNM, 674; XXVI, 674
Magdalena limestone, IV, 74, 99; V, 164, 546, 562, 606
Magdalena trough, XXIX, bet. 508 and 509, 530
a graben, XXIX, 531
oil possibilities in, XXIX, 531
Magdalena Valley, XXIII, 963; XXVI, 794; XXIX, 1077
Llanos of, XXVI, 795
lower, XXIX, 1092
lower Cretaceous in, XXV, 1794
Middle, Colombia, Tropical Oil Company's De Mares Concession in, XXIX, 1107
Neocomian fauna of Lower Cretaceous of, XXV, 1794
(Magdalena)
petroleum possibilities in Tertiary deposits of, XXIX, 1092
Tertiary oils of, XXIX, 1136
upper, XXIX, 1102
Magdalena Valley area, middle, XXIX, 1090
Magdalena Valley graben, XXVI, 829, XXIX, 1078
Magiscáztin, sandy facies of Tamesí at, MEX, 78, 83, 84, 140
Magiscáztin-Lináres basin, MEX, 97
Magma, diagrams illustrating formation of, in tachylite layer by fractional crystallization, XXIII, 1345-1349
origin of, XXIII, 1344
Magmatic and structural processes in isostatic layer, XXIII, 1320
Magmatic formation, XXIII, 1332
Magmatic rocks, Atlantic type, MEX, 145
Pacific type, MEX, 145
Magnesia, MEX, 42; RMS, 511, 512
aluminum ratio, RMS, 485
Magnesian formation, VI, 374
Magnesian limestone, XXI, 833
Magnetite, XXVI, 71
in rock salt, XXI, 1288
Magnesium, RMS, 455, 456, 461-463, 467, 474, 486
in glauconite, RMS, 504
in Great Salt Lake, XXII, 1341
in sea water, RMS, 65, 143
in shale, RMS, 509
in tidal deposits, RMS, 200
precipitation of, RMS, 423
quantity of, in muds, RMS, 510
relation of, to insolubles in Great Salt Lake, XXII, 1347
replacing power of, RMS, 479, 481, 536
Magnesium carbonates, RMS, 529
in shells, RMS, 287, 288
Magnesium clay minerals, RMS, 468, 472, 487, 490
Magnesium ions, RMS, 475, 477
Magnesium minerals, in Big Hill dome, Texas, SD, 699; IX, 719
Magnesium oxide, SBP, 74
Magnesium sulphate, RMS, 485
Magnetic and torsion-balance survey of Munich Tertiary basin, Bavaria, XVIII, 69
Magnetic and torsion balance work used in finding anticlinal structure in vicinity of Hoffman field, XXIV, 2126
Magnetic or gravimetric mapping, XXIV, 1391
Magnetic anomalies, XXIX, 83
Magnetic compass, XIV, 598
Magnetic compass and clinometer surveys, XIV, 596
Magnetic core orientation, XXIII, 664
Magnetic core orienter, XXI, 580, 581, 583, 586, 587, 603, 605
cross section, XXI, 582
curves from cores of known orientation tested by, XXI, 595
Magnetic core orienter tests, XXI, 594
Magnetic disturbance caused by buried casing, XV, 1371
Magnetic field balances, construction, theory and application of, X, 1189
Magnetic force as possible cause of axial rotation, CD, 173
Magnetic iron sulphide of Pliocene of Ventura Basin, California, XXI, 627
Magnetic method less useful than gravimetric method as reconnaissance tool, XXVIII, 913
of prospecting for oil, XIV, 204
Magnetic polarity, laboratory orientation of well cores by, XXI, 580
Magnetic resurvey of Oklahoma City field, XVI, 1171
of part of Northamptonshire iron field, review, XII, 1122
Magnetic separation, classification of minerals according to, RMS, 599, 602
Magnetic survey in Sligo area, Louisiana, XV, 1386
Magnetic susceptibility and magnetite content of sands and shales, XIV, 1187
Magnetic susceptibility and polarity, relation between, XXI, 596
Magnetic torsion balance, experiments with, by H. N. Herrick, XXI, 581
Magnetic variometers for vertical and horizontal intensity, simple derivation of working equations of, XII, 855
Magnetic vector study of Kentucky and southern Michigan, XVIII, 97
of regional and local geologic structure in principal oil states, XVI, 1177
Magnetic vectors in Alabama, XVI, 1196
in Arkansas, XVI, 1189
in California, XVI, 1199
in Kansas, XVI, 1192
in Louisiana, XVI, 1183
in Mississippi, XVI, 1194
in Oklahoma, XVI, 1191
in Texas, XVI, 1186
Magnetics and geology of Yoast field, Bastrop County, Texas, XIV, 1191
Magnetische Verfahren der Angewandten Geophysik, review, XII, 953
Magnetite, MEX, 145; RMS, 37, 38, 212, 290, 382, 598, 602; XXIV, 641; XXVIII, 79
Magnetite content and magnetic susceptibility of sands and shales, XIV, 1187
Magnetometer, new Hotchkiss superdip, XIII, 659
Magnetometer or torsion balance, control and adjustment of surveys with, XIII, 1163, 1570
use of, in Oklahoma, XXVII, 794
Magnetometer study in Louisiana, discussion, XIV, 1087
of Caddo-Shreveport uplift, Louisiana, XIV, 175; discussion, XIV, 327
Magnetometer survey of Little Fry Pan area, Uvalde and Kinney counties, Texas, XIV, 509
of Louisiana, review, XIII, 1494
Magnetometer surveys, GAS, 395, 588, 664
in California, some results of, XV, 1351
in La Salle and McMullen counties, Texas, XIV, 1187
Magnolia City field, Jim Wells County, Texas, XIII, 1238
Magnolia field, Columbia County, Arkansas, XXI, 896; XXIV, 1028, 1095
Louisiana, XXVI, 985
Magnolia Gas Company, GAS, 771
Magnolia Oil Company, XIX, 21;

- (Magnolia)
XXII, 1489
(well 406), SBP, 335-349, 410
Magnolia Petroleum Company, GAS,
732, 743; XXI, 1008; XXII, 731,
1484; XXIII, 866, 868, 899;
XXIV, 480, XXVIII, 199; XXIX,
792
Magnolia Petroleum Corporation, GC,
635
Magnolia Pipe Line Company, XXII,
1485
Magnolia-Sealy south pool, gravity of
oil in, XXV, 1048
Magoffin County, XXVI, 1131
Maguabes Occidental, MEX, 147, 164,
176, 178
Maguabes Oriental, MEX, 80, 82
Maguabes Oriental and Alamo, syn-
cline in, MEX, 175
Magura overthrust, XV, 16
Magura sandstone, Europe, VI, 526
Magura zone in Poland, XVII, 1085
Mahakam River Basin, central, Borneo,
XXVIII, 1448
lower, Borneo, production at Sama-
rinda oil fields of, XXVIII, 1448
upper, Borneo, XXVIII, 1448
Maher, John C., ground-water geology
of Camp Polk and North Camp
Polk, Louisiana, XXIX, 1169
structural development of Las
Animas arch, Lincoln, Cheyenne,
and Kiowa counties, Colorado,
XXIX, 1663
Maher, John C., and Jones, Paul H.,
ground water and geologic struc-
ture of Natchitoches area, Louisi-
ana, XXIX, 23
Mahoney, George F., XIX, 171
Mahoney, John F., MSC, 54, 55, 107
Mahoney anticline, Carbon County,
Wyoming, structural contour map
of, XXIII, 914
Mahoney dome, Wyoming, PROB, 163,
343; STR II, 642, 654; VII, 144;
XXIII, 913; XXV, 1150
Mahoney-Ferris trend, XXIII, 915
Mahoney field, PROB, 688, 938; GAS,
311, 313-315
Maidan-i-Naftum oil field, Persia, X,
428
Maier, C. G., SBP, 2; XIII, 314; XIV,
476, 1227; XVII, 1231
Maier, C. G., and Zimmerley, S. R.,
PROB, 269; XIII, 304, 309, 340,
349, 360, 364; XV, 83; XVII,
1232; XIX, 603
Maikop, gas in, XVII, 753
Maikop district, Russia, XXI, 1078
Maikop field, Russia, XI, 499
Maikop-Kuban district, production in,
XXIII, 956
Maillet, R. and Doll, H. G., XIX, 38
Main basalt, XXV, 225
Main Pass, Louisiana, RMS, 161, 165,
169
Main Street formation in northern
Texas, XIII, 1298
Main Street limestone, XXII, 1431;
XXIX, 172, 173, 179
Maun zone in West Coyote field, PROB,
225; GAS, 206
Maue, RMS, 212
Maintaining an adequate level of geo-
physical exploration, XXVII, 948
Mainz Basin, MSC, 175, 180
Maitland, A. Gibb, X, 1119, 1121,
1129, 1130, 1137, 1138, 1143; XI,
56, 70, 72; XX, 1031, 1037, 1038,
(Maitland)
1045, 1049, 1051; XXV, 374
Majdan field, Poland, XV, 24
Majeed, M. A., RMS, 606
Major, C. E., X, 830
Major divisions of Permian in Okla-
homa and southern Kansas, XXI,
1515
Major sole fault in Turner Valley,
XVIII, 1425
Major tectonic provinces of southern
Oklahoma and their relation to oil
and gas fields, XXV, 1
Makasi shale, XXIII, 1179
Makat area, XXIII, 496
Makat dome, XXIII, 506
Neocomian sands in Jurassic and
Permo-Triassic in, XXIII, 509
Maksimov, M., XVIII, 1328
Makuoketa formation, IV, 45
Malacca, RMS, 349
Malaga Cove, Los Angeles County,
California, CAL, 195, 209
age of diatom-bearing shales at, dis-
cussion, XII, 1109
outcrop section R, SBP, 167-194, 411
Malaga formation, CAL, 195
Malaga mudstone, MSC, 165, 185, 211,
221, 223, 249, 252, 253, 255, 257,
262, 263, 275, 281, 282, 294, 295,
297, 308, 317, 319, 320, 332, 334,
338, 341, 342, 344, 350, Fig. 14 (in
pocket)
California, outcrop section R, SBP,
167-194, 411
Malagash salt deposit, PROB, 635
Malampy, Mark C., XVI, 573; XXIX,
552
Malaria in Venezuela, preventive meas-
ures against, XI, 300
Malay Archipelago, MSC, 14; XXI,
553
an illustration of crust-movement on
an unobstructed path, CD, 160
geographic features of, XXI, 554
geological features of, XXI, 555
Paleogene of, XXI, 122
Recent foraminifera of, MSC, 13
volcanoes of, XXI, 554
Malay Peninsula, stratigraphic section
in, XI, 411
Malaya, geology of, review, XV, 976
Upper Triassic fossils in, XXII, 8
Malayan Shield, XXVIII, 1453
Maldanid worms, RMS, 289
Maley, Vaughn C., XIII, 958; 977;
XXIV, 180; XXV, 75
Humble deep test, Apache Moun-
tains, Culberson County, Texas,
XXIX, 280
memorial of Cecil Lamar Chatman,
XXIII, 115
Maley, W. A., XIV, 1402; XVI, 189,
191
Malheur Plateau, XXIX, 1379, 1412
Malik, A., and Nafiz, H., MSC, 173
Maliyantz, A. A., XXVII, 1183
Maljamar area, XXVI, 1037
Maljamar field, GAS, 435-438; XXIV,
40; XXIX, 751
Maljamar pool, New Mexico, STR I,
112
Maljaroff, K. L., notes on determina-
tion of alkalies and their separation
from sesquioxides, review, XII,
1123
Malkin, Doris S., and Jung, Dorothy
A., Marine sedimentation and oil
accumulation on Gulf Coast. I.
Progressive marine overlap, XXV,
(Malkin)
2010
Malkovsky, Jaroslav A., XIII, 63,
XVI, 1263
Malkovsky, Jaroslav A., Heiland, C. A.,
and Henderson, Charles W., geo-
physical investigations at Cambou,
Colorado, review, XIV, 110
Mallalieu field, gravity of oil at, XXI, X,
825
Mississippi, XXIX, 824
Malloch, G. S., XVIII, 1388, 1390,
1413; XIX, 296
Mallot, C. A., GAS, 847
Malloy, Stewart C., and Surface, F. M.,
XXVI, 1656
Malone formation, XXVII, 1417, 1474,
1485, 1487
Malone Mountains, Texas, section,
XXVII, 1492
Malone Mountains, Permian of,
PTNM, 686; XXVI, 686
Malott, Clyde A., XXII, 268, 272, 273,
275; XXIV, 767, 769, 837
Malott, Clyde A., and Shrock, Robert
R., structural features of West
Franklin formation of south-
western Indiana, XIII, 1301
Malpais, olivine-basalt at, MEX, 147
Malta, PROB, 182, 196
Maltrata limestone, XXVIII, 1127
Malyshev, A., XIII, 814
Mamberamo sector or North Coast,
New Guinea, XXVIII, 1452
Mammalian evolution, MSC, 91
Mammalian fauna, Mint Canyon, MSC,
157
Mint Canyon, correlative signifi-
cance, MSC, 174
terrestrial, MSC, 173
Mammalian faunas, MSC, 155
Pliocene, MSC, 167
Pliocene, succession of, MSC, 174
Mammalian fossils, SC, 80; XX, 1626
Eocene, in Wind River Mountains,
XXV, 141
Mammals, CAL, 211
Mammoth teeth found at Chocoy and
San José de las Rúsias, MEX, 141
Man Mountain, XXV, 824
Manasquan formation, XXIX, 891
Manchester, MSC, 77
Manchuria, RMS, 227, 507, 508
Manchurian lowlands, XXVIII, 1419
Mancora area, V, 588
Mancos Creek structure, Colorado,
XIII, 139
Mancos Divide, gas in Cretaceous beds
at, FOP, 67; XXV, 1499
Mancos formation, Iles dome, Colorado,
STR II, 97
Moffat dome, Colorado, STR II, 97,
102
northwestern Colorado, fossils, STR
II, 97
Mancos shale, IV, 109; V, 23; VI, 204,
220; XIII, 139; XXI, 911, 994;
XXVII, 858
Colorado, outcrop section k, SBP,
197, 243-255, 411
in Rangely and Tow Creek fields,
production from, XXI, 1246
in western Colorado, XXII, 1026
Rangely dome, Colorado, STR II,
108
Tow Creek anticline, Colorado, STR
II, 108
Maness shale, XXIX, 172, 176
Maness shale and Buda limestone, map
showing distribution of, XXIX,

- (Maness)
174
Manford fault, XI, 838
Manganese, RMS, 394, 420, 423
at Flour Bluff, GC, 236
in shale, RMS, 509
Manganese and iron associated with
Franciscan cherts, XXVII, 150
Manganese content of Atlantic sedi-
ments, RMS, 384, 386
of subsurface layers of sediments,
RMS, 393
Manganese crusts, RMS, 383
Manganese deposits of Laguna Madre,
XVII, 942
Manganese dioxide as dispersing agent,
RMS, 539
Manganese nodules, origin of, XXVI,
784
Manganese oxide in East Indies, RMS,
354
Manganiferous lateric deposits in India
and West Africa, XXVI, 784
Manganiferous zones, XXVI, 44
Manger, G. E., XXII, 1103
Mangles, and Irby, XX, 886
Mangrove, RMS, 436
Mangrove swamps, RMS, 283, 291, 423
Mangroves in Florida, ecology and
geologic rôle of, XXVI, 1427
Manguishlak folds, XVIII, 782
Mangum, A. W., XVI, 386
Mangum dolomite, II, 114; XXI, 1525;
XXII, 1801
Manhart, T. A., XVI, 1263; XIX, 38,
51
Manifest field, XXVIII, 273
gravity of oil at, XXVIII, 273
Manitoba, Ordovician in, XXVI, 343
Manitou limestone, II, 85; XXVI, 1377
in Colorado Front Range, XVII, 377
Manix lake beds, CAL, 257, 310
Mankers Oil & Ref. Co., SD, 623
Mankins pool, Archer County, Texas,
XXIV, 1049; XXV, 1066
Mann, Albert, VII, 612; X, 133
Mann, I. J., RMS, 636
Mann, J., XVIII, 855
Mann, Marshall, Survey, Texas (wells
309, 325), SBP, 292-335, 408
Mann sampler, RMS, 636
Manning, Van H., VII, 619
Manning, Wentworth, SD, 226
Manning beds, GC, 483; XVII, 1307
Mannington and No. 11 coal seams,
XXIII, 1385
Mannington coal, XXIII, 1385, 1389
Mannville formation, XXIX, 1609
correlation chart of members of,
XXIX, 1610
Manpower needed in search for new
crude-oil discoveries, shortage of,
XXVII, 963
Mansfield and Marshall, XIX, 1612
Mansfield, G. R., PROB, 723; PTNM,
731; XVII, 125; XVIII, 1659, 1683,
1691, 1694, 1696; XIX, 1587, 1588;
XXI, 722, 724, 728, 730, 731, 749,
757; XXIII, 85, 1172; XXIV, 311;
XXV, 1736; XXVI, 731; XXIX,
1021, 1154
Mansfield, G. R., and Richards, R. W.,
XVIII, 1655, 1656; XXIII, 95
Mansfield, G. R., and Roundy, P. V.,
XXI, 721, 729, 730
Mansfield, W. C., SD, 360; IX, 760,
761; XXII, 807; XXV, 264, 268,
269; XXVIII, 999, 1317, 1332,
1347; XXIX, 918, 953
Mansfield gas field, GAS, 568, 569, 571;
(Mansfield)
XXI, 1409
Mansfield sandstone, XXIII, 1385
in Tr-County field, Indiana, STR I,
25
Manson, XII, 132
Manta, MSC, 179, 193, 203, 243, 293
Manteca isthmus, XXIX, 1002
Manton, C. E., memorial of Kingsley
Camden Mitchell, XV, 1303
Manual for the oil and gas industry,
SD, 705
on geophysical prospecting with
magnetometer, XXI, 631
Manufactured gas industry, GAS, 1141
Manufacturers Light and Heat Com-
pany, Pittsburgh, Pennsylvania.
Our experience with underground
storage of gas, XXIV, 1478
Manufacturers' Record, SD, 545
Manvel dome, Texas, GAS, 729
discovery by torsion balance method,
XIX, 20
Many Salt dome, Louisiana, IX, 170
Manzanita limestone member, PTNM,
580, 588; XXV, 94; XXVI, 580, 588
Manzano group, PTNM, 674; IV, 105;
V, 163, 605; XXVI, 674
formations of, PTNM, 687; XXVI,
687
invertebrate fossils of, PTNM, 688;
XXVI, 688
of Lee in San Andres Mountains,
XXI, 849
plant and vertebrate fossils in,
PTNM, 689; XXVI, 689
relations of, to sequence in Delaware
basin, PTNM, 690, XXVI, 690
Manziel field, XXVIII, 844
Texas, XXIX, 773
Maokou limestone, XXIV, 271
Maoshan disturbance, XXVIII, 1425
Map, contour-type, and its properties,
XXIX, 1250
generalized tectonic, of southern
California, SC (in pocket)
index, of Wyoming, XXI, 716
of Atlantic Ocean, RMS, 378, 383,
501
of Bahamas and Florida region,
RMS, 284
of Baltic Sea, RMS, 301, 302, 308,
318, 320
of Barataria Bay, Louisiana, RMS,
181, 186, 190, 191, 588
of Channel Islands region, California,
RMS, 247, 262
of east coast of U. S., RMS, 232
of Gulf of Maine, RMS, 222
of Indian Ocean, RMS, 398
of Mississippi delta, RMS, 157, 158,
180
of north coast of Europe, RMS, 226
of north Pacific Coast of U. S., RMS,
224
of North Sea, RMS, 323, 324, 328,
330, 345, 346
of northeast Coast of South America,
RMS, 225
of Santa Monica Bay, Calif., RMS,
251
of Tully limestone in New York show-
ing insoluble residue content,
RMS, 611
showing location of pools in Sand
Hills area, XXIV, 120
Map and cross section of an oil field,
first published, PROB, 4
Maple Grove field, XXVIII, 753
Maple Mill shale, XXIV, 785
Mapping, detailed, on large scale, with
small contour interval, use in
tracing lenticular sand bodies,
XXII, 831
Mapping subsurface structure by mak-
ing radioactivity surveys, XXV,
1783
Maps, generalized regional, XXIX,
1254
list of references, MEX, 248
of associated fauna and flora, XXIX,
1256
of associated fluids, XXIX, 1256
of associated geological processes,
XXIX, 1256
of associated structures, XXIX, 1258
of attribute combinations, XXIX,
1258
of German salt domes, list of, IX,
1268
of mass chemical properties, XXIX,
1255
of mass physical properties, XXIX,
1255
of mineralogical properties, XXIX,
1256
of particle properties, XXIX, 1255
of recent and ancient sediments,
XXIX, 1258
of sulphur area, Palangana, XVII,
1202
paleogeographic, of East Indies,
XXII, 29, 32, 33, 36, 37, 41, 44, 46-
49, 51, 54, 56, 59, 62, 64, 66
showing areal variation of properties,
SBP, 108, 134, 142, 202, 212-217,
265, 271, 300, 302, 310, 320, 342,
343, 352, 360. (See also Areal varia-
tion and isopleth maps)
topographic and geologic, interpreta-
tion of, review, X, 906
Maquoketa dolomite, XXVII, 810;
XXIX, 704
Maquoketa shale, Nikkel pool, STRAT,
109
Zenith pool, STRAT, 147
Maracaibo basin, XXIX, 559
Venezuela, tectonics of, XI, 177
Maracaibo Basin fields, Venezuela,
XIII, 1188
Maracaibo Basin waters, classification
of, XV, 902
Maracaibo depression, XVII, 224;
XXIX, 526
Maracaibo Lake region, Colombia, XI,
155
Marahunite, Pleistocene, XXI, 121
Marathon and Ouachita Mountains,
Pennsylvanian rocks in, XXIX,
1346
Marathon area, extreme diastrophism
in geosynclines during Pennsylv-
anian, XXIV, 75
west-east log section from, to Mineral
Wells area. Stratigraphic base line,
upper Canyon, XXIV, 76
Marathon basin, XIII, 908; XIX, 228
Trans-Pecos Texas, date of major
diastrophism and other problems
of, discussion, XII, 1111
Marathon district, PROB, 340
Marathon disturbance, XXIII, 1675
Marathon folded belt, FOP, 102;
PTNM, 716; XXV, 1534; XXVI,
716
Marathon folds, XXVI, 226
Marathon Mountains, XXIX, 1336
Cambrian in, XXIX, 1339
comparison of pre-Pennsylvanian

- (Marathon)
rocks of, and their thicker equivalents on the north, XXIX, 1339
Devonian in, XXIX, 1343
Ordovician rocks in, XXIX, 1341
trend of, GC, 265; XXVII, 1208
Marathon oolites, XXIV, 110
Marathon-Ouachita folded belt, FOP, 98, XXV, 1530
Marathon region, XXVI, 1399
absence of Mississippian rocks in, XXIX, 1343
geography of, in Ordovician time, XXIX, 1337
Marathon uplift, FOP, 104; PROB, 572; V, 14, 377; XV, 1029; XIX, 246; XXV, 1536
Paleozoic sequence in, XV, 1032
West Texas, pre-Carboniferous stratigraphy of, XV, 1059
Maravich, Milan D., geology of Freeze-out Mountain-Bald Mountain area, Carbon County, Wyoming, XXV, 883
Marble Canyon section, XXV, 2138, 2141
Marble City sections of Osage, XXIII, 335
Marble Falls beds, XXIV, 80; XXIX, 158
Marble Falls formation, XXVI, 212; XXVII, 775, 777
in Brazos pool, GAS, 624
Marble Falls group, XXV, 1663
Marble Falls limestone, XXI, 526; XXIV, 83; XXV, 1663; XXVI, 205; XXVII, 778
Bend Arch district, GAS, 615, 628
Bryson field, STRAT, 541, 542
fauna of, III, 230
helium in, GAS, 1055
in Stephens County, Texas, STR II, 472
Texas, GAS, 660; PROB, 354; III, 36, 39, 71-81, 139, 157, 174, 188, 191, 219, 230, 237, 419; V, 157, 377, 543; VI, 13, 150; X, 462, 481
Marble Falls production in South Bend, Texas, XII, 97
Marble Falls sand, oolitic member of, XXIII, 854
production from, XXI, 1022
Marble Falls sandstone, GAS, 636
Marble Falls-Smithwick unconformity, GAS, 626
Marbut, C. F., XIV, 855, 856, 858; XVII, 472, 507; XVIII, 1320; XIX, 1063; XXV, 38, 71
discussion of calcite, GC, 586
Marbut, C. F., and Shantz, H. L., XII, 768
Marca shale, XXIX, 983
Marcasite in rock salt, XXI, 1289
Marcasite and pyrite, films, nodules, and crystals of, in black shales, XXIII, 1179
Marcasitic shales in East Indies, RMS, 354
Marcellus and Hamilton, Illinois, XXV, 681
Missouri, XXV, 683
Marcellus black shale, XXI, 1152
Marcellus shale, XXIV, 1990
Marcey, R. B., I, 28
March pool, PROB, 767
Marcotte pool, XXVIII, 772
Marcou, XXIII, 1752
Marcou, Jules, I, 29; XVIII, 568; XIX, 1509; XXIV, 299, 305
Marcussou, J., PROB, 43
Marcey, R. B., XXIII, 1752
Mardakian structure in Caspian Sea, XXIII, 955
Mardin area, Turkey, XXIII, 691
Marfa basin, FOP, 104; PTNM, 673, 685, 710, XXV, 1536; XXVI, 673, 685, 710
Guadalupe series in, PTNM, 700; XXVI, 700
Margaric acids, PROB, 39
Margaritas, intrusion, MEX, 193
Marginal elevation and geosynclinal folding, period of, XXII, 837
Marginal uplands, truncation or subsidence of, XXII, 844
Marginal zone in Poland, XVII, 1085
Margulina, Fourth, or Ortego sand, main producing sand in Tegetate field, XXII, 303
Margulina, *Heterostegina*, and *Discorbis* times, paleogeographic map for, XXIII, 180
Margulina or Greta zone productive in coastal area of south Texas, XXIII, 867
Margulina ascensionensis zone, XXIX, 795
Margulina fauna, XXVIII, 1368
Margulina-Frio producing area, XXIX, 790
Margulina-Frio production at Hackberry dome, XXIII, 887
Margulina-Frio sands, XXII, 740; XXIII, 879, 880; XXIV, 1085; XXV, 1011, 2010, XXVII, 1102
XXIX, 210
at Bayou Mallet, Acadia Parish, Louisiana, XXI, 1058
Margulina-Frio zone, XXVII, 1107
probably greatest source of oil in south Texas, XXIII, 861
Margulina howei zone, XXIX, 792, 794
Margulina jonesi fauna, XXVII, 301
Margulina sand, XXV, 1905, 1912; XXVII, 744, 1147, XXVIII, 203
Margulina sand contour map, South Cotton Lake field, Chambers County, Texas, XXV, 1910, 1911
Margulina sands in Jennings dome, XXI, 1059
in Sugarland field, GC, 715; XVII, 1367
Margulina shale, XXV, 2007
Margulina texana zone, XXIX, 794
Margulina vaginata zone, XXIX, 795, 796
Margulina zone, GC, 11, 13, 14, 747; XVII, 642; XVIII, 510; XIX, 391; XX, 570; XXIII, 179, 868, 1640; XXVII, 1136, 1138, XXVIII, 201, 1357, 1367
Amelia field, XXIII, 1644
Esperson dome, GC, 863; XVIII, 1638
Gulf Coast section, XXII, 293
High Island dome, GC, 955; XX, 606
Hitchcock field, STRAT, 644
Jennings dome, GC, 966, 977, 981; XIX, 1313, 1324, 1328
Louisiana, GC, 404; XVII, 635
(Oligocene) (Tmg), SBP, 336, 339-349, 416
Piedgar field, GAS, 726
Spindletop, XXI, 480, 482
Sugarland field, GC, 710, 724; XVII, 1363, 1377
West Columbia field, Texas, STR II, 459
Mariaca, Guillermo, XXIX, 513
Mariaca, Guillermo, de Paiva, Glycon, and Reyes, Jorge Muñoz, geology of sub-Andean belt of Bolivia, review, XXIV, 1686
Mariana facies, XXVIII, 60
Marianna limestone, XXVIII, 1316, 1322
Covington County, Mississippi, GC, 364, 373, XIX, 1152, 1168
section, XXVIII, 1324
stratigraphic relations of, XXVIII, 1328
Marias River gas area, XXVIII, 797
Mariba-Denniston oil field, XXVIII, 741
Maricopa, MSC, 61, 105, Fig. 14 (in pocket)
type, -Vaqueros contact, MSC, 61
Maricopa Basin, SC, 14, 75, 76; XX, 1560, 1621, 1622
extensive during post-Paleocene time, SC, 70; XX, 1616
Pliocene, SC, 48; XX, 1594
Maricopa Brown shale production at Wheeler Ridge, XVI, 371
Maricopa diatomaceous shales, PROB, 183, 197, 199, 200
probable source beds in Elk Hills field, California, STR II, 44, 49
Maricopa faunule from Chico Martinez Creek, MSC, Fig. 14 (in pocket)
Maricopa faunules, MSC, Fig. 14 (in pocket)
Maricopa field, V, 453
Maricopa Flat, PROB, 747
Maricopa formation, CAL, 190, 213, 214, 310; MSC, 61, 187-189, 193, 194, 205, 209, 211, 216, 217, 231, 245, 246, 259, 271, 276, 290, 293, 295, 296, 305, 306, 316, 322, 333, 346, 352, 354
Maricopa sandstone members, Maricopa Flat, Kern County, California, truncation of, XV, 689
Maricopa shale, MSC, 56, 165, 196, 214, 216, 219, 222, 239, 240, 245, 251, 253, 260, 261, 264, 265, 276, 316, 331, 343, 353
McKittrick field, California, STR I, 19; XI, 617
North Belridge field, GAS, 137
San Joaquin Valley, XVI, 370
Wheeler Ridge, California, X, 498
Maricopa shales, XXV, 1329
Marietta area, PROB, 501, 506
Marietta syncline, STRAT, 793
Marine, lower, series at Rodessa, Louisiana, XXII, 767
Marine and non-marine sediments, possible criterion for distinguishing, XXIII, 1716
Marine bacteria, PROB, 46
in sea water enriched with paraffine oil and treated with different concentrations of sodium sulphide, oxygen consumed by, XXVII, 1184
natural and synthetic rubber oxidized by, XXVII, 1178
oxygen consumed by mixed cultures of, in presence of different hydrocarbons in aged sea water, XXVII, 1178
Marine beds, glauconite and marine fossils indications of, XXIII, 152
in Oklahoma coal field, XXI, 1403
of Embarras formation, source beds, XXI, 1252
on deltas, RMS, 173
Marine Biological Station at Plymouth, RMS, 51, 142

- Marine calcareous deposits, Florida and Bahama**, RMS, 283
 references on, RMS, 293
- Marine conditions of Wilcox formation**, updip extent of, XXIV, 1918
- Marine currents**, on deltas, RMS, 172
- Marine deposition**, STRAT, 562
 in Caliente trough in Oligocene and Miocene, XXV, 196
- Marine deposits**, RMS, 154
 associated with organic life, XXI, 1107
 criteria for distinguishing them from non-marine deposits, XXIII, 151
 faecal pellets in relation to, RMS, 516
 from southwestern north Pacific Ocean, MSC, 12
- Marine ecology** as related to paleontology, XXVI, 287; XXVII, 656
- Marine environment** represented by crinoid phase, Grand Tower limestone, Ozora, Missouri, ecologic analysis of, XXVI, 1745
- Marine environments**, classification of, XXIV, 1167
- Marine Eocene deposits** on east slope of Venezuelan Andes, XI, 992
- Marine erosion**, RMS, 238
- Marine fauna** of Catahoula formation, GC, 536; XVII, 534
- Marine faunal zone** in Gulf Coast region, XXIII, 1405
- Marine faunas**, Upper Cretaceous, abundant in Gulf and interior regions, XXII, 1635
- Marine fossils** in bituminous black shales, XXIII, 1180
 of Verden sandstone, XXIII, 575
- Marine fossils and glauconite**, indications of, marine beds, XXIII, 152
- Marine "humus"**, RMS, 150, 261, 418, 429
 of Baltic, RMS, 303
- Marine invertebrates**, CAL, 69, 109, 146, 154, 179, 247, 264, 287, opp. 288, 300
- Marine Jurassic formations** of Sweetgrass arch, Montana, XXIX, 1262
- Marine Jurassic (Sundance)**, supposed, in foothills of Front Range of Colorado, XV, 1095
- Marine kerogen shales** from oil fields of Japan, a contribution to the study of the origin of petroleum, review, VII, 83
- Marine lower Miocene** in Gulf Coastal Plain, XXIII, 178
- Marine microorganisms which oxidize petroleum hydrocarbons**, XXVII, 1175
- Marine middle Tertiary**, chronologic-biostratigraphic classification of, MSC, 87
- Marine Miocene and related deposits** of north Colombia, review, XIV, 109
- Marine Miocene formation** at Buckeye field, GC, 745; XIX, 389
- Marine Oil Company**, XXVI, 1471
- Marine oil shale**, source of oil in Playa del Rey field, California, XIX, 172
 chemical composition of, XIII, 1381
- Marine Oligocene**, areal variation of properties of, in Gulf Coast region, SBP, 343
 in Caliente trough, XXV, 215
- Marine Oligocene wedge**, XXV, 2006
- Marine organisms**, RMS, 105, 142; XXVII, 941
- Marine origin of Chester series**, XXIV, 846
- Marine overlap, progressive**, XXV, 2010
 progressive, diagrammatic section showing sedimentary sequence in, XXV, 2018
- Marine Palaeozoan und Eozan in Norddeutschland und Sudskandinavien, mit einer Zusammenstellung der gesamten Literatur*, XXII, 315
- Marine Pennsylvanian (Cmp)** (Pennsylvanian), SBP, 94, 259, 261-280, 414
- Marine Permian rocks**, important areas of, XXIV, 265
- Marine phase of Tuscaloosa formation**, XXIX, 920
- Marine pool**, XXIX, 687
 a Silurian limestone pool, XXVIII, 753
- Marine Research Institute of Helsingfors**, RMS, 298
- Marine sands of Trinity**, Cotton Valley field, XXI, 1069
- Marine sandstones** in Bradford field, Pennsylvania and New York, STR II, 414
- Marine section**, XXVIII, 41
- Marine sections**, fossiliferous, best standard sections for definition of paleontologic zones and boundaries, XXIV, 318
- Marine sediment**, effect of, on bacterial oxidation of various hydrocarbons, XXVII, 1185
- Marine sedimentation**, Artinskian time close of, XXV, 403
 in Western Australia, period of, XXV, 394
- Marine sedimentation and oil accumulation** on Gulf Coast. I. Progressive marine overlap, XXV, 2010
- Marine sediments**, RMS, 445; XXVII, 941
 bacteria in, references on, RMS, 425
 color of, XII, 932
 eolian deposits in, RMS, 496; references on, RMS, 502
 faecal pellets in, RMS, 516-524
 occurrence and activity of bacteria in, RMS, 416
 oil fields generally found in, XXIV, 874
 organic content of recent, references on, RMS, 451
 recent, organic content of, RMS, 428-453
 tabulation of, XXIII, 1720
 vertical distribution of bacteria in, XX, 258
- Marine Sespe**, MSC, Fig. 6 (in pocket)
- Marine shells**, RMS, 161
- Marine strata**, some marginal middle Permian, paleoecology and environments inferred for, XXVIII, 1012
- Marine terraces**, SC, 50; XX, 1596
 in California, XII, 135
 in Ensenada, XX, 1279
- Marine transgressions**, MSC, 158; XXV, 2011
- Marine Triassic** in Borneo, XXII, 9
- Marine Tuscaloosa black shale**, XXIX, 825
- Marine unconformities**, marine conglomerates, and thicknesses of strata, XX, 677
- Marine waters of neritic zone**, Tumey sandstone deposited in, XXVIII, 969
- Marine zone** of middle Oligocene in Saxe field, Texas, XXIV, 1815
- Mariner's sounding lead**, RMS, 631, 638
- Marino, L., and Danesi, D.**, X, 1281
- Marño deposits**, XXVIII, 1460
- Marion and Clay counties**, Illinois, anticlines in, XXII, 651
- Marion County, Illinois**, correlation of subsurface Devonian of Sandoval pool with Devonian outcrop of southwestern Illinois, XXVIII, 1528
- Salem oil field**, XXIII, 1352
- Marion field**, XXV, 1128; XXVI, 1102; XXVII, 823
- Marion formation**, II, 75, 83, V, 508
- Mariposa formation**, CAL, 17, 21, 43, 74, 77, 85, 94, 95, 97, 109, 112, 124, 311; SC, 71; XX, 1617
 of Mother Lode district, CAL, 72
- Maritime provinces**, Canada, FOP, 119, XXV, 1551
- Carboniferous** in, FOP, 119; XXV, 1551
- geologic column**, FOP, 120; XXV, 1552
- map**, FOP, 120, XXV, 1552
- Middle Devonian orogeny** in, FOP, 119; XXV, 1551
- oil shales** of, review, VII, 302
- references on oil prospects** in, FOP, 121; XXV, 1553
- Maritime provinces and Quebec**, natural gas in, GAS, 89
- Mark, H.**, RMS, 621
- Marker horizons** of Mississippian limestone, XXIX, 1156
- Marketing facilities** for Sewell-Eddleman area, XXVI, 216
- Marketing variations**, XXVIII, 1561
- Markets for natural gas**, GAS, 1032, 1126, 1147
- Markham, Edmond O.**, memorial of Harry Mayo Andreen, XVII, 1401
- Markham, Edmond O.**, minutes of business committee, Fort Worth, Texas, April 7, 1943, XXVII, 702
 minutes, twenty-eighth annual business meeting, Fort Worth, Texas, April, 1943, XXVII, 670
 report of secretary-treasurer for 1941, XXVI, 925
 report of secretary-treasurer for 1942, XXVII, 674
- Markham, Edmond O., and Lamar, L. C.**, STRAT, 481
- South Burbank pool**, Osage County, Oklahoma, XXI, 560
- Markham, Edmond O., Weaver, Paul, Aurin, Fritz L., Owen, Edgar W., and Ver Wiebe, Walter A.**, development and use of engineering geology: foreword, XXVI, 1795
- Markham dome**, Texas, PROB, 639, 666, GAS, 703-705; SD, 37, 218
- Markham Mill formation**, XXII, 884
 type locality of, XXII, 885
- Markham Mill siliceous shale**, XXII, 861
- Markley, E. A.**, XVI, 882
- Markley, E. A., and Valerius, Claude N.**, Midway field discovery, Lafayette County, Arkansas, XXVI, 1289
- Markley, J. H., Jr.**, XIII, 946
- Markley, Joe**, XI, 425
- Marks, J. G.**, XXVII, 9
- Marks, L. S.**, XIX, 845
- Marl**, RMS, 243, 293, 449; SBP, 294, 337
 of Helgoland, RMS, 331

- Marl banks, RMS, 450
 Marl facies, XXV, 2130
 Marl member and Bucatunna clay member of Byram formation, XXVIII, 1332
 Marland, E. W., IV, 173; V, 120; XXVII, 933
 Marland Oil Company of California, GAS, 186
 A-Non-To-Oppe (well 269), Bryant 1 (well 267), Cooper 1 (well 263), Mason 1 (well 284), Strothers 1 (well 293), Tucker 1 (well 265), Wright 1 (well 257), SBP, 255-285, 407, 408. (See also Continental Oil Co.)
 Clark 1 (well 234), SBP, 194-243, 406
 Marland Oil Corporation, GC, x
 Marland sand, V, 118, 139
 Marlbrook formation, XXIII, 296
 Marlbrook marl, XXII, 1669
 Arkansas, VI, 54, 352, 361, 473, 477, 479
 Bellevue field, Louisiana, STR II, 240
 Homer field, Louisiana, STR II, 209
 Louisiana, II, 62; IV, 128; V, 305, VI, 181
 Stephens field, Arkansas, STR II, 6
 Marlbrook marl formation in south Arkansas, XXII, 976
 Marlin, Texas (wells 393, 394), SBP, 292-335, 410
 Marlow, Stephens County, Oklahoma, deep well near, XXII, 1106
 Marlow-Dog Creek-Blaine unconformity, XXI, 1547
 Marlow-Dog Creek contact in Grady County, Oklahoma, XXI, 1941
 Marlow exposure, typical, in Comanche County, Kansas, XXIII, 1804
 Marlow formation, PTNM, 707; XX, 1469; XXI, 1521; XXV, 1682; XXVI, 707
 lateral gradation rather than unconformity at base of, XXI, 1560
 unconformity at base of, XXI, 1562
 Verden sandstone a part of, XXIII, 566
 Marlow formation and overlap in Oklahoma, XX, 1469
 Marlow member in Oklahoma, XXI, 1544
 of Whitehorse formation, XXI, 1542
 of Whitehorse formation in Kansas, XXIII, 1803
 Marlow overlap, XXI, 1523
 section showing, XXI, 1537
 Marls, MEX, 12, 58, 82, 96, 136
 as source rocks, PROB, 54
 Louisiana, X, 263
 Marly limestone, MEX, 13, 14, 22, 90
 Marmara Sea, RMS, 366
 Marmaton and Cherokee beds in Oklahoma, XIV, 1252
 Marmaton and Cherokee groups, GAS, 471
 Marmaton and Cherokee Mid-Continental Pennsylvanian formations, regional extent of, XIV, 1249
 Marmaton beds in South Dakota, XIV, 1262
 Marmaton formation, V, 295, 510
 Marmaton group, Bush City field, STRAT, 45, 46
 Chanute pool, STRAT, 62-64
 (Cma) (Pennsylvanian), SBP, 194, 259, 261-280, 413
 Pennsylvanian, in Kansas, stratigraphy of, XXIX, 1521
 Marmaton shale, PROB, 295
 Marmar, H. A., RMS, 128
 Marmolejo breccia in vicinity of Las Tablas fault zone, map and cross sections showing relations of, XXVIII, 465
 Marmolejo formation, folding, faulting, and alteration of, XXVIII, 461
 fossils in, XXVIII, 469
 in Santa Lucia Range, map showing distribution of, XXVIII, 460
 lithologic character of, XXVIII, 463
 Maroon formation, XXVI, 1384
 Maros-Ujvar salt dome, SD, 186, IX, 1246
 Marotta and Sni-A-Bar gas fields, Jackson County, Missouri, map of, XXII, 919
 Marquardt, Ernest, X, 1076, 1090, 1099, 1230, 1239
 Marquesas Lagoon, RMS, 286, 290
 Marr, XXI, 1147
 Marr, J. D., XXVIII, 119
 Marr, J. E., MSC, 95, XXIII, 1182, 1183, 1189, 1190
 deposition of sedimentary rocks, review, XIV, 1233
 Marsh and Cope, X, 835
 Marsh, O. C., XXVIII, 1196, 1215
 pioneer in paleontology, XXIV, 1684
 Marsh coasts, RMS, 201
 in southern North Sea, RMS, 347
 Marsh Creek section, XXIX, 989, 990
 Marsh deposits, RMS, 156, 169
 on deltas, nature of, RMS, 169
 Marsh flask, XXVII, 57
 Marsh gas, PROB, 452; RMS, 170
 on mud lumps, RMS, 172
 Marsh pool, Steuben County, New York, STR II, 269
 Marshall, XXI, 124, 1105
 Marshall and Mansfield, XIX, 1612
 Marshall, C. E., RMS, 462, 625
 Marshall, Lester R., and Bornhauser, Max, three new interior salt domes in northeast Louisiana, XXIV, 483
 Marshall, P., RMS, 39, 40, 43
 Marshall, W. B., SD, 360, IX, 760; XVII, 516; XXIX, 1731
 Marshall, Creek, Pottawatomie, and Carter counties, Oklahoma, radioactivity logs of wells in, illustrating correlation of logs across long distances, XXV, 1787
 Marshall to Dundee interval in areas of oil production in Michigan, XXII, 148
 Marshall and Dundee structures, relation between, in Michigan, XXII, 143
 Marshall Ford Dam, Texas, XXVI, 1812
 foundation problems of, XXVI, 1813
 geology at site of, XXVI, 1812
 section showing bedrock features of, XXVI, 1814
 Marshall formation, XXII, 135, 396; XXIV, 1966; XXVIII, 187
 Marshall-Grand Rapids breaks, PROB, 551
 Marshall sandstone in Central Michigan area, GAS, bet. 799 and 800
 Michigan fields, STRAT, 245
 Marshall-Sidell syncline, XXII, 1539
 Marshes, RMS, 161, 164, 170, 173
 of North Sea, RMS, 335, 343, 347
 tidal, RMS, 207
 Marshy land, RMS, 160
 Marsters, Vernon Freeman, outline of geology and development of petro-
- (Marsters)
 leum fields of Peru, South America, with notes on other occurrences in the Peruvian Republic, V, 585
 Martens, James H. C., RMS, 210, 211, 212, 213, 290, SBP, 357; STRAT, 815; XII, 1107; XXVIII, 1321; XXII, 542; XXIV, 490, 493; XXV, 801, 810, 819; XXVII, 1223
 beaches, RMS, 207
 deep well in Russell County, Virginia, XXVII, 1543
 stratigraphy of deep well in Harrison County, West Virginia, XXVII, 1539
 Martha field, Liberty County, Texas, XXIV, 1084
 Marthas Vineyard, RMS, 233, 238-241
 Marthaville formation, XXIX, 60
 Marthaville macrofauna, XXIX, 61
 Martic thrust, XXIX, 444
 Martienssen, O., XIII, 1149, 1158
 Martin *et al.*, SD, 350
 Martin, Bruce, CAL, 14, XII, 117, 971, 972, 978
 Martin, Bruce, and Anderson, F. M., MSC, 7, 18, 23, 121-123, XX, 221
 Martin, F. O., RMS, 547
 International Geological Congress, XI, 208
 review, XIII, 183
 second Congrès International de Forages, XIV, 323
 World Engineering Congress, XIV, 325
 Martin, George C., memorial of, XXVII, 1280
 Martin, George Castor, XVI, 391; XVII, 941
 Martin, George Curtis, natural coal tar mistaken for oil residue, VI, 293
 Martin, H. G., XXI, 328
 Martin, Helen M., PROB, 775; XXI, 124, 1599
 compiler, Centennial geological map of Michigan, XXI, 1601
 Depew area, Creek County, Oklahoma, STR II, 365
 map showing aerial geology of the Southern Peninsula of Michigan, XXI, 124
 reviews, XVI, 426, 427; XVIII, 149
 Martin, James Welford, GAS, 1006, 1067; MEX, 200
 Martin, K., XXII, 3, 29; XXIII, 1853
 Martin, Lois T., MSC, 13, XXVII, 2, 1364, 1372, XXVIII, 505, 953
 Eocene foraminifera from the type Lodo formation, Fresno County, California, review, XXVII, 1269
 Martin, P. M., XIII, 567, 594
 Martin, Phillip F., XVI, 259
 Martin, T. J., Survey, Texas (well 338) SBP, 292-335, 409
 Martin, W. G., XXV, 1166
 Martin County, XXVI, 1132
 Martin County gas field, GAS, 915, 943
 Martin oil sand, XXVII, 1153
 Martin sand, XXVII, 34
 Martin series, XXVII, 1145
 Martinez, E., GAS, 1010
 Martinez (Kmc), (Paleocene), SBP, 96, 168-194, 414; SC, 24; XX, 1570
 Martinez beds, SC, 58; XX, 1604
 Martinez formation, CAL, 38, 121, 122, 125, 128, 131, 136, 138, 144, 145, 158, 161, 296; VI, 305
 along San Andreas fault, CAL, 122
 Clear Lake district, CAL, 14, 125, 126

- (Martinez)
correlation chart, CAL, 303
fossils of, CAL, 123, 124, 287-289
in Tejon Quadrangle, XXI, 214
Mount Diablo region, CAL, 123
Oriental affinities of fauna, CAL, 161, 302
Paleocene, XXIX, 970
Paleocene or Danian in age, SC, 13, XX, 1559
Santa Monica Mountains, CAL, 128, 131
Simi Valley, CAL, 122
type locality of, CAL, 123, 124
uppermost, Cretaceous stage (Danian) included in, CAL, 107
Martinez marine species, XXVI, 175
Martinez paleogeography, SC, 16; XX, 1562
Martinez Sea, locations of deposits of, SC, 15; XX, 1561
Martinez strata overlapping Chico, SC, 13; XX, 1559
Martinez topography, SC, 18; XX, 1564
Martinez town, CAL, 123, 292, 310
Martinov, A. V., XXII, 776
Martinsburg shale (Om) (Ordovician), SBP, 351, 356-379, 415
Martinsville dome, XXII, 656
Martinsville field, Illinois, STR II, 130
Martinsville pool, XXII, 1534; XXIV, 966
Martynian limestone, porosity of, XXIII, 957
Martyn, Phillip F., XXI, 133, XXIX, 1319
Refugio oil and gas field, Refugio County, Texas, XXII, 1184
Martyn, Phillip F., and Sample, Charles H., XXVI, 57
Oligocene stratigraphy of East White Point field, San Patricio and Nueces counties, Texas, XXV, 1967
Marvin Creek limestone, STRAT, 495
Marwick, J., and Finlay, H. J., divisions of Tertiary of New Zealand, review, XXV, 763
divisions of Upper Cretaceous and Tertiary in New Zealand, review, XXV, 1813
Marx, Archer H., Hoskins Mound salt dome, Brazoria County, Texas, GC, 833; XX, 155
Marvland, RMS, 209, 231, 233, 237; V, 369
deep oil test at Salisbury, Wicomico County, XXIX, 1196
development in 1941, XXVI, 1134
Lower Cretaceous in, XXII, 805; XXIX, 903
map, XXIX, 901
Miocene in, XXIX, 902
Tertiary formations in, XXII, 805
Upper Cretaceous of, CAL, 104
Maryland Coastal Plain, subsurface geology of, XXIX, 901
Maryland subsurface stratigraphy, XXIX, 900
Marysville Buttes, Sutter County, California, CAL, 20, 107, 135, 142, 144, 261, 311; XVI, 361
Chico series at, XXVII, 301
Eocene beds at, CAL, 124
fossils from, CAL, 135, 288
gas on, XVII, 443
limestone in, CAL, 107
Marysville substage of Tejon series, CAL, 141
notes on foraminifera from, XXIV, (Marysville)
2051
outcrop section C., SBP, 167-194, 411
top of Cretaceous in, XXIX, 981
Marysville-Buttes gas field, California, XXIX, 998
Marysville Buttes region, Tehama formation missing from, CAL, 234
Marysville Buttes volcano, CAL, 18, 261
Masarovich, A. N., XXII, 776
Mascall, MSC, 155
Mascall fauna, CAL, 182, 221
Mascall flora, CAL, 299
Mascall formation, XXIX, 1386, 1388
Mascho pool, XXVII, 756
Masjid-i-Sulaiman oil field, Persia, XVII, 231; XXIII, 960; XXVIII, 1498
gypsum flowage in, discussion, XIII, 685
Masking of organic content of sediments by detritus, RMS, 266
Mason, Fred I., XXV, 161
Mason, J. K., XX, 1363, 1367
Mason, Shirley Lowell, SD, 122, 129; XIV, 1088; XV, 629; XXVIII, 1355
geology of prospective oil territory in Republic of Turkey, XIV, 687
Rumanian oil fields, SD, 129; IX, 145
statistical investigation of effects of structure upon oil and gas production in Osage, III, 407
Mason, Shirley Lowell, and Huntley, X, 387
Mason, Shirley Lowell, and Mather, Kirtley F., source book in geology, review, XXIII, 1579
Mason buried midden on Brazos River, McLennan County, Texas, XX, 1365
Mason measuring meter for oil wells, V, 518
Mass properties of sediments, RMS, 178
Mass texture of aggregate, XXVI, 1721
of crinoidal sediment, XXVI, 1721
Massachusetts, RMS, 230, 645, 655
Massard Prairie anticline, GAS, 564, 565, 567
Massard Prairie field, GAS, 566, 567
Massenet, Father, XXII, 1188
Masses of moving water, RMS, 104
Masses of water, transport of, RMS, 124
Massilina pratti zone, GC, 493; XVII, 1317; XXIII, 163, 1394
from Angelina County to Jasper County, Texas, section, GC, 503; XVII, 1327
in Edna gas field, XXV, 112
Massillon or Salt sandstone in Ohio, GAS, 902
Massive anhydrite, XXII, 971, 1481; XXIII, 901
Sugar Creek field contoured on base of, XXII, 1511
Massive sand, XXIX, 826
Massive sand section, XXVIII, 40
Mastena Grant, Texas (well 404), SBP, 335-349, 410
Masterson pool, XXV, 1052
Mastodon bones, XXVIII, 62
Masuk sandstone, VI, 223
Mat surface of fragments of sediments, RMS, 44
Mata de Chapapote, GAS, 999; MEX, 153, 155, 164, 184, 236
asphalt at, MEX, 236
Mata)
gas at, MEX, 152
Mata de Chapapote pool, MEX, 184
Matagorda County, Texas, Big Hill salt dome, SD, 691
Buckeye field, GC, 734
Matejka, XVIII, 934
Material of ocean floor, CD, 18
Materials needed for crude-oil discoveries, shortage of, XXVII, 962
shortage of, XXVII, 970
Matfield shale, I, 113
Mathematical, new, and stereographic net solutions to problem of two tilts—with applications to core orientation, XXIII, 663
Mathematical solution of problem of two tilts, XXIII, 664
relation between it and Fisher's stereographic net solution, XXIII, 668
Mathematics of sedimentation curves, RMS, 554
Mather, Kirtley F., SBP, 196; V, 543, 652, VI, 43; XI, 1319; XII, 598; XIV, 1065; XVI, 644; XVIII, 978; XXIV, 1686
review, XV, 1297
Mather, Kirtley F., and Heald, Kenneth C., XIX, 1735; XXI, 107; XXIX, 511, 513
Mather, Kirtley F., and Mason, Shirley L., source book in geology, review, XXIII, 1579
Mather, Kirtley F., and Roy, Chalmers J., laboratory manual of physical and historical geology, review, XIX, 418
Mather, Kirtley F., and Shaw, E. W., XVI, 236; XXIV, 1642; XXV, 689
Mather, Kirtley F., Gillyuly, James, and Lusk, R. G., GAS, 368; STRAT, 22
Mathes, D. E., XVI, 180
Mathews, I, 38
Mathews, Asa A. L., XVIII, 1668; XXII, 1364, 1367, 1368, 1374, 1385
Mathews, C. L. S., XIX, 482
Mathews, Edward B., XXVI, 1134
Mathews, W. H., XX, 780
Mathis, R. W., XXIX, 1705, 1707
Mathis pool, XXV, 1068
Matlila fossils, check list of, XXVII, 9
Matlila overturn, CAL, 134
Matlila sandstone, CAL, 141, 311; XXVII, 7
(Tmt) (Eocene), SBP, 95, 97, 168-194, 416
Matley, C. A., XXIV, 1552, 1560
Matlock pool, XXIX, 763
Matson, George Charlton, GAS, 671; GC, 405, 406, 407, 415, 418; PROB, 422; RMS, 285, 286, 290; SD, 217, 223, 410, 426, 431; SBP, 297; STR I, 307; STR II, 188; II, 62, 64; IV, 120, 131; V, 490; VI, 43; VII, 367, 380; VIII, 776; IX, 742; XIV, 751; XV, 532, 534; XVII, 636, 637, 639, 642, 645, 646, 649, 651; XX, 494; XXIII, 1553, 1557, 1558, 1559; XXVIII, 62, 979, 982, 983, 989, 1009
bibliography of works by, XXIV, 608
memorial of, XXIV, 606, 1160
review, XV, 91
Matson, George Charlton, and Hopkins, O. B., GAS, 677; IV, 117, 124, 127, 132, 135
Matson, George Charlton, and Vaughan, T. W., XXVIII, 978, 981
Matter, physical states of, CD, 20

- (Matter)
properties of, application to interior of earth, CD, 26
- Matteson, L. S., XXVIII, 734
- Matteson, L. S., and Busch, D. A., XXIX, 678
- Matteson, L. S., Sherrill, R. E., and Dickey, P. A., types of stratigraphic oil pools in Venango sands of northwestern Pennsylvania, STRAT, 507
- Matteson, W. C., XII, 1157
- Matteson, Wallace George, SD, 22, 28, 246; III, 160, IV, 285; IX, 852, 858
review of development in new central Texas oil fields during 1918, III, 163
theory of origin of salt domes, IX, 858
- Matthes, XII, 132
- Matthes, F. E., CAL, 18, 245, 255, 258, 268; MSC, 19, XIV, 868; XVI, 39; XVII, 1007
- Matthes, F. H., Cretaceous sediments in Crowley's Ridge, southeastern Missouri, XVII, 1003, 1145
- Matthes, F. W., CAL, 251
- Matthew, XXIX, 1724
- Matthew, W. D., XX, 495, XXVIII, 979, 1003, 1004
climate and evolution, review, XIX, 564
outline and general principles of the history of life, review, XIX, 565
- Mathews, D. C., XVIII, 1507
- Mathews, E., Survey, Texas (well 305), SBP, 292-335, 408
- Matthews, Tom B., IV, 269
- Matthews, W. D., XX, 443
- Matthews sand, XXVI, 1271
- Mattole River, CAL, 269
- Mattoon structure, XXIV, 223
- Mattson, Sante, RMS, 486, 535, 536, 543
- Matuyama, M., Fujita, Y., and Higashinaka, H., study of structure of Suwa Basin near Kyoto, Japan, by torsion balance, XIX, 58
- Mauch Chunk beds in Cabin Creek field, West Virginia, STR I, 466
in Copley pool, West Virginia, STR I, 448
in eastern coal field, Kentucky, STR I, 75
- Mauch Chunk formation, PROB, 454; IV, 308; V, 81
(Cmc) (Mississippian), SBP, 351, 353, 357-379, 413
- Mauch Chunk series, XXV, 798
in Scenery Hill gas field, Pennsylvania, STR II, 446
- Maucini, J. J., XIII, 999; XIX, 1092; XXII, 1235; XXIII, 984, 1053
developments in north-central and west-central Texas, 1938, XXIII, 844
- Maud expedition, RMS, 78
- Maud pool, PROB, 767
- Mauha Loa, RMS, 497
- Mauney, S. F., XXVI, 284
- Mauney, S. F., Neumann, L. M., Bass, N. W., Ginter, R. L., Ryniker, Charles, and Smith, H. M., relationship of crude oils and stratigraphy in parts of Oklahoma and Kansas, XXV, 1801
- Maurain, Ch., observations on continental drift theory, CD, 102
- Maurice member of Deadwood formation in Wind River Canyon, cliff-forming limestone in, XXIII, 481
- Maury, Carlotta Joaquina, GC, 345, 406, VII, 519, XVII, 636, 652, XIX, 1655, XXIV, 1565, XXV, 648; XXVIII, 977
O Cretaceo de Sergipe, review, XXI, 1211
- Maury, M. F., XIX, 478, 480
- Maury shale, Nashville dome, Tennessee, XX, 1073
- Smithland field, GAS, 861
- Maverick County, Texas, Taylor age of San Miguel formation of, XV, 793
- Maverick Spring field, PROB, 941
- Embar and Tensleep waters in, XXIV, 1295
- Mawdsley, J. B., Gilchrist, L., and others, studies in geophysical methods, 1928 and 1929, review, XVI, 219
- Mawson, XXII, 69
- Mawson, D., XXVI, 55
- Maximum density, temperature of, in sea, RMS, 70
- Maximum slope, lines of, superimposed on generalized contour-type map, XXIX, 1253
- Maximum tidal current velocities on continental shelf, RMS, 134
- Maximum turbulence, RMS, 18
- Maxon formation, IV, 308
- Maxon sand in Tanner Creek field, West Virginia, STR II, 573, 574
- Maxon sandstone in eastern Kentucky, GAS, 932, 934, 943
- Maxson, John H., CAL, 213, 222; MSC, 71, XVIII, 788, XXIII, 518, 533
abstract, XXII, 1716
models of Kettleman Hills North Dome, California, XXIV, 740
- Maxton-Maxon lenticular sand, XXV, 798
- Maxton sand, IV, 28, 30; V, 82; XXV, 798
eastern Ohio, STR I, 143
West Virginia, PROB, 495, 511
- Maxton sandstone, Ohio, GAS, 902, 903
- Maxville limestone in Monroe, Noble, and Belmont counties, Ohio, GAS, 910
in Ohio, XXII, 1528
- Maxwell & Sherwood, SD, 350
- Maxwell, Clerk, XXIX, 1645
- Maxwell, R. A., XXVI, 6
- Maxwell, R. G., GC, 669; XVIII, 524; XXII, 1184, 1194
exceptional association of oil and water in producing zones at Refugio, Texas, XV, 953
- Maxwell, Ross, XIII, 1477; XVII, 1406, XX, 302, 1108
- May, Arthur R., XVIII, 435; XXIII, 25; XXVII, 1364; XXIX, 957
memorial of Thomas Moir Gardiner, Jr., XV, 723
- May, Arthur R., and Gilboe, J. D., MSC, 49, Fig. 14 (in pocket); XVI, 417
- May, O. E., and Herrick, H. T., PROB, 925
- Maybelle pool, XXV, 1077
- Mayberry pool, XXIX, 690
- Mayer, Maurice, XXIV, 435
- Mayer, Randolph H., XV, 1371
- Mayer *et al.*, SD, 611
- Mayes formation, XXV, 1653, 1657
(Cmy) (Mississippian), SBP, 259, 261-280, 413
- Mayes limestone, V, 121; XXII, 1566; XXIII, 228
- (Mayes)
Bowlegs field, Oklahoma, STR II, 357
Seminole district, Oklahoma, STR II, 323
- Mayes pool, PROB, 763
- Mayfield, S. M., XXIV, 769
- Mayfield, W. W., STRAT, 827
- Maynard, J. E., and Moore, E. S., XXVI, 776
- Mayo and Busk, X, 428
- Mayo, Evans B., XIV, 1353
- Mayo, J. F., GAS, 609
- Mayo field, XXVII, 744
- Mayville limestone, Big Sinking field, STRAT, 178
- Mayuga, Manuel N., XXIX, 956
- Mazapil-Concepción del Oro-Melchor Ocampo area of northern Zacatecas, XXVIII, 1153
- Mazarn shale, XXV, 1631, 1638
- Mazarovitch, A. N., XXIV, 263, 264
- Mazda-Finley sand productive in north Texas, XXIII, 851
- McAdam, J., XVII, 233
- McAlester anticline, GAS, 519, 528
- McAlester-Ardmore-Strawn basins, XIII, 570
- McAlester-Arkansas River Valley-Ouachita Mountain region in eastern Oklahoma and western Arkansas, map, FOP, 92, XXV, 1524
- McAlester basin, cross section from western part of, to Hunton arch of central Oklahoma, XXIX, 150
- McAlester formation, GAS, 514, 524-526; XXII, 1568
- McAlester-Hartshorne zone, XXIII, 226
- McAlester shale, III, 268; V, 34, 124, 548; VI, 13, XVIII, 1052; XX, 1349; XXI, 1414
(Csm) (Pennsylvanian), SBP, 259, 261-280, 414
on Sugarloaf Mountain, composite section of, XXI, 1416
- McAlester sand, XXIII, 824
- McAnulty, S. M., Survey, Texas (well 389), SBP, 292-335, 410
- McArthur, Donald, XVI, 552; XIX, 770
- McBean formation, XXII, 791
- McBride, Becker 1 (well 256), SBP, 255-285, 407
- McCabe, L. C., Bell, A. H., and Ball, C. G., XXIII, 1522
- McCallie, S. W., XXVIII, 998
- McCallum, H. D., PROB, 782; XVI, 762; XVII, 1332
- Darst Creek field, Guadalupe County, Texas, XVII, 16
- McCallum, Henry, XVII, 1294
- McCallum anticlines, FOP, 59; XXV, 1491
Colorado, GAS, 376
proposed unit development at XVIII, 1484
- McCallum field, FOP, 37; XXV, 1469
discoverer of, discussion, XII, 99
- McCamey field, Texas, gravity of oil at, XXVIII, 817
- McCamey pool, PROB, 878
- McCandless pool, Texas, XXVIII, 819; XXIX, 706
gravity of oil at, XXVIII, 819
- McCanne, R. W., GAS, 323, 341; XIV, 1015
- McCarter, W. B., GAS, 683
- McCarter, W. B., and O'Bannon, P. H., GAS, 713

- (McCart) Sugarland oil field, Fort Bend County, Texas, GC, 709, XVII, 1362
- McCarthy, Gerald R., XXIX, 83
- McCarthy Creek, California, outcrop section B, SBP, 167-194, 411
- McCarthy Creek section, CAL, 112
- McCartney, G. C., XXVIII, 117
- McCauley, C. F., MEX, x
- McCauley pool, XXVI, 1044
- McClain, A. H., STRAT, 817, 827
- McClain County, Oklahoma, Byars or Chism pool, XXIV, 1022
- McClatchey and Brown, XVI, 1263
- McCleary, T. H., XVII, 1364
- McClellan, H. J., SBP, 297
- McClellan, Hugh W., GAS, 465, 468; PROB, 321, 765, 769; SBP, 257; XVII, 173, 795; XIX, 1408
- Hunton in Kansas, XVI, 490
- review, XXV, 1410, 1412
- subsurface distribution of pre-Mississippian rocks of Kansas and Oklahoma, XIV, 1535
- McClelland, G. B., I, 28
- McCloskey, Downs, MSC, 51; XXIX, 956
- McCloskey, Downs, and Kleinpell, W. D., MSC, 50, 105, Fig. 6 (in pocket)
- McCloskey bed, XXIII, 1357
- McCloskey formation, XXV, 1122
- in Salem field, XXIII, 811
- McCloskey limestone, XXVII, 819; XXIX, 691
- in Illinois fields, XXII, 656
- of Ste. Genevieve formation productive in Basin fields in Illinois, XXIII, 1495
- of western Kentucky, productive areas in, XXIII, 1844
- porosity of, XXIII, 1369
- productive in Salem field, XXIII, 1369
- McCloskey oil-producing zone in Fredonia member, XXIV, 229
- McCloskey oolitic limestone, XXV, 1116
- McCloskey production, distribution of, XXIII, 1845
- McCloskey sand, XXI, 785; XXVII, 820; XXVIII, 740
- early production from, in Illinois, XXIII, 811
- in Illinois, Kentucky, and Indiana, XXII, 1527
- in Illinois oil fields, XXII, 74
- productive in Illinois, XXIII, 807
- recent development in Illinois with discussion of producing formations below, XXIII, 807
- McCloskey test, XXVI, 1094
- McCloskey zone, XXIII, 1367
- McCloud limestone, CAL, 63, 310
- McCloy, Samuel D., XXIV, 672
- McClung, Edwin, XXIX, 25
- McClung field, California, XXVIII, 743
- McClure, Joseph D., XXI, 34
- McClure, P. S., XXVII, 1041
- McClurkin, J. H., XI, 912
- McCluskey pool, XXIII, 848
- McColl-Frontenac Oil Company, XXVII, 45
- McCollom, C. R., and Hoots, H. W., Ralph Daniel Reed, honorary member, XXIII, 1884
- McCollom, C. R., and Templeton, R. R., Sante Fe Springs field, California, VIII, 178
- McCollough, E. H., GAS, 1082, 1083; PROB, 407, 431
- (McCollough) Kettleman Hills oil field, California, XIII, 1479
- structural influence on accumulation of petroleum in California, PROB, 735
- McCollum, Burton, XIX, 1227, 1230
- McCollum, Burton, and LaRue, Wilton W., XVII, 1499
- utilization of existing wells in seismograph work, XV, 1409
- McCollum, Burton, and Snell, F. A., XVIII, 118
- McCollum, L. F., XVII, 1293; XVIII, 1506, 1507
- some factors influencing declining rate of crude-oil discoveries—geologist's responsibilities in present situation, XXVII, 960
- McCollum, L. F., Cunningham, C. J., and Burford, S. O., PROB, 328, 354, 419
- Salt Flat oil field, Caldwell County, Texas, XIV, 1401
- McCollum earth-current meter, XVI, 1282
- McCollum Exploration Company, XXI, 947
- McComas, West Virginia (well 426), SBP, 349-379, 410
- McComb, Oklahoma (well 292), SBP, 255-285, 408
- McConnell, Duncan, XX, 828
- photography for geologists, discussion, XX, 827
- McConnell, R. G., STRAT, 286; XI, 239; XXII, 1134
- McCormack, John, and Croneis, Carey, XXVI, 1196
- McCormick anticline, XXII, 1683
- McCourt, J. H., STRAT, 327; XXIX, 1265
- McCourt, J. H., and Hupp, J. E., STRAT, 334, 337
- McCourt, W. E., XXV, 30
- McCoy and Trager, IX, 158, 163
- McCoy, Alexander Watts, PROB, 53, 54, 247, 258, 260, 269, 283, 309, 311, 363, 594, 595; SBP, 7, STRAT, 731; III, 292, 355; IV, 173; V, 40, 173; VI, 5, 43; VII, 56, 351, 352, 606, 608; VIII, 304, 699; IX, 204; XI, 112, 290, 743, 978; XII, 943; XIII, 145, 165, 308, 592, 594, 627, 637, 853, 883, 958, 1223; XIV, 25, 27, 28, 30, 57, 58, 70, 1452; XVI, 1031; XVII, 110, 143; XVIII, 572, 1062, 1316; XIX, 603; XXI, 40, 55, 1242, 1256, 1379; XXV, 20; XXIX, 1745
- brief outline of some oil-accumulation problems, X, 1015
- experimental petroleum geology, V, 466
- interpretation of local structural development in Mid-Continent areas associated with deposits of petroleum, PROB, 581
- on migration of petroleum through sedimentary rocks, II, 168
- outline of Association research program, XV, 287
- report of president for 1926, XI, 538
- report of research committee, XIII, 875; for 1929-1930, XIV, 809; for 1931, XVI, 519; for 1932, XVII, 601
- short sketch of paleogeography and historical geology of Mid-Continent oil district and its impor-
- (McCoy) tance to petroleum geology, V, 541; review of, V, 102
- soluble material in oil shale, IX, 1025
- some effects of capillarity on oil accumulation, I, 140
- symposium in Pennsylvanian and Permian stratigraphy of southwestern United States, XIII, 883
- McCoy, Alexander Watts, and Keyte, W. Ross, PROB, 313, 920; XX, 254, 292, 296, XXVII, 1183, 1189
- present interpretations of structural theory for oil and gas migration and accumulation, PROB, 253
- McCoy, Alexander Watts, and Taylor, Charles H., PROB, 618
- McCoy, Alexander Watts, Tarr, R. S., and Dorsey, G. E., arguments against David White's carbon-ratio theory, XI, 978
- McCoy, E., and Williams, F. T., XXV, 844
- McCoy formation, XXVI, 1391
- in Colorado, XIV, 1265
- McCraney limestone, XXIV, 785
- McCrate Oil Company (well 59), SBP, 87-153, 404
- McCubbin, R. J., XVII, 1241
- McCue, J. B., Price, Paul H., Hare, C. E., and Hoskins, H. A., XXIV, 487
- McCulloch County, Texas, fusulinid-bearing limestones in, XXIV, 83
- McCullum, Burton, and LaRue, Wilton W., method for detection of overhang, GC, 148
- McCurry, W. J., Survey, Texas (well 332), SBP, 292-335, 409
- McCutchin, John A., PROB, 270, 992, 995, 997, 998; STRAT, 775; XII, 765, XVIII, 24, 26, 28
- determination of geothermal gradients in Oklahoma, XIV, 535
- McDermott, Eugene, XVII, 258; XVIII, 121; XXIV, 496, 497, 499, 501, 502, 1353
- application of reflection seismograph, XVI, 1204
- application of seismography to geological problems, XV, 1311
- geochemical exploration (soil analysis) with some speculation about the genesis of oil, gas, and other mineral accumulations, XXIV, 859
- McDermott, Eugene, and Karcher, J. C., deep electrical prospecting, XIX, 64
- McDermott, Eugene, Rossaire, E. E., Fash, R. H., et al., discussion of geochemical exploration (soil analysis), XXIV, 1434
- McDonald, James A., and Diediker, Paul, MSC, 13
- McDonald, O. G., and Merritt, John W., STRAT, 437, 451; XIII, 33, 34
- McDonald, Worth W., Cotton Valley oil field, Louisiana, IX, 875
- McDonald field, V, 360
- McDonald gas field, XXIX, 980
- McDonald Island gas field, XXI, 984, 985; XXIV, 1945; XXVII, 302
- an anticlinal accumulation, XXIV, 1948
- McDonald pool, XXIX, 763
- McDonald shale, MSC, 328; XXVI, 1617
- McDougal-Segur sand, Turner Valley field, GAS, 45

- McDowell County, West Virginia (well 429), SBP, 349-379, 410
- McElmo Canyon, section showing subdivisions of Morrison formation, XXV, 1760
- McElmo dome, XXI, 1250
- McElmo formation, VI, 47, 204, 219
- McElroy beds, XXIII, 162
- McElroy field, Texas, XXV, 1049
- McElroy formation, XXI, 1427
- in Edna gas field, XXV, 112
- in vicinity of Hockley dome, amount of subsidence on, XX, 1417
- Raccoon Bend field, GC, 678, 683, 688; XVII, 1461, 1466, 1472
- Texas, GC, 480; XVII, 1303
- (Tml) (Eocene), SBP, 337, 338-349, 416
- McElroy member in Driscoll pool, GC, 626; XVII, 822
- McEvoy, J., XI, 247
- McEwen, G. F., PROB, 29; RMS, 88, 89, 104; XVII, 1521
- McFaddin Beach salt dome, Jefferson County, Texas, XXIII, 883
- foraminifera of Upper Cretaceous at, XXIII, 340
- Upper Cretaceous chalk in cap rock of, XXIII, 339
- McFaddin-O'Connor, Greta, Fox, Refugio, White Point, and Saxet fields, Texas, GC, 664; XVIII, 519
- McFaddin-O'Connor field, development of, GC, 668; XVIII, 523
- McFadyen, John, GAS, 324, 341; XIV, 1015; XXII, 1022
- McFarlan, Arthur C., GAS, 915, 924; PROB, 73; STRAT, 177, 187, XXII, 1533; XXIII, 1847; XXV, 814, 823
- Cincinnati arch and features of its development, XXIII, 1847
- geology of Kentucky, review, XXVII, 1021
- review, XXVIII, 278
- unexposed Silurian section and producing zone of Irvine oil field, Estill County, Kentucky, XXII, 1447
- McFarlan, Arthur C., and Freeman, L. B., XXIII, 1847
- McFarlan, Arthur C., and Jones, D. J., STRAT, 168; XVIII, 1128; XXII, 1447
- McFarlan, Arthur C., *et al.*, GAS, 941
- McFarlan, Arthur C., Freeman, L. B., and Nelson, V. E., Corniferous at Irvine, Estill County, Kentucky, XXVIII, 531
- McFarland, XIV, 562
- McFarland, D. F., VII, 619
- McFarland, D. F., and Cady, H. P., GAS, 1072; XI, 188
- McFarland, L. R., XIV, 1517; XXII, 1474
- McFarland, Paul W., XIII, 946; XV, 786; XVIII, 1264
- discussion of Miranda and Pettus districts, XV, 786
- East Texas field, XV, 843
- Laredo district, Texas, STR I, 389
- McFarland, R. S., XII, 765; XIII, 1095; XIX, 1540
- report of president for 1928, XIII, 543
- McGarvey, XV, 14, 15
- McGaughy, Clay, XXIV, 731
- McGee, XII, 130, 132
- McGee, D. A., XX, 1087
- McGee, D. A., and Clawson, W. W., Jr., PROB, 355, 411, 717; XXIII, 151
- (McGee) 251
- geology and development of Oklahoma City field, Oklahoma County, Oklahoma, XVI, 957
- McGee, W. J., XIII, 741; XVI, 36, 37
- McGehee, J. Rex, XIV, 1505; XVII, 1406; XX, 302, 303; XXVIII, 1528
- McGeorge, E. F., XIV, 562, 563
- McGeorge method of orienting cores, XIV, 563
- of surveying bore holes, XIII, 1147
- McGillivray, D., XXIX, 1607
- McGlamery, Winnie, XXIX, 924, 925, 927
- McGlothlin, C. I., XV, 1338
- McGlothlin, Tom, XXVII, 1410; XXIX, 817
- general geology of Mississippi, XXVIII, 29
- McGlothlin, William Claude, XXIV, 2032
- memorial of, XXVI, 1434
- McGovnev, Paul, XXVII, 1364, 1369, 1371
- McGowen, N. C., natural gas with regard to its place in national defense, XXV, 1291
- McGowen, N. C., and Rawlins, E. L., GAS, 1113
- McGrath zone, PROB, 219
- McGreer, T. H., XI, 398
- McGuigan, F. H., and Melton, Frank A., depth of base of Trinity sandstone and present attitude of the Jurassic peneplain in southern Oklahoma and southwestern Arkansas, XII, 1005
- McGuinness, M. J., XXVIII, 937
- McGuirt, XXIII, 198
- McGuirt, James H., XXVIII, 579; XXIX, 51
- McGuirt, James H., and Howe, Henry V., XXIV, 456; XXV, 275; XXVIII, 981
- McHugh, W. E., log of wildcat well, Union County, Iowa, XXIV, 1495
- McIntyre, James, XX, 36
- McIntyre well in Pecos Valley, XXI, 867
- McKamie field, XXV, 1033; XXVIII, 266
- McKanna, E. A., MEX, ix
- McKay, Alexander, X, 1228, 1233
- McKean County, Pennsylvania, Music Mountain oil pool, STRAT, 492
- McKee, XII, 993
- McKee, Edwin D., XVI, 1024; XXIV, 309, 621, 622; XXV, 438; XXVIII, 1015
- McKee, H. H., XVII, 212
- McKee, Ralph H., XIII, 317; XVII, 1231
- oil shale, review, X, 452
- McKee, Ralph H., and Lyder, E. E., XIII, 309; XVI, 1031; XVII, 1232
- McKee and Waddell sands, Simpson group, West Texas, XXVI, 279
- McKee gas field, Kentucky, XXIX, 683
- McKee sand, type section, XXVI, 281
- McKeesport field, Pennsylvania, STR II, 449; V, 83, 364
- McKelvey, V. E., and Twenhofel, W. H., sediments of fresh-water lakes, XXV, 826
- McKenzie County, North Dakota, XXVII, 1583
- McKenzie Hill formation, Gasconade fossils in, XXV, 1635
- McKenzie, W. H., Survey, GAS, 676
- McKittrick, CAL, 20, 177, 310
- Cretaceous beds outcrop at, CAL, 99
- oil seeps south of, CAL, 258, 266, 303
- McKittrick asphalt deposits, birds of, CAL, 265
- McKittrick fault zone, XIII, 210
- McKittrick formation, CAL, 235; VI, 57; XXV, 1331
- McKittrick Front anticline, PROB, 198
- McKittrick oil field, California, STR I, 18, PROB, 197, 198, 228, 747, 959-961; V, 181, 457; XI, 617
- McKittrick oil field and vicinity, Kern County, California, geology of, XVII, 1
- McKittrick Quadrangle, Kern County, California, MSC, 105
- microfossil localities of, XXVII, 1383
- McKittrick-Sunset oil region, MSC, 107
- McKittrick syncline, PROB, 198
- McKnight, A. G., Mrs, SBP, 6
- McKnight, Edwin T., XIII, 1414; XIX, 1505
- zinc and lead deposits of northern Arkansas, review, XX, 322
- McKnight, Edwin T., Baker, A. A., and Dane, C. H., PROB, 634, 658
- McKnight, Edwin T., Baker, A. A., Dobbin, C. E., and Reeside, J. B., Jr., notes on stratigraphy of Moab region, Utah, XI, 785
- McKnight formation, XXIX, 1461
- McKnight pay dolomite productive at, McKnight pool, XXIV, 128
- McKnight pool, Sand Hills area, Texas, XXIV, 128
- McLaren, XXII, 1150
- McLaren, R. L., and Van Tuyl, F. M., occurrence of oil in crystalline rocks in Colorado, XVI, 769
- McLaughlin, XIV, 562
- McLaughlin, A. C., VII, 614
- McLaughlin, Donald H., XXIX, 519
- McLaughlin, H. C., and Kendrick, Frank E., GAS, 1054
- relation of petroleum accumulation to structure, Petrolia field, Clay County, Texas, STR II, 542
- McLaughlin, Roy Parmelee, III, 370; VII, 621; VIII, 75
- accuracy of bore-hole surveying by orientation from surface, XIV, 579
- California oil fields, V, 623
- conservation of oil and gas resources in California, IV, 17
- memorial of Arthur Sidney Henley, XX, 1384
- oil land development and valuation, review, VI, 56
- regularity of decline of oil wells in California, V, 178
- review, VI, 56
- structure, V, 98
- McLaughlin, Roy Parmelee, and Colom, Roy, VII, 611
- McLean, F. H., GAS, 22
- McLean, James, Jr., XXIX, 886, 917
- McLean field, XXVII, 744
- McLeansboro formation, confusion in correlation of members of, in Illinois coal basin, XXIII, 1509
- sections showing persistent nature of limestones in, XXIII, 1510
- McLeansboro formation and coal bed No. 6, graphic section of, from Macoupin County to Cumberland County, Illinois, XXIII, 1514-1517
- McLeansboro series, XXIII, 1355
- McLeansboro succession, pattern of,

- (McLeansboro)
basis for identifying coal bed No. 6, XXIII, 1511
- McLearn, F. H., STRAT, 273, 285, 337, VI, 112, 116, 121, VII, 148; XXVIII, 1388, 1390, 1404, 1405, 1408, 1410, 1411; XIX, 156, 168, 297; XXII, 1141; XXIX, 1021, 1022, 1024, 1269
- McLearn, F. H., and Hume, G. S., stratigraphy and oil prospects of Alberta, Canada, XI, 237
- McLellan, H. J., PROB, 333
Hawkins field, Wood County, Texas, XXV, 898
- McLellan, H. J., and Wendlandt, E. A., developments in East Texas during 1939, XXIV, 1062
- McLellan, H. J., Wendlandt, E. A., and Murchison, E. A., GAS, 677; PROB, 330, 332, 639, 659, 660, 676, 780
- Boggy Creek salt dome, Anderson and Cherokee counties, Texas, XVI, 584
- McLennan, J. C., XI, 196
- McLeod, X, 462
- McLeod, Angus, III, 137; XIV, 917, XVII, 454
- McLeod, James Walter, PROB, 266
- McLester pay, XXIV, 86
- McLish formation, XXI, 1008, 1009, 1010; XXII, 1564; XXV, 654, 658, 661, 664, 665, XXIX, 191, 198
productive of gas in Jesse pool, XXII, 1561
- McLish sand in Murray County, Oklahoma, erratic mass on, XXIX, 199
- McLouth gas and oil field, Jefferson and Leavenworth counties, Kansas, XXVI, 133
- McLouth pool, XXV, 1109
- McLure caving blue shale, upper, faunules of, MSC, Fig. 14 (in pocket)
- McLure shale, CAL, 206, 310; MSC, 68, 129, 165, 200, 229, 296, 299, 319, 323, 328, 336, 344, 355; PROB, 407; SBP, 94
- Coalinga region, Fresno and Kings counties, California, CAL, 166, 242; XIV, 403
- North Belridge field, GAS, 137
- Parkfield area, faunule from, MSC, Fig. 14 (in pocket)
- Reef Ridge, CAL, 215
- Reef Ridge, faunule from, MSC, Fig. 14 (in pocket)
- McLure shale formation, XXIII, 31
- McLure Valley syncline, SC, 59; XX, 1605
- McManamy, Lyle, XXVI, 17
- McMasters, J. H., and Cushman, J. A., MSC, 243; XXIV, 1931, 1932; XXVII, 1372
- McMillan, J. M., Jr., clastic dike in Fort Hays chalk, Kansas, XV, 843
- McMillan, Robert, XXIII, 122
- McMillan pool, XXIII, 849
- McMillin, H. C., XV, 442
- McMurray, W. F., and Lewis, J. O., XVIII, 1457
- McMurray formation, FOP, 23; XIX, 158; XXV, 1455
map of part of northern Alberta showing areal distribution of, XXII, 1143
unconformable on Devonian and Silurian, XXII, 1137
- McMurray oil, theory of origin of, (McMurray)
XXII, 1146
- McMurray oil sands, Alberta, origin of, XXII, 1133
origin of, in underlying Paleozoic strata, XXII, 1145
- McMurray sands from Clearwater shales, possible derivation of oil in, XXII, 1141
- indigenous origin of oil in, XXII, 1140
- lateral migration of oil into, XXII, 1142
- residual theory of origin of oil in, XXII, 1141
- unconformable on Devonian beds, XIX, 157
- McMurtry sand, Hardin field, STRAT, 568
- McNairy-Hardin saddle, XXVII, 1041
- McNairy sand, XXII, 1646
- McNeely, Robert, XV, 409; XVIII, 1388, 1390; XXIII, 1795
- McNeil, Harold E., Wherry pool, Rice County, Kansas, STRAT, 118
- McNutt, Vachel Harry, XXIII, 1691
memorial of, XX, 842
- memorial of Guy Henry Cox, VI, 566
- McNutt pool, XXIX, 764
- McNutt zone, potash beds of, XXIII, 1691
- McPherson, Kansas, physiographic significance of loess near, XXIII, 1232
- McPherson and Harvey counties, Kansas, Nikkel pool, STRAT, 105
- McPherson County, Kansas, gas pools in, XXIV, 1795
(wells 244-256), SBP, 255-285, 407
- McPherson County field, GAS, 465, 468, 471-474, 478-480, 482
- McPherson formation, Nikkel pool, STRAT, 106
- McPherson gas field, PROB, 772
- McQueen, H. S., STRAT, 65; XV, 1103; XVII, 173, 174, 1003, 1008, 1436, 1437, 1440; XIX, 412, 1417; XX, 1086, 1087, 1106, 1120; XXIV, 1010, 1658, 1659; XXV, 1626, 1633, 2113; XXVI, 17; XXVIII, 1387
insoluble residues as guide in stratigraphic studies, review, XIV, 640
- memorial of Charles D. Gleason, XX, 382
- McQueen, H. S., and Greene, F. C., XXV, 30, 31, 46
- McRae well in Telfair County, deepest well in Georgia, XXII, 795
- McWilliams, J. R., XVI, 1024, 1026
- Meacham, Reid P., XXIII, 1836; XXIV, 1644, 1658
- Mead, Warren J., X, 297, 1264; XI, 640; XII, 507, 508, 1026; XIII, 304, 310, 358, 361; XIV, 452, 521, 634; XVII, 1229; XXVI, 1798
director of investigation on generation of oil in rocks, XIII, 303
experiments showing effects of rotational stresses, X, 296
some applications of strain ellipsoid, discussion, XIV, 231
- Mead, Warren J., and Leith, C. K., X, 1038
- Mead Oil Company, XXI, 560
- Meade, R. K., SBP, 78
- Meade, Hardin, and Breckinridge counties, Kentucky, Chester rocks of, XXII, 267
- stratigraphic section, XXII, 270
- Meagher, D. P., XXIX, 51
- Weaker pool of Tioga field, XXII, 255
- Mean, SBP, 9, 11
- Mean, arithmetic, relation of, to geometric, RMS, 573
- Mean sea-level, determination of, RMS, 128
- Mean velocities in sea, RMS, 74
- Meander anticline, XI, 125
- Meander patterns, XXIII, 1202
of Red and Mississippi rivers, XXIII, 1206
- Meandering, RMS, 164
- Meandering streams, RMS, 163; XXIII, 1199
- Means, Eldon A., XXIII, 1810; XXVI, 51
- Means, Eldon A., Morgan, Lindsey G., and Reynolds, H. D., application of X-ray crystal analysis to a problem of petroleum geology, XXI, 1333
- Means area, XXIII, 840
- Means field, XXIX, 745
- Measurement of dip angles on aerial photographs, XXVII, 1534
of geologic time, XXIII, 351
of geologic time, report of committee on, review, XIX, 302
of stratigraphic units, new technique for, XXVII, 220
- Mecatepec-Poza Rica district, Mexico, GAS, 1007; MEX, 5
- Mecca Hills, CAL, 203
- Mechanical analyses of sand samples for correlation, XXI, 1311
- Mechanical analysis, RMS, 182, 197, 209, 212, 249, 263, 264, 530, 532, 616
bibliography on, RMS, 555
effect of size of apparatus upon, RMS, 542
of Atlantic sediments, RMS, 386
of Baltic sediments, RMS, 305, 307-315
of Barataria Bay sediments, RMS, 184-193
of calcareous sediments, RMS, 286, 293
of Late-Glacial clays, in Baltic, RMS, 313
of tidal-flat deposits, RMS, 197, 199
pipette method of, RMS, 182
relation of, to clay mineralogy, RMS, 487-488
- Mechanical cohesion, RMS, 538
- Mechanical enrichment of foraminifera on ridges, RMS, 377
- Mechanical methods for excluding free gas, XXII, 1243
- Mechanical sand shaker, XXI, 1313
- Mechanical versus geological variations in drilling, XXIII, 1821
- Mechanical viscosity, RMS, 7
- Mechanics, fluid, of salt domes, GC, 79; XVIII, 1175; discussion, XVIII, 1712
of Appalachian structure, XXV, 419
of folding in Appalachians, XXV, 420
of formation of salt domes, GC, 20; XVII, 1025
of formation of salt domes, with special reference to Gulf Coast salt domes of Texas and Louisiana, XVII, 1025
of gas reservoirs, GAS, 121
of low-angle overthrust faulting as illustrated by Cumberland thrust block, Virginia, Kentucky, and Tennessee, XVIII, 1584
of salt-dome formation, experiments

- (Mechanics)
 showing, XXIX, 1652
 of salt-dome formation, recent experimental and geophysical evidence of, XXVII, 51
- Mechanics and geology, XV, 210
- Mechanism of geological undulation phenomena in general and of folding in particular, and their application to problem of roots of mountains theory, XXI, 813
- of maintenance of equilibrium in sea, RMS, 57
- of transportation, RMS, 81
- of turbulent motion, RMS, 77
- Mechanization, program of, effect on oil industry, XXV, 1264
- Mecklenburg, RMS, 332
- Medal award committee, XXVII, 878
- report of, XXVIII, 1230
- Medalist, Wallace Everett Pratt first Sidney Powers memorial, an appreciation, XXIX, 478
- Media shale, MSC, 85, 105; XXVII, 1368
- Media shale faunules from Zemorra Creek, MSC, Fig 14 (in pocket)
- Media shale member, MSC, 45, Fig 6 (in pocket)
- Median, RMS, 184, 185, 187, 564, SBP, 9, 26
- Median diameter, RMS, 178, 183-193, 208, 209, 239, 241, 249, 252-256, 264, 275, 433, 564-590
- map showing variation of, RMS, 186
- of Baltic sediments, RMS, 304-315
- of beach sediments, RMS, 209
- of sediments, RMS, 251
- of sediments in basins, RMS, 257
- of suspended particles in streams, RMS, 272
- Median grain size, RMS, 213
- Median size of beach sand, RMS, 208
- Median zone in Poland, XVII, 1085
- Medicinal properties of tidal muds, RMS, 204
- Medicine Bow anticline, Carbon County, Wyoming, XXI, 993; XXVII, 448
- Medicine Bow dome, XXVII, 436
- Medicine Bow field, Carbon County, Wyoming, XXII, 688; XXIII, 921
- Medicine Bow Mountains, Sundance formation in, XXI, 743
- Medicine Bow Oil and Gas Company, XXI, 995
- Medicine Bow Oil Company, XXII, 686
- Medicine Bow oil field, Sundance water in, XXIV, 1277, 1298
- Medicine Bow structure, XXIII, 927
- Medicine Hat, Alberta, VII, 156
- Medicine Hat field, GAS, 2, 25, 28, 30, 36, 38
- Medicine Hat sand, GAS, 22-24
- Medicine Lodge gas field, Kansas, GAS, 469, 478
- contours on top of Mississippi limestone, XXIV, 1790
- Medicine Lodge gypsum, II, 74, 114; XVIII, 1301; XXI, 1524; XXIII, 1795; XXVI, 232
- makes best Keenes cement, XXIII, 1797
- Nescatunga gypsum, Shimer gypsum, and Dog Creek shale, in Comanche County, Kansas, view showing, XXIII, 1801
- Medicine Lodge gypsum and dolomite, Canadian, Caddo, and Washita counties, XXI, 1516
- Medina (Silurian) formation in New York, XXII, 79
- Medina and Trenton of western New York, XXII, 79
- Medina area in Chautauqua, Cattaraugus, Erie, and Niagara counties, New York, XXIX, 670
- Medina-Cataract formation, GAS, 63
- Medina fields in New York, GAS, 985
- Medina formation in Ohio, GAS, 908
- well data for subsurface map of, XXII, 85, 86
- Medina gas fields, XXII, 87
- distribution of, by counties, in New York, XXII, 82
- Medina gas production, XXVIII, 723
- Medina Gray band, XXII, 81
- Medina group in Ohio, XXIV, 679
- (Sm) (Ordovician and Silurian), SBP, 351, 355, 357-379, 415
- Medina sand, XXVIII, 723
- Medina sandstone, PROB, 505, RMS, 215; V, 359, XXIX, 667
- gas in, in New York oil fields, STR II, 286
- productive of gas in southwestern Pennsylvania, XXV, 1141
- Medina sandstones in New York fields, GAS, 952, 985
- Medina series, XXV, 816
- Medina subdivisions, XXII, 80
- Medinan group, Big Sinking field, STRAT, 179
- Mediterranean, CAL, 67, 301, 302; PROB, 30
- Mediterranean, Red, Black, and Caspian seas and Persian Gulf, petroleum resources in environs of, XXVIII, 1508
- Mediterranean and Ponto-Caspian types of oil deposits, XVIII, 760
- Mediterranean-Antillean connections, CD, 121
- Mediterranean basin probably rich in petroleum, XXVIII, 1504
- Mediterranean belt of mountains, latitude not explained, CD, 193
- Mediterranean-Near East area, oil producing districts in, XXV, 360
- Mediterranean Sea, RMS, 90, 94, 95, 101, 143, 332, 365
- Mediterranean seas, persistent intercontinental, XXVIII, 1508
- Mediterranean stages, MSC, 180
- Mediterranean type of oil-bearing basin, XVIII, 776
- Medora section of Tertiary of Dakota basin, XXVII, 1574
- Meek, XXI, 717; XXIV, 1128
- Meek, Charles E., II, 71; XIV, 413
- genesis of a sandstone dyke as indicated by heavy minerals, XII, 271
- Meek, F. B., XXIV, 299
- Meek, F. B., and Hayden, F. V., STRAT, 21; V, 21; XIII, 884; XV, 1251; XX, 1190; XXIV, 299; XXIX, 1607
- Meeks, W. R., XXI, 1534
- Meers quartzite, oldest rock in Oklahoma, XXV, 1624
- oldest rock in Wichita Mountains, XXV, 288
- Mega fauna of California, changes in, caused by epirogenic control inaugurating the Vaqueros, Temblor, and Monterey stages, XXV, 238
- Mega fauna, Cebada and Graciosa, XXVII, 1357
- Mega fossil horizon in Eocene sections, SC, 20, 21; XX, 1556, 1567
- Mega fossil localities in Santa Barbara County, California, XXVII, 16
- Tumey sandstone, in Fresno County, California, XXVIII, 972
- Mega fossil of Foxen mudstone, XXVII, 1355
- of Temblor formation of Monocline Ridge, checklist of, XXVIII, 965
- of Tumey sandstone, checklist of, XXVIII, 963
- of Upper Temporal formation from Guayabal, MEX, 114
- photography of, XXIX, 1494
- Meganos, SC, 17, 66; XX, 1563, 1612
- Meganos and Domengine formations, CAL, 139
- Meganos formation, CAL, 103, 127, 138, 311
- as stage of Tejon series, CAL, 123, 137, 141
- correlation, CAL, 303
- Domengine unconformable with, CAL, 139
- faunally distinct from Martinez, CAL, 138
- fossils in limestone from, CAL, 130
- humid period, CAL, 114
- Kreyenhagen and Tejon of Capistrano younger than, CAL, 144
- name proposed by Clark, CAL, 137
- north of Coalinga, CAL, 123, 138
- plant-bearing beds in, CAL, 134
- proportion of gastropods to pelecypods in, CAL, 140
- section by Reinhart, CAL, 139
- Sierra Blanca limestone same age as, CAL, 131
- type locality of, CAL, 137, 138
- Meganos group, MSC, 162
- Meganos shales, PROB, 189
- Megargel field, Archer County, Texas, STR I, 434
- Megascopic geochemical prospecting, XXIV, 1401
- Megatectonic force of Chamberlin, CD, 172
- Mehl, Maurice G., XII, 201; I, 6; IV, 93; X, 1067; XIII, 157; XVI, 642; XIX, 1114
- Mehl, Maurice G., and Branson, E. B., XX, 1334; XXIV, 777, 779
- Mehmel, Martin, RMS, 383, 457, 468, 469, 603, 625-628
- application of X-ray methods to investigation of recent sediments, RMS, 616
- Meier, A. E., RMS, 486
- Meier, J. Lawrence, and Griley, H. L., XXVIII, 1622
- Meigen, W., MEX, 207
- Meigs County, Ohio, structure of Berea sand in, STR I, 131
- Meinardus, W., RMS, 498
- Meine, XIV, 566
- Meine method for orienting cores, XIV, 566
- Meineke well in Bammel field, cratering action around, XXIX, 262
- Meinesz, Vening, measurements of gravity at sea, CD, 19, 202
- Meins, Ed., XVII, 823
- Meinzer, Oscar E., PROB, 813; VIII, 720; X, 1041; XIII, 938, 940; XIV, 8; XVI, 337; XVII, 475; XIX, 323, 324; XXVI, 85, 87, 97; XXVII, 1081; XXVIII, 1032; XXIX, 25, 72, 254, 1171
- definition of aquifer, GC, 277
- editor, hydrology, review, XXVI, 1538

- (Meinzer)
 movements of ground water, XX, 704
 review, XXII, 490
- Meinzer, Oscar E., and Hard, Herbert A., XI, 740
- Meinzer, Oscar E., Renick, B. C., and Bryan, Kirk, XXI, 860; XXIV, 48
- Mekel, J. A. A., MEX, ix
- Mekler burner, SBP, 62
- Meland, Norman, VIII, 335, XXIII, 564
- Meland, Norman, and Reed, R. D., IX, 626, 630; XXI, 1543; XXIII, 564, 568, 574, 1806
- Melanite, RMS, 602
- Melawi River Basin, Borneo, XXVIII, 1448
- Melcher, Arles Francis, GAS, vi, 618, 850; STR I, 225; IX, 202; X, 931, 937, 1046, 1052; XI, 983, 1053; XIII, 681; XIV, 2, 5, 1337, 1342, 1345; XVI, 380; XVIII, 202, 349, 353
- apparatus for determining absorption and permeability of oil and gas sands for certain liquids and gases under pressure, IX, 442
- investigations on permeability and absorption of "sands" for oil, water, and gas, with reference to their normal and possible yield, VI, 143
- memorial of, XVIII, 560
- profile showing porosity of Bradford sand in Bradford field, Pennsylvania and New York, STR II, 430
- review, XII, 680
- texture of oil sands with relation to production of oil, VIII, 716
- Melcher's method for determining porosity, X, 937; XXV, 1842
- Melcher's paraffine method and Jolly balance-mercury method, comparison of volumes determined by, XIV, 5
- Meletta beds, Europe, VI, 526
- Melhase, John, constructing geologic sections with unequal scales, XI, 755
- Melikoff, A. A., summary of methods of exploration for new oil fields in Azerbaidjan, review, XIX, 1826
- Mellen, F. P., XXVIII, 53, 1342
- Mellen, W. P., XV, 1265
- Mellen, W. P., and Rohwer, F. W., stratigraphy of Spring Coulee well, supplementary paper, ALTA, 151; XV, 1279
- Mellor, XII, 88
- Mellor, J. W., GAS, 1072
- Meloche, V. W., XXV, 846
- Melon Creek field, XXIII, 867, 868
- Melsheimer, Albert, XXIX, 51
- Melting point, CD, 21, 22
- of dry silica rock, CD, 32
- of silicates, CD, 22
- Melton, A., Survey, Texas (well 341), SBP, 292-335, 409
- Melton, Frank A., STRAT, 100; XII, 1069; XIV, 758, 766, 1226; XV, 994, 1007, 1022; XVII, 110, 922, 974; XVIII, 1008; XIX, 1002; XXIV, 735; XXVI, 1016, 1395
- age of Ouachita orogeny and its tectonic effects, XIV, 57
- preliminary observations on geological use of aerial photographs, XXIX, 1756
- time-equivalent *versus* lithologic extension of formations, discussion, XVI, 1039, 1044
- Melton, Frank A., and Hubbert, M. K., gravity anomalies and petroleum exploration by gravitational pendulum, XII, 889
- Melton, Frank A., and McGuigan, F. H., depth of base of Trinity sandstone and present attitude of the Jurassic peneplain in southern Oklahoma and southwestern Arkansas, XII, 1005
- Member, definition, XXIII, 1074, 1081
- Memorandum to members of National Service Committee, XXVI, 1310
- Memorial of George Irving Adams, XVII, 103
- of George Whitney Adams, XIV, 1373
- of Noah C. Adams, XI, 779
- of Harry Aid, XI, 439
- of John Mandeville Alden, XXI, 1370
- of Alex M. Alexander, XIX, 147
- of Gustavus Edwin Anderson, XXIV, 1854
- of Harry Mayo Andreen, XVII, 1401
- of Irving V. Augur, XIV, 681
- of Donald Clinton Barton, XXIII, 1888; XXIV, 1521
- of Mowry Bates, XI, 107
- of Clyde M. Becker, XXII, 1621
- of Joshua William Beede, XXIV, 1855
- of Clyde M. Bennett, XIX, 1715
- of Ivan Vincent Bentz, XXII, 1127
- of Edwin Binney, Jr., XIII, 295
- of François Biraud, XXI, 138
- of Frank Shackelford Boggs, Jr., XXVII, 1029
- of Conrad K. Bontz, XII, 231
- of R. R. Brandenthaler, XIV, 256
- of Carl St. John Bremner, XXIX, 120
- of Charles Brewer, Jr., XXVIII, 1553
- of Henry Andrew Buehler, XXVIII, 1240
- of James Walker Cain, Jr., XXVI, 516
- of Marius R. Campbell, XXV, 546
- of Frank Carney, XIX, 761
- of Charles Theodore Casebeer, XXV, 1831
- of Samuel Jefferson Caudill, XX, 118
- of Cecil Lamar Chatman, XXIII, 115
- of Charles Albert Cheney, XXI, 1617
- of Jerome Archibald Chevalier, XXIV, 2060
- of Frederick Gardner Clapp, XXIX, 402
- of Carl W. Clarke, XIII, 93
- of Melvin J. Collins, XX, 841
- of Lewis Samuel Coryell, XXVII, 105
- of Maree Cummings, XXVI, 1855
- of Robert Hamilton Cuyler, XXVIII, 1233
- of Charles Laurence Dake, XIX, 144
- of Salvador Ortiz Davila, XVI, 330
- of Jesse Homer Derden, XXVIII, 1668
- of Roy Ernest Dickerson, XXVIII, 888
- of Noah Fields Drake, XXIX, 1794
- of Edwin Theodore Dumble, XI, 439
- of Arthur W. Duston, XXII, 511
- of Arthur Eaton, VII, 461
- of Hugh Moore Eley, XXVI, 1550
- of Josef Theodor Erb, XIX, 309
- of Nolan Anthony Fanguy, XXVI, 1854
- of Linn Markley Farish, XXVIII, 1783; XXIX, 1530
- of D. D. Finley, XI, 440
- (Memorial)
 of Otto Fischer, XXVII, 1283
- of John Fitts, XXVI, 1548
- of Corbin Drummond Fletcher, XV, 859
- of Donald Alexander Fullerton, XXVII, 240
- of Marion Harbin Funk, XXIX, 1216
- of William G. Gallagher, Jr., XVII, 345
- of Edgar Wayne Galliher, XXIX, 1680
- of Thomas Moir Gardiner, Jr., XV, 723
- of Lovic Pierce Garrett, XXVIII, 1064
- of Tracy Gillette, XXVII, 238
- of Charles D. Gleason, XX, 382
- of Harold Beach Goodrich, XXIX, 1675
- of Ivan Mikhailovitch Goubkin, XXIII, 1283
- of David H. Graham, XXVIII, 1556
- of William Armstrong Patterson Graham, XIX, 1082
- of Ulysses S. Grant, XVII, 206
- of Lee Hager, XXVIII, 1666
- of George Martin Hall, XXV, 1828
- of Henry L. Hamilton, X, 358
- of Chester A. Hammill, XXVI, 1173
- of Howard Walter Handley, XXV, 184
- of Thomas Kennerly Harnsberger, XVIII, 1554
- of William Peter Haseman, XVI, 527
- of Erasmus Haworth, XVII, 343
- of Bryan Hendon, X, 1188
- of Gerhard Henny, XXIX, 246
- of Curtis J. Hesse, XXIX, 1219
- of Daniel Franklin Higgins, Jr., XIV, 819
- of Robert Thomas Hill, XXV, 2221
- of Hans von Hbfer, VIII, 534
- of Lozell Charles Hookway, XXIII, 272
- of James Earl Hoover, XVIII, 430
- of Edwin Butcher Hopkins, XXIV, 1851
- of Baker Hoskins, Jr., XXV, 2228
- of James V. Howe, X, 1188
- of Carl Bernard Hummel, VII, 715
- of Charles Stirling Huntley, X, 1322
- of Eugene Law Ickes, XXV, 1962
- of Kenneth Allen Johnston, XXVII, 104
- of J. Claude Jones, XVI, 623
- of Fred Hall Kay, XXVII, 1561
- of William Weaver Keeler, XXVII, 565
- of Arthur Keith, XXVIII, 1553
- of James Furman Kemp, XI, 221
- of Wilson Keyes, XX, 1272
- of Ivy Allen Keyte, XV, 985
- of Jack Joseph King, XIII, 405
- of John Franklin Kinkel, XXI, 691
- of Charles Townsend Kirk, XXIX, 1222
- of Howard Walde Kitson, XVI, 115
- of George Alfred Kroenlein, XXIV, 1521
- of Merrill Evans Lake, XXIII, 115
- of Frank Parkes Latimer, XIII, 1237
- of Otto Leatherock, XXV, 2101
- of Ephraim Noble Lowe, XVIII, 428
- of Charles T. Lupton, XX, 513
- of George C. Martin, XXVII, 1280
- of George Charlton Matson, XXIV, 606

(Memorial)

- of William Claude McGlothlin, XXVI, 1434
 of John Walter McKim, XII, 459
 of Vachel Harry McNutt, XX, 842
 of Arles Francis Melcher, XVIII, 560
 of Roy J. Metcalf, XXVI, 1175
 of Kingsley Camden Mitchell, XV, 1303
 of Curtis Hall Montgomery, XXVIII, 690
 of Glenn Beckley Morgan, IX, 1220
 of Paul Franklin Morse, XIII, 1501
 of John Malcolm Muir, XXII, 509
 of Thurman H. Myers, XXV, 347
 of Henry Arthur Nedom, XXIV, 1150
 of Warner Wilson Newby, XI, 109
 of Donald Frost Newell, XXIX, 1368
 of Edward Dana Nolan, XI, 221
 of Jorgen O. Nomland, XXVII, 1030
 of Herbert George Officer, XXI, 972
 of Thomas Hartman Olds, XVI, 435
 of William Warren Orcutt, XXVI, 1306
 of Henry Jessup Packard, XV, 106
 of Louis Samuel Panity, XXVII, 1399
 of Leon J. Pepperberg, XXI, 970
 of Eldridge Douglas Phillips, XVI, 327
 of Rudolf R. Pollok, XIII, 1237
 of Sidney Powers, XVII, 325, 328
 of Henry Hart Pratley, XXV, 1962
 of Thomas Mann Prettyman, XXV, 346
 of Franklin S. Prout, XXIV, 944
 of L. G. Putnam, XX, 996
 of Ralph Daniel Reed, XXIV, 1152
 of William McCormick Reid, XXVII, 1031
 of Allan Eugene Reiff, XVII, 1156
 of John W. Reiss, XXVII, 1279
 of Roy A. Reynolds, XXVII, 1169
 of George L. Richards, Jr., XXVIII, 889
 of Bertrand S. Ridgeway, XXVI, 1172
 of Samuel W. Riter, XXV, 2100
 of John R. Roberts, XVIII, 277
 of Morgan Evan Roberts, XXVI, 513
 of Paul Vere Roundy, XXI, 1368
 of Russel Fossler Ryan, XX, 240
 of Rollin D. Salisbury, VI, 563
 of Roger W. Sawyer, XXV, 1610
 of Conrad Schlumberger, XX, 997
 of Maurice B. Schmittow, XIV, 255
 of Charles Ross Schroyer, XVI, 712
 of Charles Schuchert, XXVII, 1027
 of Walter Winthrop Scott, XXIV, 944
 of Julius Segall, XIII, 295
 of D. Bruce Seymour, XVIII, 1222
 of Eugene Wesley Shaw, XX, 239
 of Edwin Martin Shepard, XIX, 142
 of Theodore C. Sherwood, Jr., XII, 593
 of Cecil Earl Shoenfelt, XXVIII, 1413
 of Jesse Elmore Simmons, XXV, 1610
 of Ewart Gladstone Sinclair, XI, 1348
 of James Donaldson Sisler, XIX, 1717
 of Frank Morse Smith, XII, 687
 of George Otis Smith, XXVIII, 683
 of John Young Snyder, XXIII, 454
 of Dale Darrell Dolsun Sparks, XXII, 627
 of M. Wood Stanley, XIII, 1089
 of Eric A. Starke, XVIII, 967

(Memorial)

- of J. Lauer Stauff, XVIII, 715
 of George Steiner, XV, 105
 of Reichie S. Stelfox, XVII, 1021
 of William C. Steubing, XXVIII, 693
 of Philip Charteris Ansthruther Stewart, VII, 321
 of Irving McKay Streeter, XVIII, 277
 of Otto Stutzer, XXI, 139
 of Karl Sunberg, XXIII, 1282
 of Joseph Alexander Taff, XXVIII, 1236
 of William Arthur Tarr, XXIV, 200
 of Eugene Crittenden Templeton, XVII, 752
 of Jean Cleveland Thompson, XIII, 296
 of Arthur Jerrold Tieje, XXVIII, 686
 of Frederick Bevan Tough, XI, 109
 of Johan August Udden, XVI, 328
 of Edward Oscar Ulrich, XXVIII, 687
 of Willem A. J. M. van Waterschoot van der Gracht, XXVIII, 1066
 of Arthur Clifford Veatch, XXIII, 621
 of Ion Popescu-Voitești, XXIX, 1221
 of Ed Dickinson Wappler, XXI, 543
 of Freeman Ward, XXVIII, 692
 of Arthur Albert Wedel, XXV, 2230
 of Laura Lee Weinzierl, XIII, 94
 of Stuart Weller, XI, 1347
 of David White, XIX, 925, 931
 of Israel Charles White, XII, 339
 of Robert Brooks Whitehead, XX, 1270
 of Charles Edwin Whiteside, XII, 785
 of Robert Massie Whiteside, XXI, 287
 of Ira Abraham Williams, XVIII, 967
 of Harry H. Wilson, XIII, 1238
 of Dean Eddy Winchester, XXI, 135
 of Edward Virgil Winterer, XXVIII, 694
 of Harry Favill Wright, XXVIII, 1063
 of Lloyd Irvin Yeager, XXII, 1127
 Memorial medal award, Sidney Powers, presentation of first, XXIX, 477
 Memorial shale, XXVII, 633
 of Pennsylvania age in Oklahoma, XXV, 1591
 section of, near Memorial Park Cemetery, XXV, 1595
 Memorials, XXIV, 1160
 Memories, some, of a paleontologist, XXIII, 1861
 Memphis Natural Gas Company, GAS, 772
 Mena, XVI, 445
 Menard River, RMS, 225
 Menard County, eastern, Canyon deposits progressively overlapping earlier Carboniferous and Ordovician beds on Concho arch in, XXIV, 109
 Menard formation, XXIV, 213; XXV, 875
 Menard limestone, XXII, 280; XXIII, 1355, 1367; XXIV, 838; XXV, 874
 in Kentucky, XXII, 281
 Mendeleev, D. J., XXIV, 498; XXIX, 1739
 Mendenhall, W. C., CAL, 68; GAS, 221; VII, 618; XIII, 594; XVI, 259, 340, 350, 352, 357; XVIII, 1455, 1456; XIX, 1537
 biographical sketch of, XIX, 922

(Mendenhall)

- discussion of Fredericksburg group in Texas, XIX, 1537
 oil possibilities of area northeast of Petaluma, Sonoma County, California, XI, 425
 Méndez formation, MEX, 20, 21, 25, 26, 32, 33, 35, 57-59, 68-77, 85, 88, 91, 108, 111, 119, 164, 180, 182, 186, 189, 194, 195, 203, 235, Figs 10, 12 (in pocket); PROB, 382, 392, 394, 397
 Aguada, MEX, 235
 Arroya Membral, MEX, 70, 111
 Barcodón, MEX, 235
 between Valles and Tamazunchale, MEX, 88
 Cacalilao, MEX, 72
 condensed section, MEX, 74
 Garrucho pool, MEX, 186
 La Borrega Cañon, MEX, 25, 26, 70
 Las Flores, MEX, 71
 limestone in, at Ebano, MEX, 75
 Mexico, X, 681
 Mulato, MEX, 85, 92, 109
 Naranjo, MEX, 235
 near Crucero, MEX, 88
 Northern fields, thickness of, MEX, 69, 75
 Tamesí contact with, MEX, 76, 82, 83, 85, 90, 186, 197
 Tancasneque, MEX, 76
 Tancoco pool, MEX, 188, 189
 typical exposure in Chocoy, MEX, 69
 Méndez marl, II, 359, VI, 91
 Méndez red shales faulted against El Abra limestone, MEX, 161
 faulted against El Abra limestone, Taninul Cave, MEX, 71
 Méndez redbeds, MEX, 82
 Méndez-San Felipe transition zone, MEX, 188
 Méndez section, Pánuco area, thickness of, MEX, 75
 Méndez shales, MEX, opp. 44, 160, 193; PROB, 393, 396; XIV, 78; XXVIII, 1139, 1145, 1147, 1149, 1150
 Cacalilao area, MEX, 70, 183
 Cárdenas-Canoas section, MEX, 73
 correlation with Brownstown marl of Arkansas, MEX, 72
 indurated, MEX, 71, 195
 near Rayón, MEX, 73
 oil production in, at Ebano, MEX, 194
 rudistids in, MEX, 71, 72
 Sierra Madre Oriental, MEX, 70
 Sierra Tamaulipas, MEX, 70
 thickness of, MEX, 69
 Topila district, MEX, 75
 Valles area, MEX, 70
 Méndez-Tamesí hiatus, MEX, 82, 90, 91, 97
 Mendicant Islands, Louisiana, RMS, 188, 192
 Mendocino Coast, MSC, 73, 77, 109, 111, 184, 185, 187, 188, 191, 193, 197, 203, 205, 210, 215-218, 220, 222, 224, 226, 229, 240, 242, 244, 246, 252, 253, 256, 259, 260, 276, 292-295, 302, 317-319, 321, 322, 329, 332, 338, 343, 344, 346, 352, 355
 Mendocino County, MSC, 321
 Mendocino County coast, check list of foraminifera from, MSC, 76
 Mendoza, Argentina, Tupungato oil field, XXVIII, 1455

- (Mendoza)
map of areal geology of part of, XXVIII, 1461
northern, correlations of pre-Tertiary section between oil fields of, XXVIII, 1464
Mendoza district, XXIX, 499
Mendoza oil fields, XXIX, 499
Mendoza Province, Argentina, oil seepages and oil production associated with volcanic plugs in, XVI, 819
petroliferous belt of central-western, XI, 261
southwestern, geology of, XII, 693
Mene Grande field, Venezuela, XIII, 1188; XXIII, 959
Menefee sand, IV, 307; XXVIII, 203, 207
Menig, Carl, GAS, 511
Menilite series, XXI, 1190
Menilite slates, XXI, 1185
Europe, VI, 526
Menilitic shales in Carpathian Mountains, XV, 5, 21
Menken, F. A., Eocene exploration in California, XXIV, 1940
Strand oil field, Kern County, California, XXIV, 1333
Menken, F. A., and Leach, C. E., overturned plunge on overturned folds in Sespe-Piru Creek district, California, XVI, 209
Mentor beds, II, 79
Mentor sandstone, Kansas, X, 556
Mentzel, Hans, XXIV, 1757
Menudillo, MEX, 164, 185
Menzies, A., XXIV, 1552, 1572
Meotian sands productive in Baco-Tintea field, Roumania, XXIII, 960
Meramec cephalopod fauna, XXIX, 1148
Meramec-Chester relations, XXIV, 819
Meramec group, XXIII, 1357, 1366; XXV, 1655
Big Sinking field, STRAT, 180
central Tennessee, XX, 1075
in east-central United States, XXII, 1527
in Mississippian of Eastern Interior basin, XXIV, 811
productive in Salem field, XXIII, 1368
Meramec limestone, XXIV, 2011
productive of oil in Illinois, XXIV, 853
Meramec-Osage relations, XXIV, 808
Meramec paleontology, XXIV, 817
Meramec pool, V, 135
Meramec sedimentation, XXIV, 817
Meramec series, XXIX, 135, 137
Meramecian and Chesterian in Oklahoma, XI, 1315
Merauke sector or South Coast, New Guinea, XXVIII, 1452
Mercalli scale, XXVI, 1808
Merced formation, CAL, 36, 232, 233, 245, 246, 248, 311
Merced River, CAL, 16
Mercedes fault zone, XXIX, 1127
Mercedes field, Hidalgo County, Texas, discovery of oil and gas in, XIX, 1226
Merchant pool, XXIII, 1021
Mercuric chloride for preserving sediments, RMS, 419, 528
Mercury, SBP, 36
use of, for determination of volume of rock specimens in Russell porosity
- (Mercury)
apparatus, XIII, 677
Mercury field, XXVII, 730
Mereure formation, XXIX, 525
coal beds in, XXVIII, 15
Eocene foraminifera in, XXVIII, 18
fossils of, XXVIII, 18
lenticular limestone in, XXVIII, 17
Meredith, E. D., XIX, 691
Meredith, J. P., Survey, Texas (well 350), SBP, 292-335, 409
Meredith, Wynn, XXV, 1874
Meres, M. W., XXII, 1242
Meres, M. W., and Muskat, M., XXII, 1242
Meretta, RMS, 448
Meridian area, Lauderdale County, Mississippi, XVI, 491
Meridian sand, XXVIII, 55
age of, XXIX, 67
Meridional stereographic net, XXII, 1263, 1267
Merigale field, Wood County, Texas, XXIX, 1779
Merista bed, XXVI, 15, 16
Merkel field, XXVI, 1046
gravity of oil at, XXVI, 1046
Merken, M., XVIII, 1168
Merkle dolomite, I, 93, 97, 98
Noodle Creek pool, STRAT, 702
Merriam, XV, 374; XXVII, 192
Merriam, Charles, MSC, 24; XIX, 1200; XXVII, 2, 299; XXVIII, 503, 508, 516
Merriam, Charles, and Turner, F. E., XXIV, 1743
Merriam, John C., CAL, 25, 70, 156, 181, 182, 184, 212, 221, 222, 250, 257, 264, 265, 266; MSC, 70, 152; SC, 15, 43; VII, 417, 612; VIII, 70; X, 130, 133; XII, 133; XIII, 224; XVII, 81, 84, 1171; XVIII, 493; XIX, 524, 525, 527, 1068; XX, 1561, 1589
Merrill, F. J. H., XXI, 1586
Merrill, G. P., VIII, 720; XXIV, 299
Merriman, Mansfield, XVI, 1239; XIX, 845, 846, 848
Merrin, A. H., letter on exploration for oil in Australia, VIII, 244
Merritt, X, 1282; XXIX, 1074
Merritt, C. A., XIII, 1477; XVIII, 1297, 1303; XX, 1086, 1087, 1089; XXIII, 1094
Merritt, C. A., and Anderson, G. E., volume relations in open-space replacements, XXI, 1486
Merritt, C. A., and Decker, Charles E., PROB, 764; XIV, 1508; XXII, 1563
Merritt, C. A., and Ham, W. E., XXV, 1624
pre-Cambrian zeolite-opal sediments in Wichita Mountains, Oklahoma, XXV, 287
Merritt, C. A., and Minton, J. W., XVII, 245, 246
dolomites of Stillwater, Wellington, Garber, Hennessy, and Duncan formations, review, XV, 479
Merritt, John Wesley, V, 471; XXIV, 1353, 1459
Pennsylvanian sedimentation around Healdton Island, IV, 47
structure of western Chaves County, New Mexico, IV, 53
Merritt, John Wesley, and McDonald, O. G., STRAT, 437, 451; XIII, 33, 34
Merryman well located on a structural
- (Merryman)
high on coal No. 6, XXI, 785
Merten, XIV, 186, 190
Mertie, John B., XIII, 825, 827; XXII, 1260, 1261
Mertie, John B., Jr., XVIII, 1438; XXIII, 663
calculation of stratigraphic thickness in parallel folds, XXVIII, 1376
Mertie's solution to problem of two tilts, XXIII, 663
Merutiu, V., SD, 112; IX, 1190
Merutz, V., SD, 141
Mervine, Ponca, Blackwell and South Blackwell fields, Oklahoma, STR I, 162
Mervine anticline, PROB, 301
Mervine field, Oklahoma, STR I, 162
buried hills an important accumulation factor in Burbank sand of, STR II, 679
Mervine pool, PROB, 775
Merwin, H. E., RMS, 285, 624
Merwin, H. E., and Goldman, Marcus I., XIX, 974
color chart of committee on sedimentation of National Research Council, IX, 1018
Merwin, H. E., and Posnjak, Eugen, XII, 906
Merwin, H. E., Johnston, John, and Williamson, E. D., XXII, 1368, 1375
Merychippus fauna, SC, 40; XX, 1586
Merychippus mammalian fauna, MSC, 175
Merychippus zone, MSC, 70, 155, 156, 176; XIII, 224
Mesa Cartujanos, MEX, 21
Mesa de Solis, Mexico, MEX, 55, 56, 159; IX, 102
Mesa del Lobos, asphalt seepages from joints in syenitic rock, MEX, 152
Mesa fault, CAL, 51
Mesa formation, XXVI, 795, 812, 821; XXVIII, 25; XXIX, 1104
fossils in, XXVIII, 25
type locality, XXVI, 821, 822
Mesa Grande, CAL, 22, 255
Mesaverde, Hygiene, and Judith River formations of upper sandstone tongue of Upper Cretaceous in Rocky Mountain area, map showing, XXI, 909
Mesaverde formation, GAS, 369; I, 151; IV, 108; V, 204; VI, 204, 222, XXI, 995; XXII, 686, 1023; XXV, 138
in northwestern Colorado, STR II, 97 (Kmv) (Cretaceous), SBP, 193, 197-243, 414
Lost Soldier district, Wyoming, STR II, 647
Rock River field, Wyoming, STR II, 616
Mesaverde formation waters, XXIV, 1312, 1319
Mesaverde sandstone, PROB, 171, 172; XXV, 1841, 1857
Mesaverde sub-group of northwest Colorado, XXII, 1028
Mesaverde zone, XXIX, 1597
Mesler, R. D., XI, 447, 450; XXIV, 1653
Meson formation, MEX, 33, 35, 97, 107, 108, 132-137, 181, Figs. 10, 12 (in pocket)
difficulty of correlation of, MEX, 136
equivalent to Antigua formation, MEX, 132

(Mesón)

- equivalent to Glendon formation, MEX, 132
 in Juan Casano, MEX, 212
 in Tepetate, MEX, 212
 type locality of, MEX, 132
 Mesón sandstones, MEX, 179, 202
 Mesón time, crustal movements during, MEX, 136
 Mesozoic, CAL, 5, 13, 15, 25, 34, 36, 59, 60, 93, 94, 112, 166, 192, 225, 233, 254, 255, 276, 278, MSC, 109, 114, 119, 127; PROB, 737; RMS, 154, 242
 Alberta, VII, 157
 Alberta, regressive deposits of, GAS, 19
 Antillean-Caribbean region, XXIV, 1578
 California, Knoxville series in, XXI, 1344
 climate generally warm, CD, 64
 Colombia, XXIX, 1077
 East Indies, XXII, 8
 helium and nitrogen in, in Europe, 1060
 in subsurface in Mid-Continent, XXV, 1696
 Lower, SC, 4, 5, 7, 107, XX, 1550, 1551, 1553, 1653
 Mid-Continent, references on, XXV, 1705
 New Mexico, IV, 95
 Schuler field, XXVI, 1473
 South Dakota, VI, 552
 southern Arkansas, XXII, 956
 time of opening of present Atlantic rift, CD, 39
 trans-Pecos Texas, XIX, 236
 West Texas, PTNM, 615; XXVI, 615
 Mesozoic and late Paleozoic stratigraphy of Rocky Mountain region, Ancestral Rockies and, XVII, 109
 Mesozoic and Paleozoic, oscillations during, in St. George district, Utah, XXIII, 124
 Mesozoic and Paleozoic gas-bearing rocks, GAS, 17
 Mesozoic and Tertiary rocks of coastal region of northeastern Brazil, down-faulted nature of, favorable for oil accumulation, XXIX, 549
 Mesozoic epigeny, SC, 6; XX, 1552
 Mesozoic era, Mississippi, XXVIII, 33
 orogenic disturbances at close, SC, 18; XX, 1564
 Mesozoic formations, SC, 55; XX, 1601
 Caliente Mountain district, SC, 79; XX, 1625
 Mesozoic geosynclinal basins altered to folded areas of uplift during Cretaceous, SC, 13; XX, 1559
 Mesozoic geosynclines, XIX, 1809; XXVII, 218
 Mesozoic history, East Indies areas differing in, XXII, 24
 of East Indies, XXII, 22
 Mesozoic hogbacks, XXV, 144
 Mesozoic horizons, pre-Trinity, XXVII, 1229
 Mesozoic land areas, XXVIII, 302
 Mesozoic metamorphic rocks, MSC, 119, 127, 135
 Mesozoic paleogeography, MEX, 92
 Mesozoic production in Turner Valley gas and oil field, GAS, 39
 Mesozoic rocks in Mid-Continent, XXV, 1687
 in Mid-Continent, distribution of, XXV, 1688

(Mesozoic)

- on west side of Sacramento Valley, California, preliminary study of source beds in late, XVIII, 1346
 subdivisions, nomenclature, and correlations of, XXV, 1689
 Mesozoic sediments (See also under systemic names)
 California, SBP, 130-153
 California outcrop samples, SBP, 167-194
 East Texas, SBP, 292-335
 Gulf Coast, SBP, 335-349
 organic content, SBP, 28-35
 Rocky Mountains, SBP, 194-243
 Rocky Mountains outcrop samples, SBP, 243-255
 West Texas, SBP, 285-292
 Wind River Basin, XXIII, 1450
 Mesozoic stratigraphy, MEX, 8
 Mesozoic system in south Arkansas, XXII, 964
 systemic boundaries of, defined in paleontologic terms, XXIV, 289
Misozoique mexicain, étude synthétique, sur le, review, XV, 92
 Messina, Angelina R., XXVII, 940
 Messina, Angelina R., and Ellis, Brooks F., XXV, 1216
 Meta-andesite at site of Shasta Dam, XXVI, 1818
 Metabolic products of organisms, RMS, 291, 436-445
 Metahalloysite, RMS, 468, 470, 620, 625, 626
 Metairie-Gentilly subdelta, RMS, 160
Metalegeras series, XXV, 377
 Metallic cations, RMS, 463
 Metallic oxides, PROB, 241
 Metals, content of, in organic matter, RMS, 435-436
 Metamorphic contact zones, PROB, 79
 Metamorphic criteria in Pennsylvania and New York, XXI, 1582
 Metamorphic dead lines to oil and gas occurrence, PROB, 69, 80
 Metamorphic rock units, XXIII, 1085
 Metamorphic rocks, XXIII, 1074
 in sediments, RMS, 211, 269
 of Coast Range of Venezuela, fossils from, XXVII, 1632
 of Woodson County, Kansas, V, 64
 on San Gabriel Mountains, Los Angeles County, California, occurrence of oil in, XVI, 777
 Metamorphic series in Urals, XXI, 1442
 Metamorphic suite of Ural-Tau, XXI, 1457
 Metamorphics, crystalline, MEX, 159
 Metamorphism, PROB, 69, 70, 75, 79, 80, 98, 110, 158, 238, 244, 338, 339, 484, 532, 572, 727, 913
 causes, V, 68
 effect on gravity of crude oil, PROB, 157
 effect on oil occurrence, PROB, 71
 effects on débris in source rocks, XV, 161
 in oil-bearing formations, indices of, VII, 291
 incipient, PROB, 81
 intensity of, PROB, 81
 lithologic character of shale as an index of, X, 625
 of coal by pressure, XIII, 306
 of coal, regional, in southeastern West Virginia, XXVII, 1194
 of organic sediments and derived oils, XIX, 589

(Metamorphism)

- of sedimentary rocks, effects on petroleum, PROB, 77
 of sediments, SBP, 19
 of sediments, relation of, to nitrogen-reduction ratio, SBP, 59, 275, 350-352, 391, 392
 regional, at Bradford field, Pennsylvania and New York, STR II, 429
 regional, effect on character of crude oil, PROB, 147
 regional, method of representing, XXVII, 1209
 regional, of coal in southeastern West Virginia, XXVII, 1194, discussion, 1125
 regional, of coal in West Virginia, references on, XXVII, 1223, 1227
 regional, and reservoir rocks, GAS, 555-557
 relation of methane to, XXI, 1583
 thermo-dynamic, relation to oil districts, PROB, 340
 Metamorphosed contact zone, MEX, 154
 Metamorphosed sediments, V, 508, 667
 Metamorphosed shale, well producing from, MEX, 219
 Metapán beds of El Salvador, Honduras, and southern Nicaragua, XXVIII, 1114
Metaplacentoceras pacificum faunal division, XXVI, 184
 Metcalf, Roy J., PROB, 414; XIII, 657; XVI, 553
 bibliography of, XXVI, 1179
 deposition of Lissie and Beaumont formations of Gulf Coast of Texas, XXIV, 693
 discovery of Yates pool, Pecos County, Texas, XI, 635
 discussion of Capitan limestone, XIII, 657
 discussion of geology of Cuba, XVI, 553
 memorial of, XXVI, 1175
 Metcalf, Roy J., and Hennen, Ray V., GAS, 449, 450; PROB, 413; XXV, bet. 2166 and 2167
 Yates oil pool, Pecos County, Texas, XIII, 1509
 Metcalf, T. L., XIX, 503
 Metchisin volcanics on Vancouver Island, XXIX, 1406
 Meteor coring tube, RMS, 649, 651, 652
 Meteor craters, salt domes, and crypto-volcanic structures, XXI, 629
 Meteor Expedition, RMS, 51, 132, 133, 373-377, 380, 385, 386, 397, 403, 405, 407, 410
 Meteoritic waters, PROB, 276
 cause of porosity in most limestone oil reservoirs, XXIV, 1973
 Meteorites, samples of interior of planetary bodies, CD, 15
 Meter-ton-second system as used for ocean work, RMS, 109
 Methane, PROB, 35, 38, 39, 145, 147, 240, 264, 450, 452, 462, 472; RMS, 71, 422-424; XV, 451; XXVI, 21, 31; XXVII, 535, 1189
 in coal, sorption of, XXVII, 536
 in gas, GAS, 808, 1075, 1118, 1149
 its relation to metamorphism, XXI, 1583
 principal constituent of vertically migrating gases, XXIV, 876
 production by anaerobic bacteria, PROB, 45

- Methane gas at Rattlesnake Hills field, XVIII, 847
- Methane-oxidizing bacterium, XXVII, 1180
- Methanation theory of evolution of Gulf Coast crude oil, XXI, 943
- Method of discovery, oil fields discovered in United States by successive five-year periods, classified as to, XXI, 700
- of drilling in Hugoton field, XXIII, 1054
- of impregnating porous materials to facilitate pore studies, XXI, 259
- of making sand analyses, XXI, 1312
- of plotting mechanical analyses of sand, XXI, 1320
- Méthodes de prospection du sous-sol*, review, XV, 713
- Methods in paleontology, XXII, 317
- Methods of analysis, SBP, 17
- assay number, SBP, 62, 63
- bitumen, SBP, 65-68
- calcium carbonate, SBP, 77
- carbon, SBP, 21-23
- color, SBP, 73, 74
- nitrogen, SBP, 36-40
- reduction number, SBP, 46-56
- texture, SBP, 70-73
- volatility, SBP, 61-63
- weathering, SBP, 168
- Methods of applied geophysics, discussion, XII, 863
- of calculating pressure, RMS, 63
- of collecting sediments, RMS, 300, 630-664
- of determining bed load and material in suspension, RMS, 26, 27
- of determining composition of sea water, RMS, 61
- of determining density, RMS, 62
- of determining dynamic decimeters, RMS, 109
- of determining isobaric surfaces, RMS, 109
- of determining mineral frequency, RMS, 604-613
- of determining nature of organic constituents, RMS, 434-436
- of determining organic content of sediments, RMS, 184, 263, 380, 429, 435
- of determining salinity, RMS, 61
- of determining temperature in ocean, RMS, 60
- of determining water of hydration in minerals, RMS, 505
- of discovery, Mid-Continent, Rocky Mountain, and Gulf Coast region, XXVII, 967
- of dispersion, RMS, 538-541
- of examinations, sequence of, XXIV, 1391
- of exploration in Oklahoma in 1941, XXVI, 1062
- of locating wildcat wells, comparative record of, XXVI, 1203
- of making soundings for charts, RMS, 221
- of measuring currents, RMS, 103
- of mechanical analysis, RMS, 182, 183, 541-555
- of preparation of sedimentary materials for study, XXI, 260
- of presenting results of mechanical analyses, RMS, 558-591
- of sampling sediments, RMS, 178, 181, 182, 526-528
- of solving dip problems, XXI, 348
- of study, RMS, 525
- (Methods)
- of studying ocean currents, RMS, 102
- of studying sediments, RMS, 525-664; XXV, 1420
- of studying sediments with X-ray, RMS, 616-630
- of testing deposition of free oil by sediments, XXV, 2172
- of trapping sediments on sea bottom, RMS, 274
- Methyl red, SBP, 37, 40
- Methylation, PROB, 241, 243-245; GAS, 735
- of crude oil, PROB, 145
- Methylene blue, RMS, 419
- Methylene iodide, RMS, 602
- Mexia, Limestone County, Texas, XXII, 732
- edge-water contact, STR I, 382, 383
- faulting and petroleum accumulation at, VII, 226
- producing horizons at, STR I, 307
- Mexia and Balcones faulting in north-east Texas, GAS, 661
- Mexia and Tehuacana fault zones, Texas, oil fields of, PROB, 330, 421
- faults in, STR I, 305
- graben in, STR I, 307
- oil and gas fields of, STR I, 304
- summary of data on oil and gas pools of, STR I, 387
- Mexia anticline, STR I, 335
- Mexia area, Limestone County, XXIII, 893
- Mexia district, GAS, 667, 674
- Mexia fault, VI, 494
- Mexia fault trend, gas in, XXIV, 1067
- Mexia fault zone, GAS, 661, 663, 675; XIII, 428; XVIII, 1067; XXII, 730; XXV, 1698; XXVIII, 1637; XXIX, 1328, 1734
- Mexia faulting, mechanics of Balcones and, X, 1261
- Mexia faults, PROB, 616, 901, 999
- Mexia field, Texas, PROB, 295, 404, 422, 600, 601, 617, 779, 900, 999; SD, 38; III, 96; V, 419; VI, 325, 494
- hydraulic accumulation of oil in, VII, 219
- (well 390), SBP, 292-335, 410
- Mexia-Groesbeck district, Texas, development of, STR I, 307
- Mexia pool, Texas, production, STR I, 311
- Mexia-Powell district, PROB, 60
- Mexia-Powell fault-line fields, Texas, data on, XXVIII, 235
- Mexia-Powell fault zone, XXI, 1067; XXIV, 1064
- Mexia-Powell trend, PROB, 330, 332
- Mexia structure, Texas, GAS, 666, 672, 673
- log section, STR I, 338
- Mexia type of fold, PROB, 616
- Mexia zone of faulting, PROB, 332, 420-422, 577; XIII, 638
- Mexican Alazan, MSC, 179
- Mexican geosyncline, XXVII, 1417; XXVIII, 307, 1092
- south of Coahuila Peninsula, XXVIII, 320
- Upper Jurassic deposits of, XXVII, 1495
- Mexican Gulf Oil Company, GAS, 1002
- Mexican Highland, XI, 1175
- Mexican microfaunas, XX, 437
- Mexican oil, probable source of, X, 692
- Mexican oil fields, limestone reservoir (Mexican)
- rocks in, PROB, 377
- occurrence of natural gas in, with notes on Lake Chapala region and Valley of Mexico, GAS, 997
- Tamasopo Ridge, Mexico, X, 439
- Mexican Petroleum Company, GAS, 1009
- Mexican salt structures, SD, 3, 4, 40
- Mexican South fields, XIV, 86
- similarity of surface geology in front range of Sierra Madre Oriental to subsurface in, XIV, 73
- Mexican Texas Asphalt and Petroleum Company, GAS, 1001
- Mexico, MSC, 14, 20, 110, 177-179, 194, 211, 217, 294, 296, 355; PROB, 250, 633, 634
- Alazan formation of, MSC, 178, 180
- Albian Lower Cretaceous in, map, XXVIII, 312
- border province of, adjacent to West Texas, paleogeography of parts of, XX, 417
- border province of northeastern, adjacent to Zapata and Starr counties, Texas, structural geology of, XX, 403
- Cambrian in, XXVIII, 305
- Campanian and Maestrichtian in, XXVIII, 1103
- Cenomanian in, XXVIII, 1125
- Chapeño salt dome, Tamaulipas, SD, 772; IX, 134
- chart showing range of foraminifera in Tampico Embayment, XX, 452
- Chiapas, VI, 154
- claims against, IX, 183
- Colima, VI, 154
- Coniacian and Santonian in, XXVIII, 1100
- Cretaceous, IX, 127, 137
- Cretaceous and Jurassic rocks in, section, XXVII, 1467
- Cretaceous columnar sections in, XXVIII, 1108-1115
- Cretaceous foraminifera in, CAL, 110
- early Upper Jurassic redbeds in, XXVII, 1415
- eastern, evidence for upper Jurassic landmass in, XXVII, 524
- d Petroleo en*, review, XVI, 617, 707
- Eocene in, IX, 129, 142; XIX, 1358
- Eocene fauna from Moctezuma River, IX, 298
- fossils of, X, 684
- Furber field, XVI, 806
- geologic history of Pánuco River Valley and its relation to origin and accumulation of oil in, X, 667
- geologic map of, XX, 504
- geologic road log in Tamaulipas and Nuevo León, XX, 467
- geology and biology of San Carlos Mountains, Tamaulipas, XXII, 318
- geology of eastern Hidalgo and adjacent parts of Vera Cruz, XI, 1173
- Mexico, geology of Tampico region, MEX, iii; XX, 1495
- Mexico, geology of Tampico region, discussion, XX, 1494
- Mexico, geology of Tampico region, review, XX, 1134
- gushers in, PROB, 389
- history of development, VI, 493
- Jurassic ammonites and plants in, XXVII, 1418
- Jurassic salt and redbeds in, XXVII, 1437

(Mexico)

- Jurosonora in, CAL, 75, 92
 Lake Chapala region, GAS, 1009
 late Upper Cretaceous in, map, XXVIII, 314
 Lower Jurassic in, map, XXVIII, 308
 map showing principal physiographic provinces, XX, 1278
 Mecatepec-Poza Rica District, GAS, 1007; MEX, 5
 Méndez formation, X, 681
 Mesa de Solís, IX, 1012
 micropaleontology in, with special reference to Tampico Embayment, XX, 433
 micropaleontology of oil fields of, XXV, 1227
 middle and lower Albian, several distinct facies in, XXVIII, 1093
 Miocene, IX, 144
 Mississippian in, XXVIII, 305
 Neocomian Lower Cretaceous in, map, XXVIII, 310
 northeast, and south Texas, map showing principal structural features, XXI, 1430-1431
 northeast, geology of, XV, 867, 1104
 northeastern, areal geology of Eocene in, GC, 588; XIX, 1357
 northeastern, thickness of Eocene formations in, GC, 619; XIX, 1388
 northeastern, wells drilled in, XX, 478
 northern, correlation of redbeds of, XXVII, 1477
 northern, geologic history of, and its bearing on petroleum exploration, XXVIII, 301
 northern, stratigraphy and structure of, XXVIII, 315
 northern, and southern Texas, Cretaceous and Tertiary of, discussion, XII, 949
 northern, and southern Texas, map, XXIX, 1422
 northern, and western Texas, Upper Jurassic marine beds in, XXVII, 1415
 northern, and western Texas, Upper Jurassic redbeds in, XXVII, 1475
 Northern fields of, GAS, 997-1006; MEX, 18, 21, 32, 65, 161, 163, 164, 177, 182, 186, 202; PROB, 377, 380, 397
 Oaxaca, VI, 154
 oil associated with igneous rocks in, XVI, 799
 oil field in, SBP, 410
 oil fields of, in state of Vera Cruz, XXVIII, 315
 oil possibilities of Jurassic formations in, XXVII, 1528
 Oligocene, IX, 144
 Oligocene foraminifera from, MSC, 177
 Ordovician in, XXVIII, 305
 origin of redbeds of, XXVII, 1479
 paleogeographic maps showing geologic development of, XXVIII, 304, 306, 308, 309, 310, 312, 314, 316
 Pánuco district, foraminifera, X, 684
 Pánuco field, GAS, 1005; XII, 395
 Pánuco River Valley, Cretaceous in, X, 671
 Pánuco River Valley, Jurassic in, X, 671
 Pánuco River Valley, structure, X, 685

(Mexico)

- Peninsular Ranges in, CAL, 20
 Pennsylvanian in, XXVIII, 305
 Permian in, map, XXVIII, 304
 Persia and Egypt, reflected buried hills in oil fields of, X, 422
 petroliferous formations of Tampico Embayment, abstract, V, 101
 physiographic provinces of, map, XXVIII, 316
 principal physiographic provinces of, XX, 1277
 production, X, 690
 publication on, XIX, 1079
 reserves in, XXIII, 961
 reviews, VI, 261, 264, 390
 Salado Arch, Nuevo León, and Tamaulipas, a reconnaissance study of, IX, 123
 salt structures in Isthmus of Tehuantepec, IX, 834
 San Felipe formation in, X, 675
 southeastern, correlations of Lower Jurassic rocks in, XXVII, 1498
 southern, VI, 154
 southern, correlation of Lower Oligocene of South and Central America with that of, MSC, 110, 177, 179
 southern, correlations of redbeds of, XXVII, 1508
 southern, correlations of Upper Jurassic beds of, XXVII, 1514
 southern, origin of salt in, XXVII, 1510
 southern, redbeds in, XXVII, 1478, 1506
 southern, Upper Jurassic in, XXVII, 1418
 southern, Upper Jurassic Kimmeridgian to Tithonian marine beds in, XXVII, 1512
 southern, and northern Central America, Jurassic in, XXVII, 1417
 southern, and northern Central America, Lower Jurassic in, XXVII, 1495
 Southern fields of, GAS, 997-1006; MEX, 18, 20, 40, 107, 108, 162, 203, 205; PROB, 377, 393, 398
 stratigraphy of Tampico district, IX, 136
 submarine gorges, CAL, 270
 symposium on, foreword, XX, 385
 synopsis of geology of, XX, 394
 Tamasopo series, X, 671
 Tampico-Tuxpam region, IX, 136, XVI, 800 (see Mexico, geology of Tampico region)
 trend of physiographic units in, XX, 1278
 Triassic in, map, XXVIII, 306
 Tuxpam region, GAS, 1010
 unconformities, IX, 111, 144; X, 442, 673
 upper Aptian ammonites in, XXVIII, 1093
 upper Cenomanian and Turonian in, XXVIII, 1097
 Upper Jurassic in, map, XXVIII, 309
 Upper Jurassic fossil localities in, XXVII, 1509
 Upper Jurassic fossils in, XXVII, 1494
 Upper Jurassic paleogeography of, XXVII, 526
 Velasco fauna of, CAL, 111
 Velasco formation, X, 683
 well in, SBP, 410
 Mexico and Central America, anti-

(Mexico)

- clines and geosynclines of, XXVIII, 1080
 Aptian-Albian fossil localities in, XXVIII, 1091
 Campanian and Maestrichtian fossils of, XXVIII, 1106
 Campanian-Maestrichtian fossil localities in, XXVIII, 1104
 Cenomanian-Turonian fossil localities in, XXVIII, 1098
 characteristic fossils of middle and late lower Albian of, XXVIII, 1095
 Coniacian-Santonian fossil localities in, XXVIII, 1101
 correlation of Cretaceous formations of, XXVIII, 1082-1088
 Cretaceous formations of, XXVIII, 1077
 fossils of Berriasian in, XXVIII, 1089
 fossils of Hauterivian in, XXVIII, 1089
 fossils of Valanginian in, XXVIII, 1089
 Lower Jurassic localities in, XXVII, 1496
 Middle Jurassic localities in, XXVII, 1501
 Neocomian fossil localities in, XXVIII, 1081
 references on Cretaceous of, XXVIII, 1190
 salt and redbed localities in, XXVII, 1503
 several facies of upper Albian and lower Cenomanian in, XXVIII, 1095
 Mexico City highway, Agua Nueva, Méndez, and Tamesí exposures on, MEX, 53, 88
 albertite in El Abra limestone, MEX, 39
 Mexico City road, contact of El Abra and Agua Nueva in, MEX, 48
 Mexico Fuel Oil Company, GAS, 1001
 Mexico oil fields, III, 293; V, 15, 85, 101, 335, 397, 451, 465, 504, 677, (See Mexico, geology of Tampico region)
 Mexico and Texas, neue Cephalopoden aus der oberen Kreide vom Rio Grande del Norte, review, XX, 987
 Mexico samples (well 405), SBP, 292-349, 410
 Mexico's reserve, XXVIII, 1497
 Meyer, and Poiseuille, XVI, 382
 Meyer, A. M., XXIX, 187
 Meyer, A. R., XIX, 1406
 Meyer, Alfred, XXI, 233
 Meyer, E., SD, 122
 Meyer, G., PROB, 43; XVIII, 69
 Meyer, Lothar, PROB, 910; XIV, 140, 141
 Meyer, Otto, GC, 343; XII, 1097; XIX, 1653, 1656, 1659
 Meyer, Robert F., and Koester, Edward A., developments in North Mid-Continent in 1939, XXIV, 994
 Meyer, Willis G., STRAT, 590; XXVII, 20
 grabens in Gulf Coast anticlines and their relation to other faulted troughs, XXVIII, 541, 697
 stratigraphy and historical geology of Gulf Coastal Plain in vicinity of Harris County, Texas, XXIII, 145
 Meyer well, Taylor fauna in, SD, 242
 Meyer zone, PROB, 226, 405

(Meyer)
 at Santa Fe Springs field, GAS, 201, 202
 Meyer zone oil, colorimetric method of testing, XXI, 1481
 Meyers, J. C., XVII, 516
 Meyers, P. A., XIII, 946
 Miami, RMS, 213
 Mica, GAS, 749; RMS, 36, 197, 211, 290, 382, 623
 formed from soils by addition of fertilizers, RMS, 489
 glauconitization of, RMS, 507
 identification of, by X-ray, RMS, 624
 in Black River group in Ohio, XXIV, 684
 in quartz sand, RMS, 256
 relation of, to glauconite, RMS, 506
 Mica clays of North Sea, RMS, 332
 Mica group, XXVIII, 79
 Mica schist in Dockum conglomerates, XXVII, 631
 Micaceous minerals, RMS, 215
 in shale, RMS, 509
 Micelle, RMS, 535, 536, 543
 Michael Sars expedition, RMS, 50
 Michaelis, L., XX, 266
 Michaux, Frank W., Jr., and Buck, E. O., XX, 985
 Conroe oil field, Montgomery County, Texas, GC, 789; XX, 736
 Michelson and Gale, demonstration of elastic yield of solid earth to tidal stresses, CD, 147
 Michelson, A. A., XXIX, 1631
 Michener, C. E., XXII, 1139
 Michigan, PROB, 8, 12, 314, 366
 active fields and discoveries in, 1939, XXIV, 979
 Antrim-Ellsworth-Coldwater shale formations in, XXV, 724
 Basin district of, XXV, 1131
 Buckeye oil field, Gladwin County, XXIV, 1950, 1954
 Centennial geological map of, XXI, 1600
 central, columnar section of formations of, XXI, 320
 central, insoluble residues of Dundee and Detroit River (upper Monroe) formations of, XXI, 317
 central, oil in Basin area of, XXIX, 693
 central, oil fields, XXI, 319
 central, stratigraphic relations in, XXII, 169
 columnar sections in, XXII, 400, 403, 409, 412
 counties productive in, XXV, 1128, 1133; XXIX, 696
 decline of drilling operations for natural gas in 1942, XXVII, 822
 deep-pay discoveries in, XXVII, 829
 developments in, during 1939, XXIV, 974
 developments in 1942, XXVII, 822
 developments in 1943, XXVIII, 760
 developments in 1944, XXIX, 693
 Devonian in, XXII, 397; XXIV, 1953, 1955, 1966, 2151; XXV, 1134; XXVII, 829; XXVIII, 185
 Devonian rocks in Buckeye field, XXIV, 1961
 discovery and development of gas in Basin district of, during 1940, XXV, 1128
 discovery wells in, 1940, XXV, 1133
 discovery wells in, 1941, XXVI, 1107
 discovery wells in, 1943, XXVIII, 762
 exceptional Silurian brine near Bay

(Michigan)
 City, XXIX, 567
 fields, extensions, and new producing formations discovered in 1944, XXIX, 696
 gas fields of, XXIV, 1952; XXVII, 829
 gas producing counties of, XXII, 132
 gas production in 1942, XXVII, 822
 gas production in 1943, XXVIII, 765
 geologic occurrence of oil and gas in, XXII, 393
 geology of Muskegon field, Muskegon, XVI, 153
 geology of Saginaw field, STR I, 105
 geology of Saginaw oil field, and discussion of Michigan's oil prospects, XI, 959
 geology of Southern Peninsula of, XXI, 1599
 geophysical prospecting in, XXIV, 988
 glacial expression of structural features in: preliminary study, XIX, 1173
 Grand Rapids series in, XXI, 124
 history of oil and gas development in, XXIV, 1950
 Lower Devonian (Helderbergian) in, XXI, 319
 Lower Peninsula, STRAT, 239
 map showing areal geology of the Southern Peninsula of, by Helen M. Martin, XXI, 124
 map showing Basin district of, XXV, 1126
 map showing location of wells in Lower Peninsula of, XXI, 318
 map showing oil and gas fields of, XXIV, 1951
 map showing Southwestern district of, XXV, 1127
 map showing wildcats, XXVII, 824-827
 microscopic subsurface work in, XV, 749
 Mississippian in, STRAT, 241; XXI, 124, 396; XXIV, 1955, 1966, 2151; XXV, 729
 Mississippian folding in, XXIV, 1953
 monthly production by fields in, during 1939, XXIV, 976
 natural gas fields of, GAS, 787
 northern, bitumen in Nonesuch formation of Keweenaw series of, XVI, 737
 occasional papers on geology of, XXI, 1597
 occurrence of fluorite in Monroe formation of Vernon Township pool near Mount Pleasant, XVI, 91
 oil and gas in, VI, 496
 oil and gas developments in, XXI, 124
 in 1940, XXV, 1125
 in 1941, XXVI, 1097
 oil and gas developments in, review, XIII, 695
 Michigan, oil and gas fields in, XXII, 395; review, XVIII, 149
 oil and gas occurrences in, XXII, 401
 oil developments in 1941, XXVI, 1105
 oil developments in 1942, XXVII, 823
 oil fields in, XXVII, 830
 oil producing counties in, XXII, 659
 oil production in 1939, XXIV, 1952
 oil production in 1942, XXVII, 823
 oil prospecting in, review, VI, 381

(Michigan)
 oil reserves, VI, 44
 Ordovician in, XXIV, 1953; XXVI, 1103
 Pennsylvanian in, XXII, 394; XXIV, 1969
 periods of folding in, XXIV, 1953
 Permian in, XXIV, 1953
 pipelines in, XXV, 1134
 Porter oil field, Midland County XXVIII, 173
 pre-Devonian rocks in, XXII, 399
 productive counties in, XXVI, 1102, 1103, 1106-1108
 section across, XXII, 661
 shoestring gas fields of, STRAT, 237
 Silurian in, XXV, 1125; XXVIII, 195
 Silurian and Ordovician formations in, XXII, 399
 Silurian and Ordovician possibilities in, XXII, 665
 southern, and Kentucky, magnetic vector study of, XVIII, 97
 southwestern, cross section of, referred to sea-level, XXIV, 2155
 southwestern, development, XXVII, 833
 southwestern, east-west cross section through, referred to sea-level, showing Coldwater Red Rock to Traverse limestone formations, XXIV, 2156, 2158
 southwestern, east-west cross section through, referred to top of Coldwater Red Rock, showing thickness variations between Coldwater Red Rock and Traverse limestone, XXIV, 2157, 2159
 southwestern, isopach map of, showing Coldwater Red Rock to Traverse limestone interval, and type log for southwestern Michigan, XXIV, 2152
 southwestern, isopachous studies of Ellsworth to Traverse limestone section of, XXIV, 2150
 southwestern, northeast-southwest cross section of, referred to top of Coldwater Red Rock, showing thickness variations between Coldwater Red Rock and Traverse limestone, XXIV, 2156
 southwestern, wells used in geological cross sections in, XXIV, 2161
 Stray gas sand in, STRAT, 238, 239; XXI, 124
 structural map of southern, PROB, 543, 545
 summary of operations during 1942 by districts, XXVII, 828
 summary of operations in, by districts, during 1940, XXV, 1130
 Traverse rocks of Thunder Bay region, XXVII, 571
 wells discovered during 1942, XXVII, 832
 western, study of sedimentation and stratigraphy of lower Mississippian in, XXV, 713
 Michigan and Illinois basins, columnar sections for, showing oil and gas production, XXI, 786
 Michigan area, central, Mississippian gas sands of, XXII, 129
 southwestern, map showing barrier axis, XXV, 715
 Michigan basin, PROB, 339, 430; XXI, 782; XXII, 1539; XXVI, 1093; XXVII, 575; XXVIII, 191

- (Michigan)
 an important regional structural basin, STR II, 703
 its relation to Cincinnati arch structure and accumulation in, PROB, 531
 map showing progressive change in color and gravity of oil across central part of, XXIV, 1978
 recent developments in, XXII, 659
 regional geology of, XXIV, 1952
 Michigan basin province, XIII, 421; XXI, 319
 Michigan-Bayport contact, XXVIII, 190
 Michigan Consolidated Gas Corporation, XXV, 1129
 Michigan core data, XXV, 869
 Michigan Department of Conservation, Centennial geological map of Michigan, review, XXI, 1600
 Michigan development, southwestern, XXVII, 833
 Michigan fields, STRAT, 874
 production in 1942, XXVII, 828-832
 Michigan formation, XXII, 396; XXVIII, 188
 gas production from stray sands of, XXII, 132
 Michigan gas fields, XXVIII, 766; XXIX, 699
 Michigan Geological Survey, XXII, 132
 Michigan maps and sections, list of, XXII, 463
 Michigan oil fields, XXVIII, 764; XXIX, 697
 map, XXVIII, 174
 Michigan Pacific Oil and Gas Company, XXVIII, 175
 Michigan production by fields, XXV, 1130; XXVI, 1104
 Michigan Public Service Commission, XXIV, 985
 Michigan sand in Michigan, GAS, 794, 798, 799, 805, 806, 811
 Michigan series, XXIV, 1967
 Michigan Stray sand, STRAT, 238, 242; XXV, 1128; XXVI, 1103
 Michigan stray sands and Napoleon and lower Marshall formations, stereographic diagram showing stratigraphic relationship of, XXII, 170, 171
 Michigan Stray sandstone, XXVI, 1102; XXVII, 823
 of central Michigan, extent and availability of natural gas reserves in, XXI, 123
 Michigan structural basin and its relationship to surrounding areas, XVI, 145
 Michigan synclinal basin, XVI, 158; XXII, 662
 Michigan wildcat map, XXVI, 1098
 Micos to Pánuco-Topila, cross-section, MEX, 35
 Micos area, MEX, 39, 46, 160
 Micos Station, MEX, 61
 Microbiological study of oil-well waters, XVII, 55
 Microcline, XXVIII, 76
 Micro-crystals of carbonates in bituminous shales, significance of, XIII, 1377
 Microfauna from Escalera anticline, MEX, 74
 from Nicoya Peninsula, Costa Rica, XXVI, 1653
- (Microfauna)
 from Tantoyuquita, MEX, 79
 in Tamesí shales, MEX, 80, 81, 140
 list of, MEX, 79, 81, 85, 86, 101, 113
 Midway, of northwestern Louisiana, XXV, 738
 of Méndez, MEX, 82
 of Permenter's Farm beds, XXV, 273
 of Tampa limestone, GC, 411; XVII, 641
 of Tanlaías, MEX, 101
 Microfaunal study of samples from Garzas sand and underlying formations exposed along Oat Gulch, XXIX, 979
 Microfaunas from Cretaceous formations in New Jersey, XXIX, 891
 Mexican, XX, 437
 Microfilm copy, improved method of handling, XXV, 2068
 Microfilmed material, sources of, XXIII, 1568
 Microflora, marine shales rich in fossil, PROB, 460
 of oil waters and oil-bearing formations and biochemical processes caused by it, XVII, 52
 Microfossil horizon in Eocene sections, SC, 20, 21; XX, 1556, 1567
 Microfossil localities in Santa Barbara County, California, XXVII, 17
 of McKittick Quadrangle, Kern County, California, XXVII, 1383
 Microfossil localities and structure of Chico Martinez Creek area, map, XXVII, 1373
 Microfossils, RMS, 531; STRAT, 148
 chronological value of, XXIV, 1760
 ecological value of, XXIV, 1760
 economically important, XXIV, 1759
 from Miams member of Cook Mountain formation, XXIX, 42
 graphic analysis of relative importance of, XXIV, 1758
 in petroleum exploration, value of, VIII, 539
 in shale overlying *Scolithus* sandstone in Bear Lodge Mountains, XX, 1333
 neglected Gulf Coast Tertiary, XXVI, 1188
 references on, XXVI, 1198
 of particular stratigraphic value in area of southern Walton County, XXV, Plates I and II, 280-284
 principal categories of, XXV, 1232
 value of, in petroleum exploration, VIII, 539
 Microlithology and micro-paleontology of oil-bearing formations in Sunset-Midway and Kern River oil fields, X, 482
 Micromeritics, technology of fine particles, XXVII, 1163
 Micro-organisms, PROB, 178, 247, 265, 288, 302, 304, 307, 917, 918
 capable of oxidizing petroleum hydrocarbons widespread in sea water and marine sediments, XXVII, 1188
 from marine enrichment cultures, kinds of, XXVII, 1181
 function of, PROB, 261
 marine, which oxidize petroleum hydrocarbons, XXVII, 1175
 oxidation of petroleum by, PROB, 265
 plentiful in Permian, XXI, 884
 relation of, to generation of petroleum, PROB, 35
- (Micro-organisms)
 source of energy for, PROB, 919, 921
 Micro-organisms and petroleum hydrocarbons, bibliography on, XXVII, 1191
 Micro-paleontologic analysis of Jackson Eocene of eastern Mississippi, XXI, 80
 Micropaleontological study of core samples from wells in Great Valley, California, XXIX, 959
 Micropaleontologists, training of, XXV, 1250
 Micropaleontology, academic background of, XXV, 1225
 an indispensable part of petroleum geology, XXV, 1234
 bibliography on, XXV, 1251
 christening of science of, XXV, 1217
 commercial, early background of, XXV, 1219
 department of, American Museum of Natural History, XXVII, 1034
 early scientific background for development of, XXV, 1209
 in curricula of American institutions, graph showing growth of, XXV, 1238
 in Mexico with special reference to the Tampico Embayment, XX, 433
 introduced into Texas from Illinois by J. A. Udden, XXV, 1221
 introduction of use of, in Gulf Coast exploration, GC, x
 new frontiers in, XXV, 1243
 of oil fields of Mexico, XXV, 1227
 on West Coast, academic and commercial backgrounds of, XXV, 1227
 organization and administration of a course in, XXV, 1238
 past and future, XXV, 1208, 1597
 rise of, as a subject in geological curricula, XXV, 1233
 skeletal outline of course, XXV, 1239
 use of, XIX, 502
 used in its modern connotation since 1919, XXV, 1219
 Micropaleontology and stratigraphy of a deep well at Niceville, Okaloosa County, Florida, XXV, 263
 Micro-rhombos in kerogen shales, XIII, 1382
 Microscope, RMS, 533, 543, 603, 616
 binocular, use of, IX, 175
 development of, effect in advances in micropaleontology, XXV, 1210
 Microscope eclipse plate for routine index determinations, XXII, 1278
 Microscopic examination of crude petroleum, XXV, 1249
 of Permian crude oils, XXIV, 2181
 Microscopic geochemical prospecting, XXIV, 1401
 Microscopic geochemical prospecting and problem of depth to petroleum accumulation, XXIV, 1415
 Microscopic study of Texon zone, Big Lake pool, Texas, STR II, 524
 Microscopic subsurface work in oil fields of United States, XV, 731
 Microsplitter, RMS, 529, 601
 Microstratigraphic studies, earliest, micropaleontological rather than microlithological, XXV, 1220
 Microstratigraphy and well cuttings, XXV, 1229
 Microthermal observations of some oil shales and other carbonaceous rocks, X, 860

- Microthermal studies of some "mother rocks" of petroleum from Alaska, XIII, 823
- Mid-Atlantic ridge, RMS, 374, 375; XXIII, 1670
- basins formed by, XXIII, 1666
- nature of, CD, 91
- possibly the primary rift, CD, 210
- sediments of, RMS, 387
- significance of excess of gravity in, CD, 91
- Mid-Continent, PROB, 815
- Cambrian in, XXV, 1627
- Cretaceous in, XXV, 1688, 1691
- distribution of Mesozoic rocks in, XXV, 1688
- distribution of Ordovician rocks in, XXV, 1636
- distribution of Pennsylvanian in, XXV, 1658
- distribution of Silurian and Devonian rocks in, XXV, 1642
- Jurassic in, XXV, 1688, 1690
- Mesozoic in subsurface in, XXV, 1696
- Mesozoic rocks in, XXV, 1687
- Mississippian in, XXV, 1647, 1656
- Mid-Continent, north, developments in 1939, XXIV, 994
- in 1940, XXV, 1103
- in 1941, XXVI, 1073
- in 1942, XXVII, 806
- in 1943, XXVIII, 767
- in 1944, XXIX, 701
- Mid-Continent, northern, origin of oil in, review, VII, 454
- northern, Pennsylvanian in, FOP, 82; XXV, 1514
- northern, Permian in, FOP, 82; XXV, 1514
- northern, references on oil prospects in, FOP, 85; XXV, 1517
- Ordovician in, XXV, 1635
- Pennsylvanian in, XXV, 1660
- Permian in, XXV, 1680, 1687
- references on Cambrian of, XXV, 1699
- references on Mesozoic of, XXV, 1705
- references on Mississippian of, XXV, 1701
- references on Ordovician of, XXV, 1700
- references on Pennsylvanian of, XXV, 1702
- references on Permian of, XXV, 1704
- references on pre-Cambrian of, XXV, 1698
- references on regional stratigraphy of, XXV, 1698
- references on Silurian and Devonian of, XXV, 1701
- regional stratigraphy of, XXV, 1619
- Rocky Mountain, and Gulf Coast region, discoveries and production in, XXVII, 962
- Silurian and Devonian in, XXV, 1641
- south, map locating wells in, XXIV, 1026
- south, recent developments in, XXIV, 1025
- southern, correlation chart for, XXVI, 220
- southern, Permian in, XXVI, 219
- standard section for Ordovician in, XXV, 1639
- Triassic in, XXV, 1688
- Triassic and Jurassic in, XXV, 1690
- Mid-Continent area, compaction in folds of, PROB, 822
- (Mid-Continent)
- core drilling for structure in north, X, 513
- correlation of Pennsylvanian of, XIII, 894
- location of wells in, SBP, 256
- references on stratigraphy and oil zones of, SBP, 257
- stratigraphic units sampled in, SBP, 258
- Mid-Continent field, history, review, VI, 383
- oil reserves, V, 411
- Oklahoma, explained on hydraulic theory, VII, 218
- paleogeography, V, 541
- value of oil geology in, II, 124
- Mid-Continent fields, north, notes on subsurface pre-Pennsylvanian stratigraphy of, V, 117
- Mid-Continent oil, factors unfavorable to market in Atlantic states, XIII, 1204
- Mid-Continent oil companies, XXI, 34
- Mid-Continent oil district, short sketch of paleogeography and historical geology of, and its importance to petroleum geology, V, 541; abstract, V, 102
- Mid-Continent oil field, Carboniferous sediments of, XIII, 557
- Mid-Continent oil fields, notes on subsurface pre-Pennsylvanian stratigraphy of northern, V, 117, 324
- origin of local structural features in, PROB, 581
- Mid-Continent Ordovician waters, PROB, 856; XIV, 1215
- Mid-Continent Pennsylvanian formations, Marmaton and Cherokee, regional extent of, XIV, 1249
- Mid-Continent Permian compared with Permian of Utah and Arizona, XXV, 437
- Mid-Continent Petroleum Corporation, XXIV, 1995; XXVIII, 782; XXIX, 716
- Mid-Continent producers, advantages of mergers, XIII, 1206
- Mid-Continent region, areal variation of organic content in, SBP, 265
- areal variation of volatility and nitrogen-reduction ratio in, SBP, 271
- convergence studies in, XI, 657
- defined, PROB, 762
- distribution of Cambrian rocks in, XXV, 1628
- distribution of Mississippian in, XXV, 1648
- distribution of Permian in, XXV, 1678
- distribution of pre-Cambrian rocks in, XXV, 1622
- early Pennsylvanian redbeds in, IX, 814
- granite wells in northern, IX, 351
- logs and oil zones of wells in, SBP, 261
- major structural features, XIV, 1538
- north, Carboniferous-Permian boundary in, XXIV, 300, 314
- North, map showing location of important wells drilled in Forest City basin and adjacent areas in 1939, XXIV, 1004
- Pennsylvanian in, XXIX, 139
- relation of oil and gas accumulation to geologic structure in, PROB, 571
- relation of oil and gas pools to un-
- (Mid-Continent)
- conformities in, PROB, 761
- relation of Ouachita belt of Paleozoic rocks to oil and gas fields of, XXIII, 1059
- studies on Carboniferous of, XIII, 191
- thinning over anticlines in northern, GAS, 588
- Washita County, Oklahoma, deepest well in, XXIV, 735
- Mid-Continent samples, assay number, SBP, 270, 272
- carbon content, SBP, 27-31, 266, 267
- carbon-nitrogen ratio, SBP, 34, 35, 276-278
- color, SBP, 75, 269, 270
- correlation of samples, SBP, 261
- key to productivity of, SBP, 280
- location, SBP, 256
- nitrogen content, SBP, 268, 269
- nitrogen-reduction ratio, SBP, 271-276
- oil and gas zones, SBP, 261, 262
- organic content, SBP, 263-266
- oxidation factor, SBP, 276-277
- reduction number, SBP, 267-268
- reflectivity, SBP, 269, 270
- relation of, to oil zones, SBP, 278, 283, 381, 382
- relative volatility of, SBP, 273
- stratigraphy, SBP, 257-262
- summary of properties of, SBP, 279
- variation of nitrogen-reduction ratio of, with respect to distance from oil zones, SBP, 282
- volatility of, SBP, 272
- (wells 242-301), SBP, 255-285
- Mid-Continent states, correlation of Pennsylvanian in, XV, 129
- northern, possible future oil provinces in, FOP, 76; XXV, 1508
- Mid-Continent waters, comparison of, PROB, 835, 840
- Mid-Cretaceous crustal movements, XXIX, 502
- Mid-Cretaceous disturbance, XXVIII, 469
- Midden Curaçao beds, age of, XXIV, 1571
- Midden Curaçao formation unconformable on Diabas formation, Knip formation, and Seroe Teintje limestone, XXIV, 1570
- Middens, Indian, RMS, 171
- Middle Baxter basin, XXV, 1157
- Middle Butte, XXIX, 1266
- Middle Creek structure, Tensleep (Minnelusa) water in, XXIV, 1301
- Middle Cretaceous, Colombia, XXIX, 1088
- north-south seaway in, CD, 129
- Middle Devonian subsurface formations in Illinois, XXVIII, 1519
- Middle Dome, California (well 18), SBP, 130-153, 403
- Middle Dundee residues, XXI, 325
- Middle East, center of gravity of world oil production, XXVIII, 919
- oil concessions in, XXVIII, 922
- oil fields and refineries of, map, XXVIII, 923
- pipe lines in, XXVIII, 920
- preliminary report of technical oil mission to, XXVIII, 919
- refineries in, XXVIII, 920
- reserves in, XXVIII, 920
- Middle Eocene, SC, 19, 24; XX, 1565, 1570
- conditions in California during, SC,

(Middle)

- 26; XX, 1572
time of widespread transgression, SC, 27; XX, 1573
Middle Eocene and Middle Miocene transgressions, SC, 143, XX, 1689
Middle Eocene floras, SC, 26; XX, 1572
Middle Eocene quartz sand, SC, 26; XX, 1572
Middle Ferris dome, Wyoming, STR II, 659
Middle Ferris gas field, GAS, 311
pressure at, GAS, 319
recoveries, GAS, 318
Middle hard zone and upper dense zone in limestone in Turner Valley, XXIV, 1632
Middle Jurassic rocks in Western Interior of United States, occurrence of, XXIX, 1019
Middle Kittanning coal in Otsego field, Muskingum County, Ohio, map, STR I, 132
Middle Leine salt-dome ridge, SD, 201; IX, 1261
Middle Leine Valley district, IX, 1247
Middle Magdalena Valley, Colombia, Tropical Oil Company's De Mares Concession in, XXIX, 1107
Middle Miocene fauna, SC, 122; XX, 1668
Middle Miocene fossils, SC, 80; XX, 1626
Middle Miocene paleogeography, SC, 39; XX, 1585
Middle Miocene transgression, SC, 143, XX, 1689
Middle Oligocene wedge, XXV, 2006
Middle Oeage strata in Kentucky, XXIV, 802
Middle Volga district, XXII, 759
Middle Wichita orogeny, XXIV, 100
Middlesboro geosyncline, GAS, 924, 933
Middlesex shale, XV, 179
Middleton, H. E., RMS, 540
Mid-Indian Ridge, RMS, 398
Mid-Kansas Oil Company, Kuns 1 (well 244), SBP, 255-285, 407
Yates G2, (well 303), SBP, 285-292, 408
Midland, Texas, Insoluble Residue Study Group, XXV, 318
Midland basin, FOP, 98; XXIV, 40, 49, 54; XXV, 77, 102, 1047, 1530, 1687; XXVI, 1021; XXVII, 771; XXVIII, 807; XXIX, 745
eastern, Texas, stratigraphy, XXIV, 52
San Andres group in, XXV, 83, 86
wells in Yates area, XXIV, 136
Wolfcamp beds in, PTNM, XXVI, 677
Midland County, Michigan, Porter oil field, XXVIII, 173
Midland Farms, XXIX, 745
Mid Ojuelos field, XV, 764
Mid-Pleistocene orogeny, SC, 67; XX, 1613
Midway, XXIII, 83
increase in thickness toward south in northern Mexico, GC, 597
Midway or Scanlan dome, Lamar County, Mississippi, XXII, 816
upper, sediments of Louisiana, check list of ostracoda and foraminifera from, XXV, 740
Midway, Wilcox, and lower Claiborne groups of Texas, Louisiana, Mississippi, and Alabama, correlation

(Midway)

- chart, XXIX, 47
Midway and Wilcox, break between, XXVII, 621
Midway and Wilcox groups in Alabama and Mississippi, XVII, 194
Midway and Wilcox sediments of Sabine uplift, depositional conditions and history of, XXIX, 68
of Sabine uplift, Louisiana and Texas, areal geology of, XXIX, 48
section showing stratigraphic changes in, across Sabine uplift, XXIX, 50
Midway and Wilcox surface sediments, Sabine uplift, Louisiana and Texas, structural axes indicated by, XXIX, 49
Midway affinities in Aragón species, MEX, 109
Midway age of beds at Tanlajás, MEX, 101
of Hall Summit formation, XXIX, 59
Midway-Arkadelphia contact, faunal break at, XXIII, 297
Midway beds in Carterville-Sarepta and Shongaloo fields, XXII, 1477
in Florida, XXVIII, 1704
Midway black shale, XXIX, 56
Midway clay in Stephens field, Arkansas, STR II, 7
Midway correlations, MEX, 73, 84, 85, 89, 100, 105, 140
Midway deposits, XXIX, 907
Midway dome discovered by geological methods, XXII, 821
structural geology and history of, XXII, 820
Midway Eocene mollusca, Louisiana, check list of, XXV, 737
Midway fauna of northwestern Louisiana, references on, XXV, 742
of Texas, correlation with foreign faunas, XV, 158
of Texas, relation of foreign faunas to, XV, 149
of western Gulf province, analysis of, XXV, 644
Midway faunas of Gulf province, correlation of, with those of Africa and Brazil, Trinidad, and Venezuela, XXV, 648
Midway field, PROB, 228, 800, 937, 962; VII, 115; XXII, 755; XXVIII, 266, 837
section, XXIX, 1300
Midway field discovery, Lafayette County, Arkansas, XXVI, 1289
Midway foraminifera, SD, 248
Keechi dome, Texas, X, 40
Midway formation, PROB, 421; X, 38, 247; XXII, 1508; XXIII, 298; XXV, 2012
along Rio Grande, GC, 595; XIX, 1364
Arkansas, VI, 363
Bellevue field, Louisiana, STR II, 241
Homer field, Louisiana, STR II, 209
in Gulf Coast region, XXIX, 1321
increase in thickness toward south in northern Mexico, XIX, 1366
Irma field, Arkansas, STR I, 10
Louisiana, SD, 284, 301, 311, 316, 342; II, 62; IV, 129; VI, 180; X, 232, 264
Luling field, Texas, STR I, 273
Lytton Springs field, Texas, X, 956
Mexia fault zone, Texas, STR I, 325
Monroe field, GAS, 749

(Midway)

- Prothro dome, Louisiana, X, 249
southwestern Arkansas, guide notes on, IX, 167
Texas, I, 75; VI, 323; X, 27, 61
Texas salt domes, SD, 215, 243, 246, 247, 252, 253, 256, 258, 261, 266
Midway fossils, XXIX, 53
along Rio Grande in northern Mexico, GC, 595
Midway Gas Company, GAS, 120, 148
Midway glauconitic shell beds in Trinidad, XX, 1443
Midway group, Covington County, Mississippi, GC, 377; XIX, 1156
East Texas, STRAT, 608
(Eocene) of southwest Arkansas and northwest Louisiana, stratigraphy of, XIX, 696
Louisiana, GC, 384; XVII, 614
Louisiana, fossiliferous localities of, XXV, 734
south Arkansas, XXII, 979
(Tmi) (Paleocene), SBP, 294, 296-335, 337-349, 416; XXVIII, 47; XXIX, 56
Midway lime in North Currie field, Texas, STR I, 328, 344
Midway limestone of northeast Texas, VI, 323
Midway microfauna of northwestern Louisiana, XXV, 738
Midway oil gravity, STR I, 367
Midway sedimentation in Louisiana, GC, 384; XVII, 615
Midway shale, XXII, 1663, 1671; XXVIII, 275
Midway shales, possible source of oil at Irma field, Arkansas, STR I, 13
Texas, X, 39, 45, 50
Midway structure, Frontier water in, XXIV, 1249
Lakota water in, XXIV, 1266
Midway-Sunset area, California, GAS, 147, 151; PROB, 747
waters in, PROB, 962, 963
(well 23), SBP, 130-153, 403
Midway-Sunset-Buena Vista province in California, production in vicinity of updip wedge edge of Etchegoin formation, XXVII, 898
Midway-Sunset field, PROB, 142, 143, 155, 199, 201, 798, 799; V, 51, 181, 383, 457, 624
Midway-Sunset oil district, CAL, 20, 311
Midway-Wilcox of Sabine uplift, stratigraphic section, XXIX, 56
Midway-Wilcox-Claiborne seas, MEX, 140
Midway-Wilcox complex of Sabine uplift, cyclic depositional pattern in, XXIX, 54
Midway-Wilcox contact, XXVII, 609, 620
Midway-Wilcox depositional history of Sabine uplift, XXIX, 69
Midway-Wilcox formations, sand members of, XXIX, 54
Midway-Wilcox inlier of Sabine uplift, XXIX, 52
Midway-Wilcox surface stratigraphy of Sabine uplift, Louisiana and Texas, XXIX, 45
Mid-West pool, PROB, 411
Midwest Refining Company, GAS, 306, 381; XXIII, 913
Capps 31 (well 302), SBP, 285-292, 407
1 (Cooper Cove) (well 223), 1 (Dutton

(Midwest)

- Creek (well 224), 1 (Golden Eagle) (well 204), 1 (Midway) (well 221), 1 (North Casper Creek) (36-37-82) (well 220), 1 (Rangely) (well 232), 1A (Chimney Creek) (well 235), 2 (Notches) (well 217), 4SD (lles) (well 233), 27 (Elk Mountain) (well 226), 31 (North Casper Creek) (1-36-82) (well 219), 34X (Tisdale) (well 207), Dynes 1Dt (well 237), Hughes 4A (well 228), Jupiter 18 (well 218), Rosenberg 36 (well 201), Tip 6 (well 200), SBP 194-243, 406, 407
- Salt Creek wells, 3SD3 (35-40-79) (well 214), 12 (25-40-79) (well 210), 21SD3 (35-40-79) (well 215), 21SD3 (2-39-79) (well 216), 24A (12-40-79) (well 208), 29DT (35-40-79) (well 211), 33X (35-40-79) (well 212), 34A (23-40-79) (well 209), 34SD3 (35-40-79) (well 213), SBP, 194-243, 406, 407
- Midwestern Oil and Gas Company, GAS, 523
- Mielenz, R. C., XXVII, 160, 178, 185
- Mier sandstone, fossils from, GC, 606; XIX, 1375
- typical exposure in Ciudad Mier, Tamaulipas, GC, 605; XIX, 1374
- Mier sandstone tongue, XXVI, 264
- Migrating oil in Bernstein field, XXVII, 1617
- Migration, GAS, v, 24, 75, 228, 235, 397, 471, 472, 590, 594, 595, 598, 800, 982
- conditions affecting, XV, 922
- displacement of water in sands, review, VI, 386
- effect of pressure on, VIII, 527
- effects of, XXIX, 18
- into Bradford sand in Bradford field, Pennsylvania and New York, STR II, 431
- lateral, XXII, 1379
- lateral, in Glenn pool, Oklahoma, XI, 1063
- lateral, in Osage County field, Oklahoma, STR II, 389, 390
- lateral, in Santa Maria field, California, STR II, 18
- lateral, in Texon zone, in Big Lake field, Texas, STR II, 526
- lateral, in Virgil pool, Kansas, STR II, 149
- lateral, of oil in Webster and Carolina-Texas sands, Laredo district, Texas, STR I, 408
- lateral, of oil into McMurray sands, XXII, 1142
- of gas, PROB, 463
- of gas from an oil pool through thousands of feet of overlying sediments, explanation of, XXIV, 1445
- of gas and water along fault planes at Salt Creek field, Wyoming, STR II, 594
- Migration of oil, PROB, 53, 254, 313, 335, 397, 431, 809; SBP, 3; STRAT 310, 311; II, 168; IV, 105, 254; XXI, 270 (See Oil Migration)
- along faults, PROB, 60, 561, 677
- along faults, theory postulating, XXI, 269
- distance of, SBP, 380-381
- effect of Los Bajos fault on, XXIV, 2123
- effects of, XV, 460

(Migration)

- from a distributed source, difficulties, PROB, 248
- from Arbuckle limestone into Chattanooga shale in Chetopa oil pool, Labette County, Kansas, XXV, 1934
- gravitational-hydraulic theory, PROB, 259
- halted by traps, PROB, 445
- in Appalachian province, PROB, 101
- in Artesia field, New Mexico, STR I, 120
- in Copley pool, West Virginia, STR I, 456
- in Cromwell field, Oklahoma, STR II, 313
- in Florence field, Colorado, theory of upward, STR II, 88
- in Glenn pool, Oklahoma, STR I, 240-242
- in Homer field, Louisiana, STR II, 222
- Mexia district, Texas, STR I, 384
- in New York oil fields, STR II, 283
- in Nigger Creek field, Texas, STR I, 417
- in Oklahoma City field, XIX, 699
- in Osage County field, Oklahoma, STR II, 390, 395
- in Smith-Ellis field, STR II, 567
- in Wheat pool, XX, 792
- influence of speed of, on water encroachment at Casmalia, California, XVII, 1133
- into Gose pay sand, XXIV, 113
- lateral, PROB, 8, 17, 63, 223, 249, 250, 319, 330, 566
- lateral, in Nemaha Mountains region, Kansas, STR I, 69; XI, 928
- lateral and vertical, a study of evidences for, PROB, 399
- limited, PROB, 63, 310, 556
- long distance, PROB, 101, 313, 333, 345, 859
- long-distance, function of carrier beds in, XV, 911
- replacement theory, PROB, 258
- selective, PROB, 154
- significance of classification of reservoirs, to the problem of, PROB, 445
- through chert, SBP, 189, 190
- to Kansas fields, XVII, 799
- vertical, PROB, 57, 63, 133, 148, 185, 207, 250, 313, 317, 368-370, 391, 397, 399, 565, 677; XX, 1481
- Migration of oil and gas, PROB, 676
- of oil and gas downward with regional dip of geosyncline, XXII, 839
- of oil and gas in western Kentucky, XVI, 240, 254
- of oil and water, further discussion, VIII, 697
- Migration of petroleum, RMS, 192
- compaction as cause of, XII, 1049
- digests of reports of members of research committee, XX, 612
- effects of salt dome on, XV, 62
- in limestone reservoirs in western United States and Canada, PROB, 347
- through sedimentary rocks, II, 168
- Migration of petroleum and natural gas in Pennsylvania, PROB, 447
- of sand masses in North Sea, RMS, 336
- origin, and accumulation of oil, problems of, PROB, 337
- relation of faulting to, STR II, 690

(Migration)

- up-dip, in Sundance formation, XXI, 768
- vertical, XXI, 1379
- vertical, in Big Lake field, Texas, theory of, STR II, 524
- vertical, in Cromwell field, Oklahoma, STR II, 313
- vertical, in Cushing field, Oklahoma, STR II, 398
- vertical, in Florence field, Colorado, STR II, 88
- vertical, in Homer field, Louisiana, STR II, 221
- vertical, in Kevin-Sunburst field, Montana, STR II, 267
- vertical, in Lost Soldier district, Wyoming, STR II, 666
- vertical, in northwestern Colorado fields, possible, STR II, 107
- vertical, in Petrolia field, Texas, STR II, 553, 555
- vertical, in Ventura Avenue field, California, STR II, 33
- Migration and accumulation of oil, influence of pressure relief in reservoir sandstones on, XXV, 1879
- marine invasion favorable for, XXV, 2019
- Migration and accumulation of oil and gas, cementing materials in sandstones and their probable influence on, XXV, 1839
- influence of cementing minerals on, XXV, 1872
- period of, XXII, 837, 842
- Migration and accumulation of petroleum, PROB, 247
- of petroleum, effect of, X, 917
- of petroleum and natural gas, XXIX, 460
- present interpretations of structural theory for oil and gas, PROB, 253, 287
- Migration and filtration of a water-oil mixture within a sandstone, XXV, 1874
- Migration and flushing, influence of rate of movement of water, VII, 222
- Migration and variation of crude oil at Spindletop, Jefferson County, Texas, GC, 309; XIX, 618
- Migration routes of aunas and floras between northeastern North America and northwestern Europe, CD, 133, 138
- Miguelito area, GAS, 169
- Mikhailovskii, XI, 493
- Mikton Oil Company, XXIV, 1088
- Milan limestone member of Wellington beds, XXIII, 1757
- Milch, L. SD, 45, 148, 163; IX, 326, 423; XIV, 1041, 1042
- tests of rock-salt flowage, XIV, 1042
- Milek, A., MEX, ix, 27, 31, 45, 57
- Miles, Ted, GAS, 119
- Milham Exploration Company, GAS, 129, 139, 141
- (wells 8, 9), SBP, 130-153, 403
- Milham group at Rock Crossing, Texas, XXI, 525
- Milham sands (Cisco), XXIII, 853
- Miliolid foraminifera, XXVIII, 1681, 1685
- Miliolid limestone, MEX, 36, 39, 40; XXVIII, 1143
- Cretaceous, in Florida similar to El Abra limestone of Mexico, XXVIII, 1722
- Miliolididae, MSC, 16, 82, 102, 195

- Milohids, PROB, 393; XXVIII, 1133
- Military application, expansion of normal domestic geologic activities for, XXVI, 1837
- Military classification, use of, in classification of fossils, XXV, 1245
- Military maneuvers, interpretation of terrain for, XXVI, 1832
- Military service, geologists in relation to, XXVI, 1186
- geologists will be deferred from, XXVII, 1278
- Military supplies and communications, maintenance of, XXVI, 1836
- Military use, adaptation of ground for, XXVI, 1834
- Milk River, Alberta, VII, 156
- Milk River, Foremost, and Pakowki formations of southern plains of Alberta, stratigraphy of, ALTA, 53, XV, 1181
- Milk River area and Red Coulee field, Alberta, Canada, review, XVI, 425
- Milk River formation, Alberta, ALTA, 7; GAS, 24-26, 29, 30, 36; XV, 1135
- gas production from, GAS, 26
- Milk River Ridge region, Alberta, sediments of Montana age in, ALTA, 87; XV, 1215
- Milk River sandstone, XXIX, 659
- Border-Red Coulee field, STRAT, 277
- in Red Coulee field, Alberta, ALTA, 35-37; XV, 1163-1165
- Milk Creek syncline, XXIX, 187, 193
- Miller, Jas K., XVIII, 1388
- Miller, John E., XIV, 798
- Miller pool, XXVI, 1031
- Millard, H. C., XI, 75
- Millard, William John, XXV, 2067, XXVI, 829
- geological notes on Belgian Congo, V, 661
- Millbrook-Belvidere pool, Michigan, GAS, 811
- Miller, A., XVII, 212
- Miller, A., and Haynes, W. P., review, XVI, 220
- Miller, A. D., and Campbell, Ian, GAS, 781; XVII, 625
- nepheline basalt in Richland Parish gas field, Louisiana, XII, 985
- Miller, A. H., CAL, 265
- Miller, A. K., PTNM, 539, 547, 676, 683; XII, 201; XVIII, 1134, 1659, 1663; XXIII, 499, 1449; XXIV, 41, 97, 248, 280, 281, 296, 309, 315, 317, 321, 327, 328, 354, 1130; XXV, 129, 387, 404; XXVI, 539, 547, 676, 683, 1377, 1566; XXIX, 1767, 1770
- comparison of Permian ammonoid zones of Soviet Russia with those of North America, XXII, 1014
- Miller, A. K., and Cline, L. M., XXIII, 86; XXIV, 312; XXV, 438
- Miller, A. K., and Furnish, W. M., PTNM, 565, 567, 573, 575, 598, 600, 604, 643, 650, 651, 652, 656, 659, 682, 683, 686, 696, 698, 699, 700, 701; XXIV, 1166, 1179, 1180; XXV, 97, 99, 402, 404; XXVI, 565, 567, 573, 575, 598, 600, 604, 643, 650, 651, 652, 656, 659, 682, 683, 686, 696, 698, 699, 700, 701; XXIX, 1148, 1149, 1767
- Miller, A. K., and Warren, P. S., XXIV, 272
- Miller, A. K., Dunbar, C. O., and Condra, G. E., XXVI, 689
- Miller, A. K., Furnish, W. M., and Barrage, E. J., Ordovician fossils from upper part of type section of Deadwood formation, South Dakota, XX, 1329
- Miller, A. M., GAS, 941 STRAT, 173, 175; XXV, 689
- Miller, A. M., and Withers, F. S., GAS, 933
- Miller, Alden H., CAL, 265
- Miller, Alten S., VIII, 202; XVIII, 872
- Miller, B. Maxwell, XXIII, 1353, 1449, XXV, 127, 128
- Miller, Benjamin L., XXI, 333, XXIX, 79, 950, 951
- Miller, Benjamin L., and Clark, W. B., XXIX, 73
- Miller, Benjamin L., and Singewald, J. T., Jr., XVII, 512
- Miller, C. A., and Guthrey, W. M., STRAT, 797
- Miller, C. C., XXVI, 258
- report on South Texas section tenth annual meeting, Corpus Christi, October, 1938, XXII, 1712
- Miller, Charis R., GAS, 683, XVII, 1364
- Miller, Charis R., and Teas, L. P., GAS, 718; XX, 1434
- Raccoon Bend field, Austin County, Texas, GC, 676, XVII, 1459
- Miller, E., Floyd, XIII, 1055; XVII, 110; XXVII, 1411
- Miller, F. J., XIV, 434
- Miller, F. L., and Bartell, F. E., XXIV, 2164
- Miller, Guy, XVIII, 788
- Miller, H. C., GAS, 1005; XIX, 885
- Miller, Howard W., XIX, 1340
- Miller, Hugh, XXVI, 1221
- Miller, Irving, VIII, 55
- Miller, John Charles, XII, 394; XIV, 433; XXVII, 419, 1411; XXV, 2010, 2020; XXVI, 258; XXIX, 1417
- well spacing and production interference in West Columbia field, Brazoria County, Texas, XXVI, 1441
- Miller, John Charles, and Avery, C. Dwight, relationship of geology to unit operation of oil and gas fields, involving government lands XVIII, 1454
- Miller, John C., and Dobbin, C. E., Osage oil field, Weston County, Wyoming, STRAT, 847
- Miller, Lee S., STRAT, 239
- Miller, Loye H., CAL, 211, 265
- Miller, Robert H., analysis of some torsion-balance results in California, XV, 1419
- Miller, S. A., XXV, 2109
- Miller, W. Dana, X, 1230, 1249
- Miller, W. J., CAL, 42; XVII, 735; XVIII, 788; XXII, 563; XXIII, 1712; XXV, 210
- elements of geology, review, XXIII, 1251
- introduction to physical geology, review, XXV, 2212
- Miller, Wendell Zerbe, Burbank field, Osage County, Oklahoma, V, 502
- work in Davenport field, STRAT, 387
- Miller County, Arkansas, gas in, XXVIII, 267
- Millet, F. W., MSC, 13, 14
- Millammeter, SBP, 52, 54
- Millican dome, XXIX, 789
- Millican formation, III, 128, XIX, 224
- of Richardson in Van Horn region, XXIV, 147
- Millikan, C. V., PROB, 314; STRAT, 386; XVI, 862, XVIII, 1491; XX, 615; XXIV, 1353
- discussion of geology and unit operation, XVIII, 1491
- geological application of bottom-hole pressures, XVI, 891
- interrelations of folds of Osage County, Oklahoma, IV, 151
- petroleum engineering as an aid in exploration geology, XXIV, 1370
- reservoir pressure as evidence for or against vertical migration of oil, XX, 615
- review, XX, 1498
- Millikan, C. V., and Sidwell, C. V., PROB, 314
- Miliken anticline, XXII, 182
- Million limestone, Big Sinking field, STRAT, 178
- Millison, Clark, review, XIV, 1357
- Mills, III, 327; XI, 1303, 1304
- Mills, Coe S., XXIV, 694
- Mills, R. van A., PROB, 256, 284; SD, 28; VII, 223; VIII, 699, 727; X, 975; XII, 362; XIII, 1095; XIV, 27, 414; XV, 917, 920; XVII, 717, 719, 725, 981, 982; XXIV, 1363
- natural gas as a factor in oil migration and accumulation in vicinity of faults, VII, 14
- Mills, R. van A., and Wells, Roger C., PROB, 465, 466, 467, 470, 841 845, 850, 852, 853, 868, 910; STRAT, 319, 825; IX, 240, 858 1082; XI, 1284; XII, 362; XIV, 141; XVI, 934; XVII, 839, 1214, 1215; XXII, 263; XXIV, 487, 1428; XXV, 1862, 1865
- theory of effects of water in oil and gas fields, PROB, 834
- theory of origin of salt domes, IX, 858
- Mills formation, XXVII, 287
- Millsap Lake group, XXV, 1055, 1663
- Millsap limestone, II, 84; III, 134, 138, 140, 146, 148; V, 558; VI, 12
- Millstone grit, XXI, 1420
- (lower Upper Carboniferous) of England, grits of Artinsk not equivalent to, XXIV, 289
- Milmac Oil Company, XXIV, 1788
- Milner, H. C., sedimentary petrography, review, XXV, 169
- Milner, Henry B., VIII, 158, 542; IX, 1001; XIII, 503; XVII, 540; XVIII, 1565; XXIV, 2070, 2071; XXVI, 1755
- introduction to sedimentary petrography, review, VII, 194
- paraffin dirt, its nature, origin, mode of occurrence, and significance as an indication of petroleum, review, IX, 1118
- sedimentary petrography, review, XIII, 1490
- study and correlation of sediments by petrographic methods, review VII, 97
- supplement to an introduction to sedimentary petrography, review, XI, 427
- Milner, Henry B., and Raeburn, C., alluvial prospecting, review, XII, 1121
- Milroy, Doyle, GAS, 586
- Milroy, Doyle, Hanbury, Nellie,

(Milroy)

- Wheeler, and Cruce pools, redbeds in, GAS, 586
- Milstein, M., MEX, 157
- Milton, Charles, and Singewald, Jr., Joseph T., XXVIII, 60
- Milton, W. B. STRAT, 601
- Milton anticline, GAS, 524, 525
- Minas basin, FOP, 119; XXV, 1551
- Minco division of Permian, XXI, 1521
- variable thickness of, cause of, XXI, 1523
- map showing, XXI, 1522
- Minco series same as Leonard series, XXIII, 1678
- Mindanao Trough, RMS, 53, 350
- Minden dome, Webster Parish, Louisiana, geological and geophysical data, XXVII, 60
- Mineola, Texas (well 361), SBP, 292-335
- Miner, H. E., and Hanna, Marcus A., XXV, 1862
- Mineral, destruction of, in preparatory treatments for analysis, RMS, 594
- Mineral aggregates in Bethel sandstone, XXVIII, 88
- Mineral analyses, RMS, 530; STRAT, 586
- sample form for recording, RMS, 608
- Mineral analysis of sediments, RMS, 592
- of sediments, references on, RMS, 613
- Mineral assemblage much like that of Hornblende zone carried into Gulf of Mexico by Rio Grande, XXIV, 2101
- Mineral assemblages characterizing subsurface heavy-mineral zones, XXIV, 2073
- Mineral cements, influence of, on pressures in oil and gas fields, XXV, 1876
- Mineral composition, alterations in, in subsurface layers, RMS, 392
- effect of abrasion on, RMS, 44
- influence of, on sorting, RMS, 37
- of beach deposits, RMS, 211
- of calcareous sediments, in Bahamas, RMS, 287
- of Cambrian shale from Manchuria, RMS, 509
- of clayey sediments, RMS, 616
- of clays, relation of, to physical properties, RMS, 478
- of Red Medina shale in Ohio, XXIV, 680
- of samples from Vance well, XXIV, 689
- of sands of North Sea, RMS, 344
- of wind-borne material, RMS, 498, 502
- Mineral concentration connected with leaking gases in Angelina County, Texas, XXIV, 878
- Mineral constituents in red clay, RMS, 412
- of Atlantic sediments, RMS, 381-385
- of colloid and clay fractions of sediments, RMS, 623-628
- of sediments in Cape Verde Basin, RMS, 497
- of subsurface layers in Atlantic sediments, RMS, 392-394
- Mineral content, RMS, 587
- calculated, of fine white material in Great Salt Lake clays, XXII, 1346
- of Frio formation in Sugarland field, GC, 715; XVII, 1367

(Mineral)

- of sediments in Santa Monica Bay, XXII, 210
- Mineral deposition in geologic section, variations of, XXV, 1867
- Mineral deposits, economic geology of, XXI, 529
- geophysical survey of the Reich as background for prospecting for, XXII, 494
- in Balsas Basin, Mexico, XX, 1295
- Mineral districts in Sinaloa and Nayarit province, XX, 1284
- Mineral economists needed by the government, XXV, 1432
- Mineral exploration, aerogeology in, XXIX, 106
- Mineral frequency, RMS, 600, 604, 613
- variations in, RMS, 609
- Mineral gradient, RMS, 593, 609
- Mineral grains, economic application of, XXVII, 940
- Mineral industry of Far East, review, XIV, 1358
- Mineral interest, appraisal of, in a proved and producing oil and gas property, XXVI, 1283
- Mineral interests in a producing oil and gas property, definitions of, XXVI, 1285
- Mineral King, CAL, 64, 68, 311
- Mineral nutrients for plants in sea, RMS, 439
- Mineral oils, artificial, chemical properties of, XXIV, 1872
- natural and artificial, comparison of properties of, XXIV, 1872
- Mineral petroleum, PROB, 1
- Mineral precipitates as cementing material, sandstones with, XXV, 1858
- in sandstone reservoirs, influence on migration and accumulation, XXV, 1878
- Mineral resources of South America, development of, XXVI, 1209
- Mineral resources and geology of Washington County, Oklahoma, XXIV, 2185
- Mineral springs, metal mines, and fumaroles, analyses of natural gases from, GAS, 1063
- Mineral Wells area, west-east log section from Marathon area to Stratigraphic base line, upper Canyon, XXIV, 76
- Mineral Wells sandstone, III, 138
- Mineral zones at Kettleman Hills, XVIII, 1567
- subsurface, correlation of, with formations exposed at surface and interpretation, XXIV, 2094
- Mineralization, Cedar Lake field, Texas, XXIV, 862
- Coles Levee area, California, XXIV, 871
- La Rosa field, Texas, XXIV, 867
- Monument and Hobbs fields, New Mexico, XXIV, 866
- Mineralization values, frequency of occurrence of, XXIV, 873
- Mineralized waters, PROB, 148
- Mineralogical analyses of Lodo, Yokut, and Domingue sandstones, XXIV, 1742
- Mineralogical analysis, XXI, 1333
- Mineralogical classification, quantitative, Johannsen system of, XXIX, 1028
- Mineralogical data, RMS, 590
- Mineralogical investigations with view

(Mineralogical)

- to correlating beds in Permian of Hunter River area, XXIV, 647
- Mineralogical properties, maps of, XXIX, 1256
- Mineralogisch-geologisches Institut of the University of Rostock, Germany, RMS, 496, 616
- Mineralogy of Bethel sandstone, XXVIII, 71
- variations laterally and vertically, XXVIII, 91
- Mineralogy of Eocene sandstones in California, XXIV, 1741
- of Narrabeen and upper Marine series, XXIV, 645
- of Paleozoic limestone in Turner Valley, graph of, XXIV, 1627
- of sedimentary rocks, review, XVIII, 267
- of sediments in Hunter River area, XXIV, 638
- Mineralogy and paleontology, economic—an appraisal, XXVII, 938
- Minerals, classification of, for heavy liquid, RMS, 602
- classification of, for magnetic separation, RMS, 602
- identification of, RMS, 603
- in cap rock at Hoskins Mound dome, GC, 846; XX, 168
- in cap rock at Jefferson Island dome, GC, 1005; XIX, 1625
- in Oriskany sandstone, percentages of, XXII, 557-559
- in salt-dome cap rock, list of, GC, 120; XVIII, 213
- in sediments, determination of, with X-ray, RMS, 616-630
- in world affairs, XXVIII, 565
- individual, present in a drill-cutting sample, X-ray diffraction by crystalline powder a method of determining, XXI, 1339
- interference figures of, diagram of, RMS, 620
- of Franciscan metamorphics, XXVII, 169
- of Gulf Coast rock salt, XXI, 1283
- of Sespe formation, California, and their bearing on its origin, XII, 747
- percentages of, in sediments, RMS, 529
- precipitation of, by bacteria, RMS, 423
- relation of, to glauconitization, RMS, 513-515
- separation of, in sediment studies, RMS, 595
- significance of, in Oriskany sandstone, XXII, 560
- strategic, need for geologists in locating, XXVI, 1302
- studies of sediments, RMS, 525-531, 592-615
- variations of, in sands of Cedar Point spit, Lake Erie, Ohio, RMS, 610
- Minerva oil field, Milam County, Texas, VIII, 632
- Mingaye, XI, 75, 77
- Minich, K., XVIII, 938
- Minimum eroding velocity, RMS, 27
- Minimum limiting closure, PROB, 730
- Minimum scale-error chart, XXI, 347
- Minimum scale-error graph for use in solving dip problems, XXI, 346
- Mining methods, Bryan Heights dome, SD, 690; IX, 625

- Mining regions, stratigraphical and structural studies in, XIX, 416
- Mining Section of International Congress of Mines, Metallurgy, and Applied Geology, Paris, October, 1935, papers presented in, review, XX, 320
- Ministerio de Fomento de Perú, XXI, 109
- Minnekahta limestone, XXVI, 1563
- surest key-bed in regional correlations of Permian formations and their subjacent Pennsylvanian and superjacent Triassic beds, XXV, 431
- Minnelusa, lower, formation, XXI, 993
- Minnelusa formation, PROB, 161; XXIII, 921; XXV, 1841, 1842; XXVI, 1563
- alternations of gypsum and sandstone in, XXI, 1249
- in Beulah district, northwestern Black Hills, Wyoming, XV, 183
- in Black Hills of South Dakota, XIV, 619
- in Black Hills, oil shale in, XXI, 1247
- isopach map, XXVI, 1574
- Minnelusa sandstone, V, 190; XXII, 680; XXVII, 465, 471
- productive in Lance Creek field, Wyoming, XXIV, 1101
- Minnesota, Cambrian in, X, 194
- Cretaceous in, X, 195
- Devonian in, X, 195
- east-central, pre-Cambrian and Cambrian relations in, XXIV, 744
- geological map of, X, 193
- oil and gas possibilities, X, 190
- oil reserves, VI, 44
- Ordovician in, X, 194
- Pleistocene in, X, 196
- Minnewanka formation, XXVII, 44
- Minnewanka section, XXVII, 45
- Minnie Bock field, XXVII, 745
- Minor, H. E., GAS, 729; PROB, 324, 327, 651, 653, 669, 836, 893; SD, 470, 546, 774, 777; III, 311, 312, 320; IX, 35; XIV, 1156; XXIV, 1401, 1406, 1458; XXVI, 865
- chemical relations of salt dome waters, SD, 777; IX, 38
- Egderly oil field, Louisiana, SD, 470, IX, 497
- Goose Creek oil field, Harris County, Texas, SD, 546; IX, 286
- memorial of William Claude McGlothlin, XXVI, 1434
- oil-field waters of Gulf Coastal Plain, PROB, 891
- Minor, H. E., and Hanna, Marcus A., GAS, 661; XXIX, 172
- East Texas oil field, XVII, 757
- East Texas oil field, Rusk, Cherokee, Smith, Gregg, and Upshur counties, Texas, STRAT, 600
- Minor oil fields of Kern County, California, review, VIII, 832
- Minor tension faults, XXIV, 1636
- Minshall, F. E., XXIV, 1706
- Minshall, F. W., PROB, 12, 13; XXII, 1097
- Minshall coal, XXIII, 1387
- Minshall limestone, XXIII, 1387, 1389
- Mint Canyon, MSC, 71, 156
- Mint Canyon continental beds, XXIII, 533
- Mint Canyon district, CAL, 211, 311
- Mint Canyon formation, CAL, 34, 200, 203, 213, 222, 303; MSC, 133, 157, 174
- (Mint)
- climatic implications of, CAL, 213
- in Tejon Quadrangle, XXI, 215
- Mint Canyon formation vertebrates, MSC, 156
- Mint Canyon mammalian fauna, MSC, 157
- correlative significance, MSC, 133, 174
- Mint Spring Bayou, Vicksburg limestone at, GC, 345; XIX, 1655
- Mint Spring facies, XXVIII, 60
- Mint Spring marl, XXVIII, 1316
- Mint Spring marl member, XXVIII, 1326
- Minton, J. A., XXVII, 1317
- Minton, Jesse, XXIX, 72
- Minton, Joseph W., and Ferguson, Wm. Boyd, Clay Creek dome, Washington County, Texas, GC, 757; XX, 68
- Minton, J. W., and Merritt, C. A., XVII, 245, 246
- dolomites of Stillwater, Wellington, Garber, Hennessy, and Duncan formations, review, XV, 479
- Minton, Robert J., XXV, 1731
- Miocene, CAL, 3, 5, 8, 10, 14, 15, 17, 19, 20, 23-26, 29, 31, 34, 36, 38, 42-44, 46, 52, 54-56, 78, 81, 87, 88, 92-94, 97, 106, 111, 114, 120, 121, 124, 134, 142, 146-149, 151, 152, 155-158, 161-227, 237, 238, 240, 241, 243, 244, 248, 249, 253, 254, 259, 261, 274, 282-287, 289, 290, 293, 295-300, 302-304; GAS, 222, 224, 225, 230, 1008; MEX, 137, 138, 140, 184, Fig. 12 (in pocket); MSC, 3, 19, 20, 26, 32, 51, 55, 68, 121, 127-129, 134, 160, 172, 173, 181, 207, 220, 236, 238, 241, 254, 257, 264, 274, 340, Fig. 14 (in pocket); PROB, 61, 137, 149, 185, 186, 191, 192, 206, 214, 404, 405, 407, 737, 750, 754, 786, 790, 797; RMS, 155, 259, 261, 522; SC, 59, 68, 70, 77, 91, 134; STRAT, 12; XX, 1605, 1614, 1616, 1623, 1637, 1680
- Amelia field, Texas, XXIII, 1643
- Anacapa, SC, 108; XX, 1654
- Anse la Butte dome, Louisiana, XXVII, 1133
- Antillean-Caribbean region, XXIV, 1578
- Assam, XVIII, 305
- Blue Mountains, XXIX, 1385
- Boling field, GAS, 702
- Borneo, V, 417; XXVIII, 1447
- brackish and non-marine, in southeastern Texas, XXVIII, 977
- Brea Canyon-Olinda fields, PROB, 215
- Brea-Olinda field, GAS, 212
- Buckeye field, Texas, GC, 743; XIX, 387
- Buena Vista field, PROB, 201
- Caliente Range, XXV, 215
- Caliente Range and environs, California, XXV, 193
- Miocene, California, STRAT 3; VI, 306; VIII, 792, 797; XII, 969; XIX, 1820; XXI, 983; XXII, 1056; XXIII, 25, 51, 61, 522, 532; XXV, 195; XXVI, 157, 1141, 1610, 1616; XXVII, 869; XXVIII, 745
- biostratigraphic classification of, MSC, 72
- foraminifera of, MSC, 66
- foraminiferal sequence in, MSC, 136
- foraminiferal zones, SC, 34; XX, 1580
- (Miocene)
- length of, SC, 34; XX, 1580
- oyster sequence in, XXV, 247
- stratigraphic distribution of Foraminifera in, MSC, 79
- stratigraphic occurrences of Foraminifera in, MSC, 137
- Miocene, Catahoula Parish, Louisiana, XIV, 437
- Chico Martinez Creek, XXVII, 1365
- chief source of new oil in south Louisiana, XXVI, 988
- Chokrak series of, in Russia, XXI, 1077
- Clay Creek salt dome, XV, 46
- Colombia, X, 398; XXVI, 804
- Colorado, XXII, 1034
- Cuba, XVI, 541
- definition, XIX, 532
- distribution of volcanic rocks, SC, 38; XX, 1584
- east and west of Los Angeles Basin, SC, 118; XX, 1664
- East Hackberry salt dome, XV, 247
- Ecuador, XIV, 287
- Edison field, STRAT, 3, 4
- Elk Hills field, California, STR II, 49
- Elwood field, GAS, 167
- Esperon dome, GC, 876; XXIII, 1651
- European, MSC, 180; VI, 526
- Florida, MSC, 329; XXV, 264
- Florida, chart showing ranges of diagnostic fossils in, XXV, 271
- Florida, foraminifera of, MSC, 176
- French fields, XVI, 1137
- Georgia, XXII, 792
- Grozny and Prahova oil fields, XVIII, 783
- Gulf Coast region, PROB, 113, 115
- Gulf coastal domes, GAS, 694
- High Island dome, GC, 955; XX, 606
- Hitchcock field, STRAT, 643
- Hockley dome, Texas, IX, 1046
- Hoffman field, XXIV, 2129
- Homer field, Louisiana, STR II, 217
- Houston district, XXVII, 1085
- Hugoton field, STRAT, 84
- Huntington Beach field, XVIII, 329
- ice, coal measures, and arid regions during, CD, 41
- Inglewood field, PROB, 216
- Iraq, XXIII, 962
- Japan, XVIII, 909
- Kern Front field, STRAT, 11, 12
- Kettleman Hills, XVIII, 1567
- Laredo district, Texas, STR I, 391; XXI, 1423
- late middle, diastrophism in Oregon and Washington, XXIX, 1409
- Lockport field, GAS, 732
- Long Beach field, California, STR II, 70; GAS, 185
- Louisiana, GC, 404; STRAT, 213; XVII, 635; XXII, 291, 1418, 1421; XXIII, 879; XXV, 1371; XXVII, 1104; XXIX, 795, 796
- Louisiana, cross sections showing interpretations of, XXIV, 442, 445-447, 450-451, 454, 455, 457, 459, 460, 462-463
- Louisiana Gulf Coast, XXIX, 796
- lower, MSC, 9, 39, 97, 99, 114, 164, 189, 328, Fig. 14 (in pocket)
- lower, Caliente range, XXV, 216
- lower, California, XXIV, 1119; XXVI, 1613
- lower, faunas, CAL, 179
- lower, heaving-shale zone, XXIII, 1119

(Miocene)

- 216
lower, in Anzoategui, XXI, 237
lower, in Tejon Quadrangle, XXI, 215
lower, Los Angeles Basin, California, X, 756
lower, Persia, XVII, 229
lower, producing sands, XXV, 2010
lower, type of crude oil at Spindletop, GC, 311, 318; XIX, 620, 627
lower, Valentine dome, GC, 1040; XVIII, 543
lower, and upper Oligocene in South Texas, XXVII, 745
marine, formation, XXV, 2012
marine upper, of San Pablo Bay, XXV, 248
Maryland, XXIX, 902
McKittick field, XI, 617; XVI, 8
middle, MSC, 110, 163, 164, 170, 172, 176
middle, in California, XXV, 224
middle, in Tejon Quadrangle, XXI, 215
middle, type of crude oil at Spindletop, GC, 311, 317; XIX, 620, 626
middle Magdalena Valley, XXIX, 1100
Mississippi, XXVIII, 60
molluscan, in Anzoategui, XXI, 237
Montebello field, PROB, 213
Mykawa field, GAS, 727
New Guinea, XXIII, 960
New Mexico, XXII, 527
Newport Beach field, California, XII, 273
North Belridge field, GAS, 137
northern Colombia, XXIX, 1096
northwestern Colorado, STR II, 99
of Ecuador, notes on, XII, 671
of North Sea, RMS, 331, 332
Oligocene, Jackson Eocene, and Lower Eocene crude oils, XXI, 923
Miocene or Eocene in Colombia, XI, 153
Miocene or Pliocene fauna from Burkeville, Texas, XXVIII, 979
Orange field, GC, 885; XX, 536
Pacific coast of Costa Rica, XXVI, 1653
Pacific geosyncline province, XIII, 435
Panama and Costa Rica, III, 365
Peru, XII, 25
Pierce Junction, GAS, 700
Playa del Rey field, XIX, 179
Miocene, Pliocene, and Pleistocene formations in Rio Grande region, Starr and Hidalgo counties, Texas, XXI, 491
Poland, XVII, 1084; XVIII, 899
Port Neches dome, GAS, 730
-post, Maccabees fault, XXII, 303
post-Saucesian, MSC, 117
pre-Delmontian, MSC, 135
pre-Mohnian, MSC, 133
Rocky Mountain region, XXIII, 1151; XXVII, 425
Roumania, SD, 93, 138, 168, 180; IX, 154, 1171; XVIII, 877
Russia, XI, 501, 504; XXIII, 950
Salinas Valley, XXI, 1340
San Joaquin Valley, GAS, 124; XIII, 103
Santa Fe Springs field, GAS, 204
Santa Maria district, XXVII, 1338
Santa Maria field, PROB, 207
Santa Maria field, structural features of, XXIII, 72

(Miocene)

- Santa Maria Valley oil field, production from, XXIII, 61
Saratoga field, Texas, IX, 267
Seal Beach field, PROB, 219
south Louisiana, Pleistocene gravels unconformable on, XXVIII, 1251
South Mountain, California, XII, 744
south Texas, XXIII, 860; XXVI, 1005
south-central Texas, GC, 531; XXVII, 529
southeastern Virginia, XXIX, 82
southern California, VII, 415; XII, 646; XXVI, 189
southwestern part of Blue Mountains, XXIX, 1386
Spindletop field, XXI, 480
structure section, Palos Verdes Hills to Santa Monica Mountains, representing conditions at end of, SC, 119; XX, 1665
sub-Carpathian zone, IX, 1240
subsurface, of southern Louisiana, XXIV, 435
Sugarland, GC, 724; XVII, 1377
Tampico district, Mexico, IX, 144
Temblor Range, California, XXV, 1329
Texas, STRAT, 644, 728; V, 223, 326, 384; VIII, 437; IX, 21; XXII, 739, 1194; XXIII, 1640; XXVII, 732
Texas, fossil fauna and flora of, XXVIII, 993
Texas, surface features of, XXVIII, 983
Texas and Louisiana, IX, 80
Texas Coastal Plain, XXIX, 1721
Trinidad, XX, 1445; XXIV, 2103; XXVII, 1602
unconformities in San Joaquin basin, PROB, 804
unconformities within, PROB, 794; GAS, 126
unconformity at base of, GAS, 127
University field, STRAT, 213
Upper, MSC, 25, 28, 71, 78, 97, 163, 167, 270, 283, Fig. 14 (in pocket); XXV, 230
Upper Anzoategui, XXI, 238
upper, *Astrodrapsis* and *Ostrea* succession of, XXV, 239
upper, California, XXI, 978
upper, coarse clastics in Temblor Range, XXV, 1334
upper, Daszawa, XVIII, 899
upper, dolomitic shales, CAL, 197
upper, East Coyote field, GAS, 207
upper, fossil vertebrates near Burkeville, Texas, XXVIII, 1000
upper, Huntington Beach field, GAS, 189
upper, intraformational breccia, SC, 99; XX, 1645
upper, invertebrates, MSC, 67
upper, Los Angeles basin wells (Galloy & Wissler, 14), MSC, Fig. 14 (in pocket)
upper, mollusks, in Venice and Del Rey fields, California, XX, 152
upper, of western Gulf province, new Rangia from, XXIV, 476
upper, oolites, CAL, 198
upper, sand productive at Lirette, Louisiana, XXII, 743
upper, Southern California, MSC, 17
upper, Tejon Quadrangle, XXI, 215
upper Magdalena Valley, XXIX, 1103

(Miocene)

- uppermost, echinoid Zone, MSC, 87
Utah, XXIII, 125, 126
Venezuela, XXII, 1229; XXIII, 699, 702, 958
Venice field, PROB, 223
Ventura Avenue field, California, STR II, 33; PROB, 211
Ventura Basin, SC, 98; XIII, 755; XX, 1644
Ventura field, XII, 732
Ventura-Santa Barbara district, GAS, 160
Vernon Parish, Louisiana, XXIX, 1171
Virginia, XXIX, 906
Washington, FOP, 29; XXV, 1461
Washington, nitrogen in, GAS, 1059
West Columbia field, Texas, STR II, 458, 461, 466
West Ranch field, Texas, XXVIII, 201
Wheeler Ridge, California, X, 498
Wheeler Ridge field, PROB, 203
Miocene and Eocene in Rattlesnake Hills, XVIII, 848
Miocene and Eocene production in Fresno area, California, XXVII, 865
Miocene and Oligocene, boundary between, XXIII, 1560
Miocene and Oligocene crude oils more naphthenic than Eocene crude oils, XXI, 926
Miocene and Pliocene series in Gulf Coastal Plain, XXIII, 185
Miocene age of Catahoula, XXI, 495
of Honda series, XXVI, 819
of Reef Ridge shale, XXIII, 38
of upper beds of Catahoula formation in Texas, GC, 537; XVII, 535
Miocene Astoria formation, Cetothere from, MSC, 154
Miocene badland district near Caliente Mountain ridge, SC, 80; XX, 1626
Miocene basins and deposits, SC, 32; XX, 1578
Miocene beaches, RMS, 215
Miocene beds near Burkeville, Texas, description of, XXVIII, 990
of Forest sands, Cretaceous oil in, XXVII, 1617
Miocene breccias of Santa Barbara district, MSC, 131
Miocene brown shales of California, collophane from, XV, 257
Miocene clay beds near Burkeville, Texas, river snails and mussels from, XXVIII, 996
Miocene columnar sections, SC, 35; XX, 1581
Miocene costate forms of *Siphogenerina*, MSC, 14
Miocene crude oils, PROB, 111, 112, 117, 121, 122, 131, 138, 154
in Gulf Coast, PROB, 125, 130
Miocene diatomaceous shales, PROB, 177, 199
Miocene diatoms, CAL, 196; XXIX, 897
Miocene-*Discorbis vilardeboana* zone at High Island dome, GC, 917, 955; XX, 568, 606
Miocene-Eocene contact in North Carolina, XXIX, 911
Miocene facies, Upper, SC, 42; XX, 1588
Miocene faulting at Wilmington oil field, XXII, 1063
Miocene fauna, SC, 108; XX, 1654; XXIX, 911

- (Miocene)
 at Tepetate oil field, Louisiana, XXII, 291, 293-296, 300-304
 in New Jersey, XXIX, 894
 Miocene faunas, MSC, 170
 Lusiian fauna notably distinct from others, MSC, 124
 Miocene fishes in well cores from Torrance in southern California, XXIV, 2182; XXV, 319
 Miocene flanking sands in Big Hill, Jefferson County, GAS, 709
 in High Island, GAS, 710
 Miocene folding in Los Angeles basin, GAS, 173
 Miocene foraminifera, MSC, 21, 28, 32, 38, 49, 55
 ecologic factors, XXV, 252
 from Monterey shale of California, MSC, 16, 18
 of California, MSC, 3
 of California, relationships, MSC, 182
 of Contra Costa County, MSC, 56
 of Los Sauces Creek, MSC, 113
 of Reliz Canyon, MSC, 56
 of Sumatra and Java, Netherlands East Indies, XXVIII, 1758
 systematic catalogue of, MSC, 182
 Miocene foraminiferal assemblages from the California province, correlation chart of, MSC, Fig. 14 (in pocket)
 Miocene foraminiferal faunas, MSC, 169
 Miocene foraminiferal localities, MSC, 166
 Miocene foraminiferal sections, MSC, 2
 Miocene foraminiferal sequence, MSC, 84, 92
 Miocene fossils, XXIV, 2182
 Buckeye field, GC, 745; XIX, 389
 California, X, 132, 757
 Costa Rica, XXVI, 1650
 High Island dome, GC, 917; XX, 568
 in South Texas wells, XXV, 1043
 Jennings field, GC, 966; XIX, 1313
 marine, in subsurface, discovered in Galveston deep well, XXIII, 1604
 of Caliente Range, XXV, 220, bet. 256 and 257
 of southern Louisiana, plates showing, XXIV, 464-475
 Saratoga oil field, SD, 510
 Tepetate oil field, Louisiana, XXII, 291, 293-296, 300-304
 Miocene gas from Lost Lake, GAS, 717
 from Sugarland field, GAS, 716
 Miocene gas-producing horizons in Russia, XVIII, 757
 Miocene gas zone in Playa del Rey field, GAS, 193
 Miocene intensive folding in East Indies, XXII, 35
 Miocene limestones in Hungary, XVIII, 939
 Miocene mammalian fossils, SC, 73; XX, 1619
 Miocene marine formations, measured geologic sections, XXVIII, 1022
 Miocene marine invertebrate fauna in southern California, XXIII, 533
 Miocene marls, XXIX, 73
 Miocene Modela formation of Santa Monica Mountains, XXII, 206
 Miocene Nodosariis, MSC, 217
 Miocene nonmarine strata of Mohave Desert region, SC, 40; XX, 1586
 Miocene oil in Trinidad, XI, 204
 in Venezuela fields, XIII, 1189
 Miocene oils, PROB, 98, 116, 118, 129, 142, 152, 153
 Miocene-Oligocene contact, XXVIII, 1359
 Miocene organic shales, MSC, 21; PROB, 194, 218, 224, 225, 227
 Miocene orogenic phases, SC, 43; XX, 1589
 Miocene orogenies in California Coast Ranges, MSC, 91
 Miocene outcrops near Burkeville, sections, XXVIII, 986
 Miocene paleogeography in central Coast Ranges, MSC, 18
 in central Coast Ranges, X, 130
 Lower, SC, 37; XX, 1583
 Middle, SC, 39; XX, 1585
 of California, bibliography, X, 136
 of Salinas Valley, and volcanic tufts of Santa Lucia Range, California, XXI, 1940
 upper, SC, 41; XX, 1587
 Miocene-Pliocene contact in Puente Hills, XXIV, 651
 Miocene-Pliocene folding in Trinidad, XXIV, 2107
 Miocene-Pliocene-Pleistocene in West Columbia field, Texas, STR II, 458
 Miocene-Pliocene transition, MSC, 173, 181
 foraminiferal, MSC, 168
 Miocene-Pliocene transition beds, MSC, 32
 of Seal Beach, MSC, Fig. 14 (in pocket)
 Miocene production from Gulf Coast domes, GC, 5, 9; XVIII, 504, 508
 in California during 1940, XXV, 1163
 south Louisiana, XXVIII, 1251
 Miocene Rotalidae and Lagenidae, MSC, 14
 Miocene sand productive in Louisiana, XXIII, 883
 productive in Texas, XXIII, 883
 Miocene sand section, mineralized, at Jennings dome, XXVII, 1115
 Miocene sands, RMS, 44; XXIX, 210
 basal, photomicrographs of, XXVI, bet. 1450 and 1451
 in Gulf Coast area, GAS, 696, 705, 707, 708, 710, 719, 722, 726, 728-730, 732, 734
 in West Columbia field, Texas, STR II, 467
 production from, West Columbia field, XXVI, 1443
 Miocene section in Kettleman Hills, SC, 59; XX, 1605
 standard, of western Florida, comparison of, with section in Niceville, Florida, XXV, 271
 Miocene sections in Santa Maria Valley oil field to show variable thicknesses and disconformities, XXIII, 73
 Miocene sediments, carbon content of, SBP, 27-31
 carbon-nitrogen ratio, SBP, 34, 45
 Catahoula sandstone (Tca), SBP, 335-349
 Delmontian zone of Kleinpell (Tma, Tmb, Tmc, Tum), SBP, 87-153
 "Fleming formation" (Ti), SBP, 335-349
 Kleinpell's zones (Tum, Tmm, Tlm), SBP, 89-153
 Lagarto clay (Ti), SBP, 335-349
 Lusiian zone of Kleinpell (Tmf, Tmm), SBP, 87-153
 near Burkeville, environmental conditions of, XXVIII, 991
 near Morgan Hill, California, (Miocene)
 XXVII, 645
 Oakville sandstone (To), SBP, 335-349
 oil-bearing, in deep coastal zone, XXIV, 1085
 Potamides zone (To), SBP, 335-349
 Relizian zone of Kleinpell (Tmm), SBP, 87-153
 Ricardo formation (Tri), SBP, 87-153
 Saucian zone of Kleinpell (Tlm), SBP, 87-153
 Wissler's zones (Tma, Tmb, Tmc, Tmd, Tmf), SBP, 87-153
 Zemorrian zone of Kleinpell (Tlm), SBP, 87-153
 Miocene series in Gulf Coastal Plain, XXIII, 178
 type, MSC, 172
 Miocene shale, California, MSC, 49, 166, 171, 258, 275; X, 898; XII, 976
 Reliz Canyon, stratigraphic distribution of Foraminifera in, MSC, Table I (in pocket)
 Miocene shale faunules from Adelaida Quadrangle, MSC, Fig. 14 (in pocket)
 from Chimney Rock, Adelaida Quadrangle, MSC, Fig. 14 (in pocket)
 Miocene shales and mudstones of Coalinga region, MSC, 165
 Miocene species, North Belridge oil field, MSC, 66
 Miocene strata in Gulf Coastal Plain, map of Texas showing outcrop of, XXVIII, 980
 Miocene stratigraphic sequence, MSC, 1
 Miocene stratigraphy in southern Louisiana, XXIV, 436
 Miocene stratigraphy and paleontology of Palos Verdes Hills, California, XX, 125
 Miocene structure at Esperson dome, GC, 875
 Miocene transgression of sea in East Indies, XXI, 557; XXII, 35
 Miocene trend, XXVII, 735
 Miocene volcanic rocks along axis of San Rafael uplift, SC, 91; XX, 1637
 Miocene volcanism, XXVII, 147
 Miocene warping and faulting of Mohave Desert region, SC, 72; XX, 1618
Miohypsinia-Heterostegina zone, XXII, 989
Miohippus beds, XXV, 199
 Mio-Pliocene orogeny in Trinidad, XXIV, 2118
 Miquihuana beds, XXVIII, 1143
 Mirador, Temporal beds at, MEX, 110
 Mirador uplift in Ecuador, XI, 1274
 Miranda and Pettus districts, Gulf Coastal Texas, factors governing accumulation of oil and gas in, and their application to other areas, XV, 755
 Miranda City sand at Government Wells field, GC, 638; XIX, 1138
 Miranda district, PROB, 402
 Miranda member, XXIII, 1629
 Miranda oil field, V, 625
 Miranda sand, XXI, 1427; XXIV, 2131
 Cole field, Texas, gas production, STR I, 402
 Driscoll pool, GC, 626, 630; XVII, 822, 826
 Henne-Winch-Farris field, Texas, STR I, 403

(Mirando)

- Laredo district, Texas, STR I, 392
 Lopez field, STRAT, 689
 Mirando sand zone, XXIII, 1410
 Mirando Valley, XXI, 1423
 Mirando Valley field, XV, 764
 Mirando zone, XXII, 754
 Miri field, V, 417; XXVIII, 1449
 Misantla region, MEX, 6, 144
 Miscorrelations of coal beds, resulting from lack of cooperation in studies of stratigraphy, XXIII, 1509
 Misener formation, XXIV, 1997
 Nikkel pool, STRAT, 109
 Wherry pool, STRAT, 125
 Zenith pool, STRAT, 144-147, 153
 Misener-Hunton zone, XXIV, 2002
 in Keokuk pool, curve showing production from, XXIII, 244
 Misener sand, PROB, 293, 314, 767; STRAT, 446, 448; V, 406; XXVII, 798, 810
 (Dm) (Devonian), SBP, 260-284, 414
 East Tuskegee pool, STRAT, 444, 446
 in Oklahoma, PROB, 767; STR II, 327
 productive in Falls City field, Nebraska, XXV, 1657
 productive in Oklahoma and Kansas, XXV, 1657
 Seminole district, Oklahoma, STR II, 316, 327
 Voshell field, XVII, 180
 windblown theory of origin of, XXIII, 229
 Misener sandstone, main producer in Keokuk pool, XXIII, 228
 photomicrograph showing brachiopod in, XXIII, 230
 structure at Keokuk pool contoured on, XXIII, 234
 Misener sandstone and Hunton limestone, sketch showing position of Mixed zone between, XXIII, 229
 Misener zone productive in Zenith pool, Kansas, XXIV, 1002
 Misener shale, XXV, 681
 Miser, Hugh D., GAS, 514, 581, 656, 661, 1054; PROB, 779, 1016; SD, 217; SBP, 7, 8, 257; STRAT, 443, 458, 615; VI, 213; VIII, 323, 339, IX, 355, 983; XI, 1, 3, 4, 1312; XII, 161, 1012, 1070, 1088; XIII, 567, 594, 884, 891, 1442, 1443; XIV, 57, 58, 66, 777, 1071; XV, 808, 810, 811, 812, 817, 824, 827, 994, 1006, 1016, 1018, 1022, 1047; XVI, 131, 641, 727; XVII, 49, 972; XVIII, 245, 568, 1011, 1012, 1031, 1034, 1045, 1049, 1201, 1343, 1348; XIX, 230, 503, 1694; XX, 302, 482, 483, 486, 808, 1125, 1257; XXI, 2, 5, 34, 35, 258, 836, XXI, 1379, 1419, 1551; XXII, 803, 896; XXIII, 564, 580, 581, 1068, 1335, 1673; XXIV, 281, 301; XXV, 1624, 2023; XXVI, 9, 11, 13, 14, 15, 17, 43, 44, 57; XXVII, 1041; XXVIII, 117, 328, 1679; XXIX, 144, 1417
 Carboniferous rocks of Ouachita Mountains, XVIII, 971
 discussion of fluid mechanics of salt domes, GC, 105; XVIII, 1201
 discussion of pre-Carboniferous of Marathon uplift, XV, 1083
 Lower Cretaceous (Comanche) rocks of southeastern Oklahoma and southwestern Arkansas XI, 443

(Miser)

- memorial of David White, XIX, 925
 Ouachita boulder problem, XX, 490
 regional geologic studies for oil and natural gas, XXVII, 1387
 relation of Ouachita belt of Paleozoic rocks to oil and gas fields of Mid-Continent region, XVIII, 1059
 report of resolutions committee, 1935, XIX, 751
 review, XX, 322; XXIV, 388
 review of Tertiary stratigraphy of Louisiana, discussion, XVII, 869
 speech at unveiling of memorial to David White, XX, 625
 temperature of Oklahoma's deepest well, VIII, 525
 Miser, Hugh D., and Bass, N. W., XXI, 54
 Miser, Hugh D., and Hendricks, T. A., XX, 1347
 Miser, Hugh D., and Purdue, A. H., XI, 4; XII, 1074, 1076; XIV, 58; XV, 1021; XVIII, 1036, 1132, 1135, 1141, 1142, 1147, 1154, 1156; XX, 302, 309; XXI, 10, 11, 1420; XXV, 1652
 Miser, Hugh D., and Ross, Clarence S., pre-Cambrian rhyolite discovered in well in northwestern Arkansas, IX, 1115
 Miser, Hugh D., and Sellards, E. H., XVIII, 1253; XXIV, 2148
 pre-Cretaceous rocks found in wells in Gulf Coastal Plain south of Ouachita Mountains, XV, 801
 Miser, Hugh D., and White, David, XX, 625
 Miser, Hugh D., Longwell, C. R., and Paige, Sidney, XIII, 1444
 Miser, Hugh D., Ross, Clarence S., and Stephenson, Lloyd W., XVII, 772
 Misinterpretation of bulging surface in tracing lenticular sands, causes of, XXII, 832
 Misleading citations, injustice of, discussion, XIV, 521
 reply to R. T. Chamberlin's discussion, XIV, 633
 Missoa Trujillo formation, XXIV, 1567
 Misool, Cretaceous sequence on, XXII, 19
 Mission Canyon limestone, XXVI, 314, 326
 insoluble residues from, XXVI, 329
 Mission Canyon member, XXVI, 318
 Mission field, Oklahoma, STR II, 316, 317
 (well 299), SBP, 255-285, 408
 Mission field, Texas, III, 299, 307
 Mississippi, FOP, 151; MSC, 177, 179; PROB, 579; RMS, 154, 645; XXV, 1583
 Mississippi, Alabama, and Florida, correlation of Oligocene deposits of, XXVIII, 1315
 subsurface Tertiary zones of correlation through, XXII, 984
 Mississippi, Alabama, Arkansas, and Texas, sections of Upper Jurassic formations in, XXVII, 1421
 Mississippi, Alabama, Texas, and Louisiana, correlation chart for lower Claiborne, Wilcox, and Midway groups of, XXIX, 47
 Mississippi, Amory field, GAS, 857, 873, 876
 beds of middle and lower Austin age

(Mississippi)

- in, XXIX, 1009
 beds of upper Eagle Ford age in, XXIX, 1009
 Cambro-Ordovician in, FOP, 151; XXV, 1583
 Cenozoic in, XXVIII, 47
 central, salt dome basin in, XXII, 822
 columnar section of surface formations in, XXIV, 2034
 Comanche in, XXVIII, 35, XXIX, 826
 commercial oil production in, XXIV, 1025
 counties productive in, XXIX, 831
 Cretaceous in, FOP, 152; XXV, 1584; XXVIII, 35, 804
 Cretaceous in Midway dome, XXII, 821
 Cretaceous fossils in, XXVIII, 39
 cross section and columnar section, Clarke and Wayne counties, XXI, 81
 crude oil production for, XXVI, 998
 deepest rocks at Jackson, discussion, XXII, 927
 Mississippi, developments in, XXVII, 992
 in 1940, XXV, 1016, 1020
 in 1941, XXVI, 992
 in 1943, XXVIII, 801, 803
 Mississippi, earth cracks in, XVI, 214
 eastern, faunas of Jackson group of, XXI, 92
 eastern, micro-paleontologic analysis of Jackson Eocene of, XXI, 80
 eastern, section, XXVIII, 26
 eastern, and western Alabama, correlation of Cockfield and Gosport formations, XXII, 309
 east-west geologic section from northern Sharkey County to northwest Madison County, XXVIII, 50
 east-west geologic section through central Sharkey County, to Tinsley field, XXVIII, 52
 electrical log correlations in, XXVIII, 38, 42, 44, 48, 49, 54, 57, 58
 Eocene in, XXVIII, 47, 804
 exploration in 1944, XXIX, 821
 facies changes in Upper Cretaceous toward north in, XXII, 1645
 foraminiferal check list from Jackson Eocene of, XXI, 82
 future prospects in, XXIX, 833
 Garland Creek-Shubuta bridge section of the Jackson Eocene, Clarke and Wayne counties, XXI, 80
 gas in southern Cincinnati Arch region, GAS, 856-858, 873, 875
 general geology of, XXVIII, 29
 geology and oil prospects, V, 490
 geophysical activity in 1940, XXV, 1018
 Hartselle sandstone in, GAS, 856
 index map showing areas underlain by Jackson and Monroe gas rock, XXVIII, 31
 Jackson Eocene from borings at Greenville, XXIII, 1393
 Jackson gas field, Hinds and Rankin counties, GAS, 881
 Jurassic in, XXVIII, 33
 leasing activity in 1940, XXV, 1017
 leasing activity in 1942, XXVII, 991
 magnetic vectors in, XVI, 1194
 map showing limits of lower Tuscaloosa and upper Eutaw, XXVIII, 32

(Mississippi)

Meridian area, Lauderdale County, XVI, 491
 Mesozoic era in, XXVIII, 33
 Miocene in, XXVIII, 60
 Miocene fossils in, XXVIII, 61
 monoclinal structure of, XXVIII, 29
 new discoveries in 1940, XXV, 1019
 Newman salt dome, Warren County, XXV, 424
 northeastern, Kentucky, and Tennessee, oil horizons of, VIII, 621
 northwest-southeast geologic section through Holmes County, XXVIII, 46
 oil and gas possibilities in, I, 152
 oil and gas prospects, I, 152; V, 490
 oil reserves, VI, 44
 Oligocene in, XXVIII, 59
 petroleum prospecting in, VII, 684
 Pleistocene and Recent in, XXVIII, 62
 Pliocene in Midway dome, XXII, 819
 present status of oil and gas prospects in, V, 490
 pre-Tertiary rocks from deep wells at Jackson, XVII, 38
 production in 1944, XXIX, 833
 references on oil prospects in, FOP, 153; XXV, 1585
 review, VI, 385
 salt-dome development in 1944, XXIX, 828
 Scanlan or Midway dome, Lamar County, XXII, 816
 section from Issaquena County to Scott County, XXVIII, 34-35
 significance of Upper Cretaceous fossils from wells in, XXIX, 1008
 southeast, guidebook of the eleventh annual field trip of the Shreveport Geological Society in, review, XIX, 571
 structure map contoured on base of Porters Creek clay, XXVIII, 30
 study of Vicksburg group at Vicksburg, GC, 335; XIX, 1645
 subsurface data on Covington County, GC, 369; XIX, 1148
 surface formations in, XXIV, 2033
 Tatum salt dome, Lamar County, XXV, 424
 Tertiary in, XXVIII, 47
 Tertiary sediments in, XXIII, 1393
 Tinsley field, Yazoo County, XXIV, 1027
 upper, and lower Ohio valleys, classification of Mississippian in, XXIV, 771
 Upper Cretaceous in, XXIV, 1027; XXV, 1601
 Wilcox group belt from Benton County to Lauderdale County, XVIII, 53
 wildcat drilling in 1942, XXVII, 994
 wildcats drilled in 1943, XXVIII, 804
 Mississippi and Alabama, Cretaceous in, XXVII, 906
 geologic map of Upper Cretaceous formations of, XXII, 1640
 Selma chalk in, XXI, 806
 stratigraphic and age relations of Upper Cretaceous formations of, XXII, 1642
 stratigraphy of Upper Cretaceous series in, XXII, 1639
 Mississippi and Louisiana, geology of, STRAT, 605
 Mississippi and Red rivers, meander patterns of, XXIII, 1206

Mississippi and west Alabama, development in 1944, XXIX, 816
 Mississippi Alluvial Plain, GAS, 742
 Mississippi arch, XXI, 773
 Mississippi delta, RMS, 3, 154, 155, 179, 450, XXIII, 202, XXIX, 1309
 building of, XIV, 867
 subsidence of, XXIX, 1325
 tidal lagoon sediments on, RMS, 178
 tidal lagoon sediments on, references on, RMS, 194
 Mississippi drainage basin, lower, some Silurian correlations in, XXVI, 1
 Mississippi embayment, PROB, 520; XXI, 775
 Upper Cretaceous in, XXIII, 1401
 Mississippi embayment area, PROB, 515
 Mississippi fields, production in 1943, XXVIII, 802
 Mississippi Geological Society Cretaceous field trip, May, 1940, XXIV, 759
 developments in southeastern United States in 1942, XXVII, 990
 field trip, December, 1945, XXIX, 1688
 fourth annual field trip, December, 1940, XXV, 181
 Mississippi oil-field and salt-dome names, XXVIII, 1046
 possible future oil provinces of southeastern United States, FOP, 143; XXV, 1575
 Mississippi lime, FOP, 82, 88; GAS, 468, 477, 862; PROB, 292, 293, 298, 301, 305, 773, 859, XXI, 507, 563; XXV, 1514, 1520, 1657
 buried hills in shoestring pools of Greenwood County, Kansas, STR II, 159
 Burrton field, GAS, 481
 Dewey area, Oklahoma, STR II, 368
 Eldorado field, Kansas, STR II, 161, 166
 Galva pool, GAS, 475
 McPherson County field, GAS, 465, 471
 McPherson pool, GAS, 475
 Mervine field, Oklahoma, STR I, 164
 Morison field, Oklahoma, STR I, 152, 153
 of central Kansas, correlation of subdivisions of, with formations in Missouri, XXII, 1594-1596
 of central Kansas, stratigraphy of, XXII, 1591
 of central Kansas, studies of insoluble residues from, XXII, 1588
 of Kansas, Burlington-Keokuk formations of Missouri correlated with middle zone of, XXII, 1594
 of Kansas, correlations of zones of, with Boone limestone of Missouri, XXII, 1591
 oil and gas field nomenclature map of central Kansas showing fields producing from, XXII, 1590
 Osage County field, Oklahoma, STR II, 381
 Ponca field, Oklahoma, STR I, 164, 166
 producing zones of, XXII, 1598
 Rainbow Bend field, Kansas, STR I, 54, 58, 59
 Salina basin, XII, 183
 South Blackwell field, Oklahoma, STR I, 172
 stratigraphic cross sections through central Kansas with top of Lansing

(Mississippi)

group (Pennsylvanian) as datum plane, to show subdivisions of, and names of outcrop equivalents in Missouri, XXII, 1592, 1593
 Virgil pool, Kansas, STR II, 143, 146
 west of Granite Ridge in Kansas, X, 96
 Mississippi lime area of Kansas, index map showing geographic relationships with central Kansas buried uplift, Nemaha buried mountains, outcrop of top of Boone limestone, and Tri-State zinc and lead district, XXII, 1589
 Mississippi limestone, XXIII, 803, XXIV, 1791, 2013
 Mississippi limestone and Chattanooga shale, deposition of, on post-Viola erosion surface, XXIV, 2014
 Mississippi maps and sections, list of, XXII, 464
 Mississippi oil-field and salt-dome names, XXVIII, 1046
 Mississippi Power and Light Company, GAS, 894
 Mississippi production in 1941, XXVI, 997
 Mississippi River, RMS, 6, 25, 35, 40, 44, 117, 153, 179, 225, 637
 Mississippi River, abandoned channels of, and active and abandoned channels of Red River, in alluvial valley of central Louisiana, XXIII, 1207
 Mississippi River delta, Lower, reports on geology of Plaquemines and St. Bernard parishes, XXI, 1213
 Mississippi River delta sedimentation, RMS, 153
 bibliography on, RMS, 174
 Mississippi River Fuel Corporation, The, GAS, 771
 Mississippi River sands, RMS, 38
 Mississippi Sound, RMS, 160, 166
 Mississippi Valley, Ozark Highland region, and combined Arkansas Valley and Ouachita Mountain region, correlation between section for, GAS, 538
 upper, correlations up to 1934, of beds above St. Peter sandstone in, XIX, 1113
 Mississippi Valley states, correlation of Pennsylvanian in, XV, 124
 Mississippi wildcat drilling, XXV, 1002
 Mississippian, CAL, 62-64; GAS, 105, 279, 500, 876; MEX, 7, 8, 33, 93; PROB, 103, 159, 172, 349, 356, 460, 490, 500, 501, 506, 517, 561, 623, 682, 725, 822; XXIX, 194
 Adair County, Oklahoma, XXIV, 412
 Alberta, STRAT, 303
 Appalachian region, PROB, 104; XXV, 798
 Arbuckle Mountains, Oklahoma, XXV, 1650
 Arizona, VI, 48
 Arkansas coal field, Fayetteville shale of, XXI, 1407
 Basin fields, Illinois, XXIII, 1505
 beds of Chester series of, most widely productive beds in Illinois, XXIV, 853
 Bend arch province, XIII, 427
 Big Sinking field, STRAT, 180
 Border-Red Coulee field, STRAT, 303
 Bryson field, STRAT, 541, 542
 Cabin Creek field, West Virginia,

(Mississippian)

STR I, 468
 Canada, FOP, 119; XXIII, 964; XXV, 1551; XXIX, 656
 Central Basin platform in western Andrews County, Texas, XXIV, 21
 central Tennessee, XX, 1072
 Chanute pool, STRAT, 62, 63
 China, XXVIII, 1422
 Colorado, XXVIII, 531
 Cunningham field, Kansas, XXI, 507
 Cushing field, Oklahoma, STR II, 401
 Dakota basin, XXVI, 1564; XXVII, 1592
 Davenport field, STRAT, 389
 Depew area, Oklahoma, STR II, 367
 distribution of, in Mid-Continent region, XXV, 1648
 divisions of, XXIX, 135
 East Tuskegee pool, STRAT, 445
 east-central United States, XXII, 1526
 eastern coal field, Kentucky, STR I, 74, 75
 Eastern Interior basin, bibliography on, XXIV, 855
 Eastern Interior basin, map showing areas covered in study of, XXIV, 772
 Eastern Interior Coal basin, GAS, 821; XIII, 420
 eastern Kentucky, GAS, 917
 Eldorado field, Kansas, STR II, 161, 162
 Flat Gap-Win-Ivityon gas field, GAS, 944
 Florence field, Colorado, STR II, 78
 Florida, XXIX, 929
 Franklin Mountains, Texas, XXIV, 165
 Garber field, Oklahoma, STR I, 179
 Glenn pool, Oklahoma, STR I, 233; XI, 1056
 Greenwich pool, Kansas, XXIII, 648, 649
 Hart County, Kentucky, field, GAS, 856
 Illinois, GAS, 825, 831; IV, 45; V, 95; XXIII, 807, 815, 1355; XXVI, 1087; XXVII, 818; XXVIII, 751; XXIX, 687
 Illinois, Indiana, and western Kentucky, XXIV, 770
 in oil fields of Eastern Interior basin, economic importance of, XXIV, 770
 in subsurface in Mid-Continent, XXV, 1656
 Indiana, IX, 321; XXVI, 1093
 Indiana, producing formations in, XXIV, 854
 Interior Highland region, GAS, 539
 Iowa, XXIV, 1496; XXV, 1656
 Jesse pool, Oklahoma, XXII, 1566
 Kansas, GAS, 466, 487, 502; STRAT, 63, 106, 124, 143; II, 105, 109; IV, 256; V, 73, 276, 509; VI, 374; VIII, 445; IX, 1211; XXII, 676; XXIV, 1002; XXV, 1109
 Kansas and Oklahoma, XXVII, 909
 Kentucky, GAS, 835, 924, 932, 943, 945; STRAT, 180; IV, 304; V, 522; VI, 25; XI, 481; XXV, 1147; XXVII, 820; XXVIII, 759
 Kentucky and Tennessee, VIII, 627
 Kevin-Sunburst field, Montana, STR II, 259
 late, deformation in West Texas, diagrammatic cross section of pre-

(Mississippian)

Pennsylvanian rocks before, XXIX, 1345
 Llano uplift, Texas, XXV, 1647
 Lost Solider district, Wyoming, STR II, 638, 641
 lower, GAS, 106; XXI, 785
 lower, Dakota basin, XXVI, 1565
 lower, in Illinois, XXIII, 807; XXIV, 225
 lower, in Illinois basin, XXII, 655
 lower, limestones productive on closed structure in Illinois, XXI, 787
 lower, Madison limestone, in Montana, VII, 269
 lower, western Michigan, study of sedimentation and stratigraphy of, XXV, 713
 lower, and upper Devonian of southwestern Pennsylvania, stratigraphic units of, XXV, 163
 Madison pool, Kansas, STR II, 152
 Martinsville field, Illinois, STR II, 130
 Mexico, XXVIII, 305
 Michigan, GAS, 792; STRAT, 241; XXI, 124, 396; XXIV, 1955, 1966, 2152; XXV, 729
 Michigan basin province, XIII, 421
 Michigan fields, STRAT, 245
 Mid-Continent, XXV, 1647
 references on, XXV, 1701
 Mississippi, V, 495
 Missouri, XXV, 1654
 Missouri and Iowa, XXI, 1158
 Moab region, XI, 789
 Montana, FOP, 42; STRAT, 303, 335; VI, 147; X, 987; XXIII, 466; XXV, 1474; XXVI, 1326, 1357; XXVII, 855, 1288
 Montana, helium in, GAS, 1057
 Montana, stratigraphy and insoluble residues of Madison group of, XXVI, 305
 Moose Mountain area, XXVII, 43
 Music Mountain pool, STRAT, 494
 Nebraska, XVIII, 1628
 New Mexico, IV, 104; XXV, 2109
 New York and Pennsylvania, GAS, 961
 New York oil fields, STR II, 274
 Newfoundland, FOP, 130; XXV, 1562
 Nikkel pool, STRAT, 106-108
 North Dakota, XXIII, 926; XXVI, 349, 1419
 north Texas, XXVI, 1042
 Northern Great Plains, XXVII, 1287
 northwest Arkansas, XIV, 127
 Ohio, GAS, 903, 1056; STRAT, 384; XI, 1026
 Oklahoma, STRAT, 389, 445; II, 58; III, 274; IV, 174; V, 34, 117-151, 404, 552, 561; VI, 6, 322, 469; XXIII, 227, 325; XXIV, 1997; XXVII, 798
 Oklahoma, distribution and correlation of, XI, 1307
 Osage County field, Oklahoma, STR II, 381
 Ouachita Mountains, Oklahoma and Arkansas, XXV, 1651
 Ozark Highland area, GAS, 543
 Paint Creek uplift, GAS, 927
 Pennsylvania, STRAT, 494, 511; XXV, 1141; XXVI, 1115; XXVII, 839; XXVIII, 727
 Pennsylvanian, and Permian deposits, reasons for treating as three

(Mississippian)

systems, XXIV, 74
 Rocky Mountain basin province, XIII, 432
 Rocky Mountain region, VII, 406; XXIII, 1138; XXVII, 422, 465
 Sacramento Mountains, map showing location of measured sections of, XXV, 2139
 Saginaw field, Michigan, STR I, 106; XI, 960
 Salt Creek field, Wyoming, STR II, 593
 Scenery Hill gas field, Pennsylvania, STR II, 445
 Seminole district, Oklahoma, STR II, 316, 323, 324, 326
 Seymour pool, STRAT, 763
 Shinnston pool, STRAT, 834, 837
 Smithland field, GAS, 861
 south Arkansas, XXII, 962
 southern Cincinnati Arch region, GAS, 854-856, 864, 865, 870-878
 southern Oklahoma, GAS, 578
 southwestern Ozarks, Oklahoma and Arkansas, XXV, 1651
 Spring Coulee region, Alberta, ALTA, 151; XV, 1279
 stratigraphic nomenclature applied to, XXIX, 136
 subdivisions, nomenclature, and correlations of, XXV, 1649
 Tennessee, FOP, 154; V, 168, 646; VI, 240; XXV, 1586
 Tennessee oil fields, STR I, 252
 Texas, STRAT, 541; V, 14; VI, 151; XXIII, 842; XXV, 1065, 1656; XXVI, 205, 212; XXVII, 776; XXIX, 723
 Thomas field, Oklahoma, X, 648
 Tri-County field, Indiana, STR I, 26
 unconformity at base of, PROB, 765
 upper, Chester sands, productive on anticlines and domes in Illinois, XXI, 787
 upper, cross section of Algonkian to, northeastern Utah to western South Dakota, XXIII, 1134
 upper, in Francisco pool, Indiana, STR II, 138
 upper, in Illinois, XXIII, 807
 upper, in Illinois basin, XXI, 785
 upper, limestone productive in Turner Valley, FOP, 20; XXV, 1452
 upper, rocks in Trans-Pecos Texas, notes on, XVIII, 1537
 Utah, XXIII, 124, 126; XXIX, 1143
 Venango district, STRAT, 510, 511
 West Texas, PTNM, 616; XXVI, 616; XXIX, 1343
 West Virginia, STRAT, 810, 834; IV, 28
 western Kentucky, main producing formations of, XXIV, 854
 Wherry pool, STRAT, 124
 Wind River Canyon area, XXIII, 1449
 Wind River Mountains, Wyoming, XXV, 130
 Wyoming, V, 188; XXII, 683; XXIII, 481, 1447; XXIV, 1220, XXV, 1734, 2027
 Wyoming and Montana fields, XVI, 866
 Zenith pool, STRAT, 143
 Mississippian and Devonian in Montana, XXI, 991
 in Oklahoma, XXIII, 228, 812
 in Pennsylvania, GAS, 950

Mississippian and Devonian formations in central Michigan, section of, XXII, 134

Mississippian and Devonian intertongues of southwestern Pennsylvania, XXV, 161

of southwestern Pennsylvania, references on, XXV, 163

Mississippian and Devonian systems in central United States, basal stratigraphic relations of, XXIV, 775

Mississippian and lower formations in Bend Arch district, GAS, 617

Mississippian and Pennsylvanian in Arkansas Valley region, Oklahoma, GAS, 515

in North America, problem of classification of, XXV, 1646

in North America and Europe, comparison of classification and correlation of, XXIX, 131

unconformity between, XXIX, 132

unconformity between, in Breckinridge County, Kentucky, XXII, 284

Mississippian and Pennsylvanian periods, areas of thickest sedimentation in Oklahoma during, XXIV, 2008

Mississippian and Pennsylvanian rock sequences properly of systemic rank, XXIX, 129

Mississippian and Pennsylvanian rocks, classification of, by State Geological Surveys, XXIX, 127

of North America, classification of, XXIX, 125

Mississippian and Pennsylvanian strata near Black Knob Ridge, XXI, 13

Mississippian and Pennsylvanian systems versus Carboniferous system, XXIX, 127

Mississippian age, probable, of Amsden and Big Snowy formations in Northern Pacific well No. 1 in Baker-Glendev anticline, XXIII, 472

Mississippian beds, fossiliferous, in base of Pocono, XXV, 162

of north-central Texas, unconformities above and below, XXIV, 71

Mississippian bituminous shales, GAS, 593

Mississippian border of eastern Interior basin, XXIV, 765, 1133

Mississippian Caney beds, XXII, 1567

Mississippian corals from a central Kansas well, XI, 1329

Mississippian correlation in east-central United States, XXII, 1521

Mississippian embayment, XXVIII, 70

Mississippian faunas, significance in threefold subdivision, XXIV, 771

Mississippian folding in Illinois, XXIII, 1359

in Michigan, XXIV, 1953

Mississippian formations exposed on borders of Eastern Interior basin, correlation chart of, XXIV, 766

in Kentucky, XXII, 273, 276-278, 280-282, 284

in New Mexico, bibliography on, XXV, 2158

in northern Rocky Mountains and Northern Great Plains, geographic distribution of, XXVII, 1302

in Oklahoma and Arkansas, correlations, XXV, 1654

in Sacramento Mountains, New Mexico, XXV, 2107

(Mississippian)

in southwestern Missouri, southern Illinois, and western Kentucky, investigations and mapping of, XXIV, 767

Mississippian fossils in Wind River Mountains, XXV, 130

Mississippian gas-producing zones in Pennsylvania, GAS, 971

Mississippian gas sands of central Michigan area, XXII, 129

Mississippian limestone, PROB, 348; XXIII, 854; XXV, 796, 1070, 1077, XXVII, 781; XXIX, 683

accumulation of oil in, determined by structure in Martinsville field, Illinois, STR II, 137

Chanute pool, STRAT, 63, 64

chart of chemical analysis of, XXIX, 1158

counties in Texas showing, XXV, 1656

East Tuskegee pool, STRAT, 445

Greenwich pool, XXIII, 649, 652

Greenwich pool, isopach map of, XXIII, 650

Greenwich pool, production in, XXIII, 644, 647

Idaho, PROB, 158

Nikkel pool, STRAT, 106

on east-dipping limestone conglomerate (Miocene), XXIII, 132

productive at Burrton field, XXIV, 1794

Rocky Mountain states, PROB, 158

Mississippian limestone fields discovered in north Texas in 1943, XXVIII, 837

Mississippian limestone pools, XXIX, 763

Mississippian orogeny, XV, 1025

Mississippian-Pennsylvanian boundary at Dry Lake, Utah, XXIX, 1152

Mississippian-Pennsylvanian sequence of events in Illinois basin, position of Bethel in, XXVIII, 120

Mississippian-Pennsylvanian unconformities, PROB, 292

Mississippian pre-Redbeds, XXIII, 1040

Mississippian producing horizons, PROB, 158, 454

Mississippian production developed in north Texas in 1938, XXIII, 848

from Berea sandstone, XXII, 418

variation of gravity, PROB, 158

Mississippian reservoirs, PROB, 59

Mississippian residual chert, production at top of, in Bornholdt pool, Kansas, XXIV, 1002

Mississippian Ridgetop shale of central Tennessee, age of, XX, 805

Mississippian rocks, STRAT, 133

of Colorado, nomenclature, XVIII, 532

of Sacramento Mountains, XXV, 2114

of Trans-Pecos Texas, notes on Upper, XVIII, 1537

outcropping in Indiana, map showing distribution of, XXIV, 843

outcropping in western Illinois, map showing distribution of, XXIV, 768

subsurface, of Kansas, XXV, 1410

Mississippian sands in eastern Ohio, STR I, 142

Mississippian section productive in Salem field, XXIII, 1368

Mississippian sediments, Caney shale

(Mississippian)

(Cca), SBP, 255-285

carbon content, SBP, 27-31

carbon-nitrogen ratio, SBP, 34, 35

Greenbrier limestone (Cg), SBP, 349-379

Kinderhook group (Ck), SBP, 255-285

"Lime" (Cml), SBP, 194, 259-280, 413

Madison limestone (Cm), SBP, 193-243

Mauch Chunk (Cmc), SBP, 349-379

Mayes formation (Cmy), SBP, 255-285

Pocono formation (Cpc), SBP, 349-379

Sycamore limestone, SBP, 255-285

Mississippian strata in upper Mississippi and lower Ohio valleys, classification of, XXIV, 771

Mississippian system, maximum thickness in southwestern West Virginia, XXV, 794

most important source of oil in Eastern Interior basin, XXV, 1116

Mississippian waters, PROB, 859

Mississippian zones, XXVII, 471

Missouri, GAS, 533, 535, PROB, 574

Missouri, Arkansas, and Oklahoma, Osage formations of southern Ozark region, XVIII, 1132

Missouri, character of St. Peter sandstone in, XXIII, 1839

concentration of Ordovician waters in, PROB, 277

cross section of upper Des Moines and lower Missouri series from Jackson County, to Appanoose County, Iowa, XXV, 26

deep wildcats drilled in 1939, XXIV, 1005

Des Moines series in Adair County, section, XXV, 51

Des Moines series in Davies and Grundy counties, section, XXV, 45

Des Moines series in Jackson County, section, XXV, 28

Des Moines series in Lafayette and Johnson counties, section, XXV, 33

Des Moines series in Livingston and northern Carroll counties, section, XXV, 40

Des Moines series in Putnam County, section, XXV, 57, 61

Des Moines series in Sullivan County, section, XXV, 46

Des Moines series northeast of Hardin, Ray County, section, XXV, 38

developments in 1942, XXVII, 811

developments in 1944, XXIX, 706

Devonian in, XXV, 674, 1645

diamond-drill core from Bourbon High, Crawford County, XXVIII, 1386

drilling in 1939, XXIV, 1003

effective porosity of gas fields in Jackson County, XXV, 1405

Helderbergian in, XXV, 675

historical geological progress, I, 24

Illinois, and Kentucky, Cretaceous and Tertiary sediments of, XIV, 845

isostatic structures, review, VI, 384

lower, and upper Des Moines series from Jackson County, Missouri, to Appanoose County, Iowa, cross section, XXV, 26

traverse of, XXV, 23

- (Missouri)
 Marcellus and Hamilton in, XXV, 683
 middle Devonian in, XXV, 682
 Mississippian in, XXV, 1654
 Missouri series in, XXV, 28, 33, 40, 46, 51, 57
 northern, and southern Iowa, map, XXV, 24
 oil reserves, VI, 44
 Onondagan in, XXV, 682
 Oriskanian in, XXV, 675
 Pennsylvanian in, XXIV, 1003
 pre-Pennsylvanian beds in, XXVII, 811
 Silurian in, XXIII, 595; XXV, 1645
 southeast, Silurian in, XXVI, 3
 southeastern, Cretaceous sediments in Crowley's Ridge, XVII, 1003
 southeastern, type section of Bainbridge formation of, XXIII, 595
 southeastern, western Tennessee, and southwestern Illinois, sections of lower Devonian in, XXV, 677
 subsurface study of Cherokee formation near Kansas City, XXII, 918
 wildcat completions in 1940, XXV, 1112
 Missouri and Illinois, Osgood-Laurel horizons in, XXVI, 6
 Missouri and Illinois sections of Devonian, correlations, XXV, 691
 Missouri and Iowa, developments in 1943, XXVIII, 772
 Mississippian in, XXI, 1158
 Pennsylvanian in, XXV, 1675
 stratigraphy of northern extension of Burlington limestone in, XXI, 1158
 Missouri and Virgil section in Kansas, XXV, 1675
 Missouri and Virgil series, boundary between, XXIX, 166
 in Iowa, XXV, 1676
 Missouri beds of Ardmore basin, XXV, 1668
 Missouri equivalents in New Mexico, XXIV, 178
 Missouri-Illinois Bainbridge formation, Osgood facies of, XXVI, 7
 Missouri-Iowa field conference, XII, 201
 Missouri maps and sections, list of, XXII, 465
 Missouri Mountain shale, fossils of, XXI, 9
 in Black Knob Ridge, XXI, 9
 Missouri-Ohio, cross section, XXII, 1536-1537
 Missouri Osgood facies, XXVI, 7
 Missouri rocks of northern Oklahoma and southern Kansas, division of, into Skiatook and Ochelela groups, XXIV, 719
 Missouri series, XXI, 505, 506; XXV, 43, 46, 50, 56, 60, 66, 69
 Bush City field, STRAT, 44, 45
 East Tuskegee pool, STRAT, 443
 in Adair County, Missouri, section, XXV, 51
 in Appanoose County, Iowa, section, XXV, 62, 66
 in Daviess and Grundy counties, Missouri, section, XXV, 44
 in Iowa, Kansas City group in, XXV, 70
 in Jackson County, Missouri, section, XXV, 28
 in Kansas, XXV, 1674
 in Lafayette and Johnson counties, Missouri, section, XXV, 33
 in Livingston and northern Carroll (Missouri)
 counties, Missouri, section, XXV, 40
 in Missouri and Kansas, XXV, 38
 in northern Oklahoma, XXV, 1673
 in Putnam County, Missouri, section, XXV, 57
 in Sullivan County, Missouri, section, XXV, 46
 Olympic pool, STRAT, 460
 Pleasanton group in, XXV, 30, 32, 38
 43, 46, 50, 56, 60, 66, 69
 Missouri subseries of Pennsylvanian of Oklahoma, XXIV, 719
 Missouri-Tennessee Niagara sections, correlations of, XXVI, 4
 Missouri type series, Virgil series, and correlatives, XXIX, 167
 Missouri-West Virginia, cross section, XXII, 1544-1545
 Missouri wildcats, 1941, XXVI, 1082
 Missourian and Desmoinesian in Oklahoma and Kansas, references on, XXVII, 640
 Missourian age, rocks of, XXVII, 633
 Mistler, Alvin J., and Rhoades, Roger, post-Appalachian faulting in western Kentucky, XXV, 2046
 Mitchell, Hugh C., first order triangulation in Texas, review, XIX, 1551
 Mitchell, J. G., XXIII, 1823
 Mitchell, J. S., XIV, 567
 Mitchell, Kingsley Camden, memorial of, XV, 1303
 Mitchell, Robert H., XX, 908
 residues of some Pennsylvanian limestones, XIX, 412
 Mitchell device for orientation of cores, XIV, 567
 Mitchell limestone, XXIV, 815
 Mitchell sand, XXII, 721, 722
 Mitchell sandstone in Ohio, GAS, 900
 Mito Juan formation, XXIX, 1090
 Mittelamerika, XXIII, 1412
 Mix, Sidney E., memorial of Corbin Drummond Fletcher, XV, 859
 Mixed facies, El Abra and Tamaulipais limestone, MEX, 35, 43, 160, 223
 Mixed water of middle latitudes, RMS, 403, 406
 Mixing, RMS, 91, 97
 as a cause of dynamic equilibrium, RMS, 125
 in basins, RMS, 96
 lateral, RMS, 274
 of waters in North Sea, RMS, 327
 of waters in ocean, RMS, 52, 54, 59
 Moab anticline, Utah, XI, 376
 Moab region, Utah, XXI, 1250
 nomenclature in, XIII, 1445
 notes on stratigraphy of, XI, 785
 Moberg, E. G., RMS, 263, 281
 Moberly channel sandstone from Miami quarry, Missouri, XXI, 256
 Mobility of sial floes under pull of ocean tides, CD, 200
 Mobility realms of sediments and organisms, XXVI, 1758
 Moccasin Mountains, XXVII, 434
 Moctezuma River, Mexico, Eocene fauna from, IX, 298
 Mode of transport of suspended silt, RMS, 28
 Model dome, GAS, 369, 1057; XXI, 1259
 helium gas from Jurassic at, FOP, 60; XXV, 1492
 illustrating contortion of sediments and salt under varying conditions, XXVII, 62
 Modeled structural map, possibilities of photograph of, XXV, 2164
 Modelo, MSC, 155, Figs. 6, 14 (in pocket)
 lower, upper Modelo, Topango Formations, and Quaternary alluvium, contacts of, MSC, 126
 Modelo and Puente formations, SC, 118; XX, 1664
 Modelo area, CAL, 214; MSC, 68
 Modelo *Bolivina seminuda* zone of Seal Beach, MSC, Fig. 14 (in pocket)
 Modelo Canyon, CAL, 224, 311, MSC, 39, 47, 166, 255, 260, 270, 281, 282, 295, 297, 299, 308, 319, 334, 343, Fig. 14 (in pocket)
 Modelo diatomite, MSC, 280
 Modelo echinoids, MSC, 71
 Modelo field, California, PROB, 756
 Modelo formation, MSC, 39, 47, 68, 71, 112, 127, 129, 134, 164, 165, 195, 201, 204, 209, 221, 232, 313; XXVI, 189
 CAL, 6, 178, 189, 199, 212-215, 217, 248
 outcrop section P, SBP, 94, 167-194, 411
 geologic age of, XIII, 509
 in Tejon Quadrangle, XXI, 215
 lower, MSC, 126
 lowermost, MSC, 185
 Playa del Rey area, XIX, 179
 unconformable on Topanga at Mohon Spring, MSC, 164
 upper, MSC, 126, 134
 Modelo marine beds, MSC, 71
 Modelo opal shale of Los Sauces Creek, MSC, Fig. 14 (in pocket)
 Modelo shale, MSC, 113, 200, 203, 205, 206, 210, 224, 228, 231, 234, 236-238, 243, 247-254, 257, 258, 260-265, 267-270, 272-274, 276-282, 285, 288, 289, 292, 295, 297-299, 301, 302, 306-330, 312, 317, 319-321, 324, 325, 327-329, 331-334, 336, 339, 341-347, 350, 354, Fig. 14 (in pocket); PROB, 183, 191, 192
 bentonitic, MSC, 113
 Ventura Avenue field, California, STR II, 33; XII, 732
 Modelo shale faunule, lower, MSC, Fig. 14 (in pocket)
 upper, MSC, Fig. 14 (in pocket)
 Modelo siliceous shale of Los Sauces Creek, MSC, Fig. 14 (in pocket)
 Models, geological features illustrated by, VIII, 89
 of Kettleman Hills north dome, California, XXIV, 740
 Modin formation, CAL, 72, 311
 Modoc lava plain, CAL, 1, 26, 251
 Moenkopi formation, VI, 47, 89, 205, 211, 213, 224, 227, 244; XXI, 1258; XXIII, 124, 138, 144; XXVII, 470
 Moffat and Rio Blanco counties, Colorado, geologic map of Wilson Creek dome, XXVII, 454
 Moffat County, Colorado, Powder Wash anticline in, XXI, 989
 Powder Wash dome, XXI, 988
 Thornburg structure in, XXI, 989
 northwest, section of geological formations as exposed or drilled in, XXII, 1024
 (wells 233, 234), SBP, 194-243, 407
 Moffat dome, Colorado, PROB, 343, 688, 946; STR II, 93-97, 102, 103, 105-107; XXVII, 449

- (Moffat)
 an anticline, STR II, 676
 Moffat gas field, California, XXVIII, 743
 Mofjord, Norway, RMS, 99
 Mogotes conglomerate, XXVIII, 1460, 1466
 Mohave Desert, SC, 1, 71; XX, 1547, 1617
 volcanic activity in, SC, 73; XX, 1619
 Mohave Desert region, CAL, 1, 9, 17, 23-25, 27, 39, 40, 60, 61, 94, 96, 221, 222, 258, 261, 311; SC, 40; XX, 1586
 Blackhawk Canyon, CAL, 42, 64, 95, 203
 correlation, CAL, 212
 land mammals of, CAL, 211
 Manix lake beds of, CAL, 257
 Miocene faunas of, CAL, 178, 211
 nonmarine beds of, CAL, 31
 Paleozoic in, CAL, 65
 part of land area designated Mohavia, CAL, 119
 Pleistocene lake deposits of, CAL, 258
 Pliocene, a low plateau during, CAL, 251
 Phocene basalt of, CAL, 243
 problems awaiting solution in, CAL, 284
 Randsburg district, CAL, 39, 41, 96, 175, 176, 200, 201, 204, 243
 Ricardo beds, CAL, 188, 211
 salt deposits of, CAL, 295
 San Andreas fault along southwest side of, CAL, 33, 122
 Tertiary marine invasion of, CAL, 190
 2,000-3,000 feet above sea-level, CAL, 267
 volcanic rocks in, CAL, 203
 Mohave River, CAL, 25, 257
 Mohavia, CAL, 17, 24, 92, 119, 151, 164, 169, 183, 184, 224, 242, 278, 292, 311; SC, 14, 52, 71; XX, 1560, 1598, 1617
 accumulation of clastic sediments on, CAL, 188, 189, 202, 224, 226, 297, 298
 development of basins of Miocene deposition in, SC, 43; XX, 1589
 diastrophism in, CAL, 226, 284
 in Cretaceous, CAL, 92, 113-115, 117, 202, 297, 298
 in Eocene, CAL, 92, 142, 202
 in Miocene, CAL, 164, 169, 182-184, 186, 188, 189, 191, 195, 202, 223, 226, 276
 in Oligocene, CAL, 151, 160
 in Pliocene, CAL, 242, 250
 in Vaqueros, CAL, 169, 182-184, 186, 202
 resemblance of Sundaland to, XXI, 556
 Mohavia, Salinia, and Anacapia, relatively stable areas, SC, 142; XX, 1688
 Mohavia and Salinia, boundary between, SC, 75; XX, 1621
 Mohavian granitic province, SC, 2; XX, 1548
 Mohawk Petroleum Company, XXI, 984
 Mohawkian sediments in Kansas, correlates of, XIII, 1213
 Mohawkian series in Tennessee, XXIV, 1645
 Mohr Spring, MSC, 47, 126-129, 164, 195, 200, 201, 204, 209, 221, 224, 228, 231, 232, 236, 243, 247, (Mohn)
 248, 250-254; 260, 263, 267, 268, 270, 272, 273, 279, 281, 282, 292, 295, 297-299, 307, 317, 319-321, 328, 331, 334, 336, 342-347, 350, 354, Fig. 14 (in pocket)
 Mohn Spring-Girard, MSC, 2, Fig. 6 (in pocket)
 Mohn Spring-Girard section, MSC, 47, Fig. 14 (in pocket)
 Mohnian, MSC, opp. iii, 68, 129, 158, 168, 201, Figs. 4, 5, 6, 14 (in pocket)
 conformable above Luisian and below Delmontian, MSC, 127
 lower, MSC, 185, 200, 206, 209, 211, 213, 218, 221, 233-235, 237, 238, 244, 245, 247-257, 259, 260, 262-265, 267-271, 276-279, 281, 282, 284-287, 292, 294-297, 299, 307, 308, 313, 314, 317-321, 323, 324, 326-329, 332-336, 338, 340-345, 350, 351, 354-356, Table 1 (in pocket)
 lower, foraminifera from, MSC, Pls. XVIII, XIX, XX
 lower, uppermost Luisian, and lower Delmontian of Reliz Canyon, Foraminifera from, MSC, Pl. XVI
 Relizian, and Luisian Foraminifera, MSC, 166
 unconformable on pre-Luisian, MSC, 127
 unconformable on Topango formation, MSC, 127
 upper, MSC, 131, 195, 201, 204, 207, 209-211, 219, 221, 223-225, 228, 229, 231, 232, 234, 236, 237, 243-245, 247-255, 257, 260, 262-264, 267-274, 276, 278-283, 285, 286, 292, 294-299, 307, 308, 313, 317, 319-321, 324, 327, 328, 330-332, 334, 336, 342-348, 350, 351, 354
 upper, foraminifera from, MSC, Pl. XXI
 uppermost, MSC, 172
 Mohnian and Relizian transgressions, MSC, 180
 Mohnian age, MSC, 167
 Mohnian-Delmontian contact, MSC, 131, 168
 Mohnian fauna, affinities of, MSC, 128
 Mohnian faunas, MSC, 134, 176
 Mohnian foraminifera, MSC, 155, 166, 176
 Mohnian invertebrates, MSC, 155
 Mohnian paleontologic time stage, XXVI, 189
 Mohnian stage, MSC, 69, 119, 123, 127, 128, 131, 133, 155, 156, 159, 165, 166, 174, 176, 181
 type area of, MSC, 126
 variation in thickness, MSC, 127
 Mohnian zone of Klempell (Miocene) (Tmd, Tum), SBP, 91-94, 97-194, 416
 Mohr, C. L., PTNM, 660, 682, 702; XIII, 958; XVI, 189, 191; XXIII, 1679, 1680, 1699, 1711; XXV, 84, 98, 100; XXVI, 238, 242, 660, 682, 702
 secondary gypsum in Delaware Mountain region, discussion, XIII, 1395
 subsurface cross section of Permian from Texas to Nebraska, XXIII, 1694
 Moisan, II, 134
 Moisture, effect of, upon velocity of elastic waves in Amherst sand- (Moisture)
 stone, XIX, 9
 in coal, PROB, 76, 84
 Moisture and volatile matter, PROB, 76
 Moisture determination in Glen Rose limestone, XXVII, 69
 Molds, MSC, opp. iii, 299; PROB, 41
 from Chico Martinez Creek, MSC, Fig. 14 (in pocket)
 from Crocker Spring Creek, MSC, Fig. 14 (in pocket)
 Molds and casts of foraminifera in Monterey shale, MSC, 10
 Molecular changes, use of radioactive heat in, CD, 94
 Molecular processes, RMS, 74
 Molecular viscosity, RMS, 78, 79
 Molecules, multiple, RMS, 66
 Molengraaf, G. A. F., RMS, 349, 351; XXI, 556; XXII, 3, 7, 26, 27, 30, 58, 60, 61; XXIV, 1550; XXV, 320; XXVI, 778
Geologie en Geohydrologie van het Eiland Curaçao, review, XVI, 106
 Wegener's continental drift, CD, 90
 Wegener's continental drift, discussion by van der Gracht, CD, 206, 209
 Moline district, V, 147, 507
 Molino (Canton Tuxpan, Veracruz), MEX, 53, 223, Fig. 32 (in pocket)
 Molino field, heavy oil in, MEX, 223
 Molino Rancho, west of Victoria, Tamaulipas section, MEX, 13, 14
 Moller, Lotte, RMS, 104
 Mollusca, XXV, 639, 1232
 Louisiana Midway Eocene, check list of, XXV, 737
 of Astoria Formation, MSC, 163
 of Jackson formation, GC, 401; XVII, 632
 of Vicksburg formation, GC, 404; XVII, 635
 Paleocene to middle Eocene, XXIV, 1742
 Molluscan, foraminiferal, echinoid correlations, MSC, 166
 Molluscan and foraminiferal assemblages, MSC, 56
 Molluscan assemblages, MSC, 66, 154
 Molluscan fauna, MSC, 66, 153, 168
 Midway, range of genera in, XXV, 647
 of Blufftown formation of Chatahoochee region, XXII, 1653
 of Chickasawhay limestone, XXVIII, 1347
 of Contra Costa County, MSC, 155
 of Domingine sandstone, XXIV, 1750
 of gastropods and pelecypods in Kazanian series of the Russian platform, XXIV, 262
 of *Turritella inezana* zone, MSC, 152
 rich in *Cusseta* sand, XXII, 1654
 Molluscan faunule in Edna gas field, XXV, 109
 Molluscan fossils, XXVII, 297
 in Santa Inés formation, XXVIII, 24
 Molluscan genera of Vaqueros littoral facies, MSC, 110
 Molluscan life of Lake Pontchartrain, XXIII, 22, 23
 Molluscan province, Recent, MSC, 99
 Molluscs, XXIV, 817
 Mollusk and echinoid zone, MSC, Fig. 14 (in pocket)
 Mollusks, CAL, 111, 155, 179, 210, 287;

(Mollusks)

- MEX, 73, 110, 120, 123-126, 131, 132, 138, 141; MSC, 27, 32, 38, 39, 56, 75, 87, 160; RMS, 149, 235, 258, 287, 288, 291, 444; VII, 185; XXII, 1649; XXIII, 699; XXV, 235; XXVII, 283, 1352, 1449; XXVIII, 962, 1322; XXIX, 885, 1018
 faecal pellets of, RMS, 516-521
 fresh water, XXIV, 1554
 from Permenter's Farm, XXV, 272
 in Alazán formation, MEX, 120
 in Altamira shale member in Palos Verdes Hills, California, XX, 137
 in Kirker formation, MSC, 161
 in Ocala formation, XXIX, 920
 in Prairie Bluff chalk, XXII, 1655
 in Raritan formation, XXIX, 893
 in Simi Valley, MSC, 152
 in typical Topanga formation, MSC, 164
 littoral and sublittoral, MSC, 109
 lower Pliocene, MSC, 166
 new species of, XXIX, 1202
 of Refugian stage of Pacific Coast Tertiary, XX, 220
 of Temblor A zone, MSC, 153
 of *Turritella inezana* Zone, MSC, 68, 75
 of typical Blakely formation, MSC, 73
 of upper Pleito horizon, MSC, 56
 of Uscari formation, XXVI, 1649
 probably Pleistocene, between Rio Pánuco and Rio Tuxpan, MEX, 141
 Upper Cretaceous, of southern California, stratigraphic distribution of, XXVI, 178
 upper Miocene, in Venice and Del Rey fields, California, XX, 152
 Vaqueros, MSC, 173
 Mollusks and echinoids, MSC, 167
 littoral assemblages of, MSC, 134
 Molluccan radiolarites, XXVI, 786
 Molluscs, RMS, 365
 southern, Pliocene graben in, XXII, 45
 Molybdenum rays in X-ray studies, RMS, 621
 Moments, RMS, 573-581
 compared with quartiles, RMS, 574
 computation of, RMS, 575-581
 geometric, versus logarithmic, RMS, 580, 581
 of a frequency distribution, RMS, 563, 573, 582
 Phi, RMS, 573
 Zeta, RMS, 578
 Momentum, RMS, 71, 72
 effect of, on bottom samplers, RMS, 646
 transfer of, in sea, RMS, 71, 73
 Mona shale, III, 364
 Monadnocks, XXIII, 986
 Monahans pool, XXVII, 751, 761
 Monazite, RMS, 212, 602; XXIV, 642
 Monclova, MEX, 55
 Moncrief, E. C., STRAT, 118; XXIII, 1757
 minutes, twenty-first annual business meeting, Tulsa, March, 1936, XX, 638
 report (minutes) of general business committee, March, 1936, XX, 652
 report of secretary-treasurer for 1935, XX, 644
 Moncton map area, geology of, review, VII, 302

- Monett, Victor Elvert, topographic criteria of oil-field structure, VI, 37
 Mongollon Plateau, Supai formation, X, 825
 Monitor district, Alberta, VII, 155
 Monitor Oil Company (well 305), SBP, 292-335, 408
 Monnett, V. E., PROB, 619, 812; VII, 371; X, 1036, XII, 1069; XIII, 2; XIV, 1; XVIII, 1297, XX, 1086, XXII, 1411
 Monoclinical accumulation in Venezuelan fields, XIII, 1188
 Monoclinical area of south-central Arkansas and north-central Louisiana, XXVIII, 582
 Monoclinical flexure in Urania field, Louisiana, STR I, 96
 Monoclinical flexures of Leonard series in Guadalupe Mountains region, PTNM, 623; XXVI, 623
 Monoclinical structure, GAS, 395
 in Hugoton field, XXIII, 1058
 of Mississippi, XXVIII, 29
 Monoclinical wedge of Kootenai sandstone, XXI, 993
 Monodine, faulted, in Burbank field, Oklahoma, STR I, 225
 faulted, in Cabin Creek field, West Virginia, STR I, 470
 faulted, in Irma field, Arkansas, STR I, 2, 7
 in Centralia-Sandoval area, Illinois, STR II, 122, 123
 in Coastal Plain of southeastern Virginia, XXIX, 83
 in Dewey area, Oklahoma, STR II, 368
 in eastern edge of Florence field, Colorado, STR II, 82
 in Francisco pool, Indiana, STR II, 140
 in Stephens County, Texas, STR II, 472
 Prairie Plains, Seminole district, Oklahoma, STR II, 335
 Monocline Ridge, XXVIII, 965
 Monoclines, accumulation of oil and gas related to, PROB, 196, 526, 527
 in Tri-County field, Indiana, STR I, 29
 Monoclines and structural terraces, XXVII, 464
 in Rocky Mountains, oil and gas fields on, XXVII, 461
 Monoclinic minerals, RMS, 469, 619
 Monohydrol form of water, RMS, 66
 Monongahela-Dunkard contact, Washington County, Ohio, new interpretation of, XXII, 103
 Monongahela formation, PROB, 453; III, 143
 Gay - Spencer - Richardson trend, STRAT, 809
 Scenery Hill gas field, Pennsylvania, STR II, 444
 Monongahela group, XXIX, 166
 in Ohio fields, GAS, 898
 Monongahela series, XXV, 797
 in Copley pool, West Virginia, STR I, 444
 Monovalent ions, RMS, 536
 Monroe, XXI, 319
 Monroe, Watson Hiner, GAS, 882; XVII, 625; XVIII, 1254; XX, 106; XXVII, 597; XXVIII, 595
 deepest rocks at Jackson, Mississippi, discussion, XXII, 927

(Monroe)

- earth cracks in Mississippi, XVI, 214
 Prairie Bluff chalk and Owl Creek formation of eastern Gulf region, XXI, 806
 pre-Tertiary rocks from deep wells at Jackson, Mississippi, XVII, 38
 Monroe, Watson Hiner, and Stephenson, Lloyd W., XXVII, 606
 stratigraphy of Upper Cretaceous series in Mississippi and Alabama, XXII, 1639
 Upper Cretaceous deposits in Mississippi, review, XXV, 1601
 Monroe, Watson Hiner, and Toler, Henry N., abstract, XXII, 1286
 Jackson gas field and the State deep test well, abstract, XXII, 1286
 Monroe bed at Muskegon field, GAS, 796
 Monroe County, New York, Churchville field in, XXII, 83
 Monroe Creek, MSC, opp. iii
 Monroe formation, a possible source of oil in Michigan, STR I, 111
 Muskegon field, XVI, 159
 Vernon Township pool near Mount Pleasant, Michigan, occurrence of fluorite in, XVI, 91
 Monroe gas field, Louisiana, GAS, 741; PROB, 579, 780; SD, 221; II, 68; IV, 123; VI, 155, 191, 383; VII, 565; review, VI, 155
 Louisiana, preliminary report on proposed pipeline from, to New Orleans, review, VI, 383
 Monroe gas rock, XXV, 1029; XXVIII, 47
 in Louisiana fields, GAS, 741, 743, 751, 755, 757, 758, 762, 778, 784
 in Richland Parish, Louisiana, XII, 987; XV, 942, 944
 Monroe group in Vance well, XXIV, 677
 Monroe horizon at Muskegon field, GAS, 803
 Monroe-Niagara unconformity in Ohio, analysis of greenish shale at, XXIV, 677
 Monroe platform, XXVIII, 582, 585
 Monroe-Richland district, map of, GAS, 776
 Monroe uplift, XXIII, 1401
 Mons, Cretaceous basin of, XVII, 1166
 Mons region in Belgium, natural pipes of, XVIII, 1501
 Monsour, Edward, XXIX, 51
 Monsour, Emil, MSC, 179; XXIII, 1397, 1400
 micro-paleontologic analysis of Jackson Eocene of eastern Mississippi, XXI, 80
 Montague, Edward P., XX, 890, 900
 Montague County, Texas, XXI, 1019, 1024; XXIII, 852
 Bonita discovery, XXIV, 1838
 Bowers field, XXVII, 20
 development, XXVII, 778
 developments during 1940, XXV, 1072
 Rogers pool, XXIV, 1836
 Montana, CAL, 111; PROB, 88, 158, 161, 165, 169, 172, 348, 368, 680, 690, 931, 990; STRAT, 273, 274, 277, 281, 293, 304, 335, 337
 Bannatype field, STRAT, 875; XIII, 783
 Border-Red Coulee oil field, Toole County, and Alberta, Canada, STRAT, 267

(Montana)

carbon dioxide in, GAS, 1065
Carboniferous, X, 986
Cat Creek oil field, V, 252, 327
central, relation of deep-seated faults to surface structural features of, VII, 1
central and eastern, oil and gas fields and main structural features of, XXIV, 1102; XXVII, 437
central and eastern, sections in, XXIII, 467
Cloverly formation waters in, XXVI, 1349
Colorado group waters in, XXVI, 1333
comparative stratigraphy in, VII, 159
correlation of marine Jurassic of, XXI, 720
Cretaceous in, FOP, 42; XXI, 989, 991; XXIII, 922; XXV, 1474; XXVI, 1326, XXVII, 855
Cut Bank oil and gas field, Glacier County, STRAT, 327, 874
development in, VI, 147, XXI, 991
developments in 1937, XXII, 687
developments in 1938, XXIII, 919
developments in 1943, XXVIII, 791
Devonian in, FOP, 42; XXI, 991; XXV, 1474
discoveries and extensions in 1938, XXIII, 915
disturbed belt in, FOP, 39, XXV, 1471
east-central, Quadrant formation of, X, 986
eastern, stratigraphic studies of Baker-Glendive anticline, XXIII, 461
eastern, stratigraphic studies of Baker-Glendive anticline, discussion, XXIII, 1246
Ellis (Upper Jurassic) section at East Butte, Sweetgrass Hills, ALTA, 29; XV, 1157
Ellis formation in, XXI, 720
Ellis formation waters in, XXVI, 1356
Eocene, VII, 12
exploration in 1938, XXIII, 922
extensions in 1938, XXIII, 909
extensions to old fields in, XXII, 684
1942, XXVII, 857
fields discovered in 1938, XXIII, 907
fossils in, STRAT, 281
Garfield County, oil and gas prospects, VI, 144
gas fields of, GAS, 247, 278
gas-producing portion of Elk Basin field extended into Carbon County, in 1939, XXIV, 1108
geologic map of Sweetgrass arch, showing Kevin-Sunburst, Pondera, and Bannatyne oil fields, STR II, 255
geologic occurrence of oil and gas in, PROB, 695
geology of Cat Creek oil field, Fergus and Garfield counties, V, 252
geology of Nye-Bowler lineament, Stillwater and Carbon counties, XX, 1161
gravity of oil in Madison limestone in, PROB, 160
helium in, GAS, 1057
important dry holes in, XXVII, 859
Jurassic in, FOP, 42; VII, 174; XXV, 1153, 1474; XXVII, 470
Kevin-Sunburst field, STRAT, 874; STR II, 254; VII, 263, 275; X, 197;

(Montana)

XIII, 781
Kevin-Sunburst field, explained on hydraulic theory, VII, 217
Kootenai formation waters in, XXVI, 1341
Lower Cretaceous in, STRAT, 285, 335; VII, 171
Madison group in, sections, XXVI, bet 328 and 329
Madison limestone in, VII, 269
Madison limestone waters in, XXVI, 1365
map showing Disturbed Belt in, FOP, 40; XXV, 1472
marine Jurassic formations of Sweetgrass arch, XXIX, 1262
Mesozoic, VII, 12
Middle Jurassic in, XXIX, 1019
Mississippian in, FOP, 42; STRAT, 303, 335, X, 987, XXI, 991, XXIII, 466; XXV, 1474, XXVI, 1326, 1357; XXVII, 855, 1288
natural gas in, GAS, 245
new discoveries in 1942, XXVII, 855
new producing zones discovered in 1944, XXIX, 1597
nitrogen in Cambrian, GAS, 1057
North Cut Bank field, Glacier County, XXIV, 1104
north-central fields, PROB, 712
northeast, FOP, 42, XXV, 1474
northeastern, map showing general features of. Contours on top Dakota sandstone, FOP, 44; XXV, 1476
northeastern, section, FOP, 45; XXV, 1477
northern, stratigraphic trap at Kevin-Sunburst field in Toole County, XXI, 1244
northern, and southern Alberta, correlations of formations of, ALTA, 3
notes on Kevin-Sunburst oil field, VII, 263
oil and gas fields in, XXVII, 455, 461
oil and gas fields in, map, XXVI, 1320
oil fields in, SBP, 406
oil fields and structure of Sweetgrass arch, XIII, 779
oil reserves, VI, 44
Paleozoic in, VII, 12
Pennsylvanian in, VII, 176; X, 987; XXVI, 1357; XXVII, 472
Permian in, VII, 175
Phillips County, GAS, 258
Pleistocene in, STRAT, 274, 331
Pondera field, STRAT, 875, XIII, 782
possibilities for oil and gas, IV, 42, 313
Quadrant formation, oil possibilities, X, 995
Quadrant formation waters in, XXVI, 1357
references on oil prospects in, FOP, 42, 43, 46; XXV, 1474, 1475, 1478
revision of stratigraphy of Dry Creek and Golden structures, Carbon County, XXII, 106
section of Paleozoic and Mesozoic rocks measured at Cinnabar Mountain, Park County, and at Mount Everts, Yellowstone National Park, Wyoming, XVIII, 368
some notes on Upper Cretaceous paleogeography of, VIII, 554
source beds in, PROB, 61
south-central, FOP, 43; XXV, 1475

(Montana)

south-central, section, FOP, 47, XXV, 1479
southeast, cross section from north west Nebraska to, XXVI, 1569
southeastern, test on Cedar Creek anticline, XXVI, 861
southwestern, Madison group near Gallatin Gateway, XXVI, 312
stratigraphic trap at Cut Bank field in Glacier County, XXI, 1244
stratigraphy and insoluble residues of Madison group of Mississippian of, XXVI, 305
structural elements of, PROB, 701
structure in, STRAT, 273, 283, 303, IV, 253
structure section across Disturbed Belt in, FOP, 41, XXV, 1473
surface types of oil and gas fields in, XXVII, 438
Sweet Grass arch, review, VI, 262
Sweetgrass Hills field, STRAT, 875
Tensleep sandstone waters in, XXVI, 1361
thrust faults, X, 106
type section of Ellis formation, Jurassic, XXIX, 451
typical Cretaceous waters of, PROB, 945
typical Madison waters of, PROB, 940
unconformities, VII, 7; IX, 894; X, 993
unfaulted anticlines and domes in, XXVII, 436
unfaulted oil and gas fields in, XXVII, 436
Upper Cretaceous in, FOP, 43, STRAT, 274, 283, 331; VII, 159, XXII, 1631; XXV, 1475
Upper Cretaceous paleogeography, VIII, 554
Upper Cretaceous sedimentation and diastrophism in, IX, 886
Upper Cretaceous sequence in, XXII, 1633
Upper Jurassic in, STRAT, 301, 335
well in, SBP, 406
Montana and Wyoming, Carboniferous in Elk Basin field, STR II, 580
character of producing sandstones and limestones of, XVI, 864; discussion, XVII, 268
deep drilling in, XV, 553
Elk Basin oil and gas field, STR II, 577
gas fields of Big Horn Basin structural province, GAS, 277
Powder River Basin, FOP, 50; XXV, 1482
references on oil prospects in, FOP, 50; XXV, 1482
structural research work in Bear-tooth-Bighorn region, XVII, 680
Montana age, sediments of, in Milk River Ridge region, Alberta ALTA, 87; XV, 1215
Montana area, south-central, map, FOP, 46; XXV, 1478
Montana Bureau of Mines and Geology, XXVI, 307
Montana-Canadian Oil Company, GAS, 271
Montana-Dakota Utilities Company, XXI, 991; XXIII, 461
Montana division of Upper Cretaceous in Alberta, ALTA, 155; XV, 1283
Montana Eastern Oil and Gas Company, GAS, 245

- Montana fields, analyses of waters from producing zones of, XXVI, 1324, 1335, 1344, 1351, 1353, 1358, 1362 discovered in 1943, XXVIII, 792 extensions in 1943, XXVIII, 797 faulting and folding in, GAS, 252, 253 gravity of oil in, XXVII, 855 operations in 1942, XXVII, 854 producing zones in, XXVII, 438
- Montana formation, V, 203; VI, 146
- Montana group, XXII, 1026 in Eastern Colorado, XVII, 397 in Florence field, Colorado, STR II, 80 of Upper Cretaceous shales in Rocky Mountain area, XXI, 911 Osage field, STRAT, 850
- Montana group waters, XXVI, 1323, 1324, 1326 characteristics, XXVI, 1333 in central fields, XXVI, 1331 in eastern fields, XXVI, 1332 in Sweetgrass arch fields, XXVI, 1327 in Sweetgrass Hills and north-central fields, XXVI, 1327
- Montana Plains, oil-field waters of, XXVI, 1317 sections of formations in, XXVI, 1322
- Montana samples (well 198), SBP, 194-243, 406. (See also Rocky Mountain samples)
- Montana shale, Wyoming, VII, 488
- Montara Mountain, CAL, 35, 311
- Montara zone, CAL, 35-38
- Monte Cristi region, Ecuador, XIV, 267
- Montebello anticline, SC, 133; XX, 1679; XXIII, 941
- Montebello field, California, GAS, 198-201; PROB, 213, 214, 751, 984, 985; SC, 114; V, 458, 624; VI, 303; XX, 1660; XXIII, 940; XXIX, 651 gravity of oil at, XXIV, 1119 structure contours at, showing relative positions of productive features, XXIV, 1122 structure section at, showing buried sand lens beneath "Old field," XXIV, 1124 (wells 96-100), SBP, 87-153, 404
- Monterey, CAL, 30, 41, 44, 173, 174, 311; MSC, 21, 22, 25, 28, 53, 71, 88, 123, 132, 200, 203, 207, 212, 214, 231, 234, 236, 237, 249, 252, 255, 258, 262, 265, 266, 281, 300, 308, Figs. 5, 6, 14 (in pockets); XXV, 230
- diatom deposits near, CAL, 209
- (Salinas) shales in Pine Canyon, Monterey County, California, section of, VIII, 55
- Valvulineria californica* beds at, CAL, 190
- Monterey and Temblor, relations between, in Caliente Range, XXV, 237
- Monterey area, correlation, CAL, 214
- Monterey Bay, California, CAL, 270; RMS, 251, 259, 261, 264, 266, 271, 513-515 formation of glauconite in, XIX, 1571 submerged gorge of, CAL, 269, 270 foraminifera from, MSC, 13
- Monterey Bay region, CAL, 11, 64
- Monterey beds, fauna of, in California, XXV, 243
- Monterey cherty shale, MSC, 132
- Monterey County, California, MSC, opp. iii, 51, 56, 81, 102, 113, 114, (Monterey) 116-118, 127, 131, 132, 234, 238, 278, 297, 350, Table I (in pocket) outcrop section G, SBP, 167-194, 411 section in Reliz Canyon, MSC, Fig. 4 (in pocket)
- Monterey-Del Monte, MSC, 2
- Monterey-Del Monte area, MSC, 157
- Monterey diatomaceous shale, MSC, 299; PROB, 30, 61, 62, 183, 206-209
- Monterey diatomite, MSC, 37, 132, 253
- Monterey fauna, Henry Ranch, MSC, 16
- Monterey faunule from Chico Martinez Creek, MSC, Fig. 14 (in pocket)
- Monterey formation, MSC, 38, 89, 91, 105, 118, 122, 123; V, 12; XXVI, 1616; XXVII, 1370 a stage of Miocene, CAL, 8, 163, 164 bituminous slate, CAL, 199 Capistrano district, CAL, 174 chert of, CAL, 173, 195 clastic facies and faunas of, XVII, 1009 Cone Canyon, XXV, 235 correlation, CAL, 212, 214, 216, 303 fossils of, XXVII, 1346 gas zone of Kettleman Hills, CAL, 217 Kettleman Hills oil sand, CAL, 219 lands existing during, CAL, 297, 298 Maricopa formation, CAL, 190 marine fauna, CAL, 290 Mascall flora of Oregon, CAL, 299 of Morales syncline, XXV, 234 of Wells Ranch syncline, XXV, 235 Puente of, CAL, 208 relation of production of oil in Santa Maria Valley oil field to thickness and lithologic character of, XXIII, 69 Salinas Valley, CAL, 189 San Joaquin Valley, CAL, 190 Santa Barbara Island, CAL, 5 Santa Cruz Mountains, CAL, 190 Santa Maria field, XXIII, 62 siliceous shale, CAL, 8, 106, 174, 175, 188, 190, 194-196, 198, 206, 278, 279 southwestern Cuyama Valley, XXV, 239 stage, CAL, 58, 163, 168, 170, 171, 173, 175, 178, 181, 187, 189, 192, 193, 196, 197, 207, 209, 278, 289 stratigraphic position of, CAL, 190 Temblor contact, CAL, 217 type, MSC, 38, 156 type, age of, CAL, 213 type, correlations, MSC, 86 type locality on Monterey Peninsula, CAL, 183, 189 typical, foraminifera of, MSC, 38, 168 volcanic rocks associated with, CAL, 203, 205, 284 western Cuyama valley, XXV, 236
- Monterey gorge, origin of, CAL, 270
- Monterey group, a division of the Miocene, CAL, 163 Los Angeles Basin, California, X, 756 Santa Maria Valley, divisions, XXIII, 63
- Monterey oil in Santa Maria district, California, origin, STR II, 21
- Monterey oil zone, XXI, 983
- Monterey oil zones in fields of Santa Maria district, XXVII, 1345
- Monterey organic shale of Highland School district, fauna from, MSC, Fig. 14 (in pocket)
- Monterey overlap in Cholame area, XI, 612
- Monterey Park, MSC, 78, 322
- Monterey Peninsula, CAL, 11, 59, 163, 213, 220, 263, 269, 311
- Monterey Quadrangle, MSC, 36, 37, 131
- Monterey-Rincon sequence, MSC, Fig. 6 (in pocket)
- Monterey sandstone, XXII, 543
- Monterey-Santa Margarita, undifferentiated, MSC, 165
- Monterey-Santa Margarita diastrophism, XVI, 141
- Monterey-Santa Margarita sequence, MSC, 167
- Monterey section, MSC, 86
- Monterey shale, MSC, 7, 9, 11, 16-18, 20-22, 25, 26, 36, 38, 117, 127, 129, 131, 164-166, 170, 171, 181, 198, 199, 201, 203, 206, 207, 210, 212, 213, 215, 219, 221, 223, 224, 227, 231-237, 239, 241, 243-245, 247-258, 260-262, 264-266, 268-276, 278, 280-282, 284, 287-291, 294-297, 299-301, 303, 304, 308-315, 319, 321, 323, 324, 326, 329-331, 335-341, 344, 345, 348-350, 353, Fig. 4 (in pocket); RMS, 4, 261; SC, 11, 44; XX, 1557, 1590; XXII, 715; XXVII, 1339
- California, outcrop section R, SBP, 167-194, 411
- check list of foraminifera from type area of, MSC, 34
- diatoms in, MSC, 10
- foraminifera in, MSC, 167
- gradational contacts with underlying Vaqueros and overlying Santa Margarita, MSC, 7
- in Casmalia Hills, XXVII, 1345
- in Purisima Hills, XXVII, 1345
- molds and casts of foraminifera in, MSC, 10
- of California at its type locality with a summary of its fauna and flora, XII, 969
- of California, fossils of, XII, 978
- of California, Miocene foraminifera from, MSC, 16, 18
- of Santa Barbara coast, intraformational breccia in Upper Miocene, SC, 46; XX, 1592
- on west side of Salinas Valley, MSC, 1
- Palos Verdes Hills, XX, 127
- Reliz Canyon, correlation and age of, MSC, 20
- Reliz Canyon, section of, MSC, Fig. 4 (in pocket)
- sandstone dike in, XIV, 419
- section in Reliz Canyon, MSC, 1
- type, MSC, 132
- type, upper, middle, and lower *Notion* fauna from, MSC, Fig. 14 (in pocket)
- type area of, MSC, 67
- Monterey shale fauna, MSC, 172
- Monterey shale faunules from Adalida Quadrangle, MSC, Fig. 14 (in pocket)
- from Henry Ranch, MSC, Fig. 14 (in pocket)
- from Love Creek, MSC, Fig. 14 (in pocket)
- from near Los Gatos, MSC, Fig. 14 (in pocket)
- from Santa Clara County, MSC, Fig. 14 (in pocket)
- type, MSC, Fig. 14 (in pocket)

- Monterey shales, California, PROB, 57, 757, 758; VIII, 55; X, 898
foraminifera, X, 131
in Santa Maria district, California, STR II, 18
- Monterey siliceous shales, PROB, 189
- Monterey stage, XXV, 199
- Monterey strata, ranges of, near Bitter Creek, XXV, opp. 240
- Monterey submarine canyon, RMS, 252, 278
- Monterey-Temblor contact, MSC, 28, 122, 238, 324, 331
- Monterey-Temblor sequence, MSC, Fig. 6 (in pocket)
- Monterey time, greatest echinoid development in, near Bitter Creek, XXV, 240
structural change in, XXV, 238
- Monterey-Vaqueros contact, MSC, 7
- Monterea anticline, XXIX, 1129
- Monterrey, MEX, 11, 23, 68, 160
- Monterrey-Ciénaga El Toro-Saltito area, section of Lower Cretaceous, XXVIII, 1150
- Monterrey region, folding in, MEX, 161
- Montgomery, A. J., XVIII, 1577
- Montgomery, A. J., and Durham, James H., XXVIII, 873
- Montgomery, Curtis Hall, XXIII, 25
memorial of, XXVIII, 690
- Montgomery, J. C., Stamey, R. A., and Easton, H. D., Jr., Greta oil field, Refugio County, Texas, GC, 648; XIX, 544
- Montgomery, Paul, XXV, 742
- Montgomery, R. B., RMS, 79, 115, 121
- Montgomery County, Texas, Conroe oil field, GC, 789
- Montgomery County and Harris County, cross section through, based on electrical logs, XXVII, 1084
- Montgomery County field, Kansas, Cherokee formation in, GAS, 501-503
- Montgomery Creek beds, CAL, 312
- Montgomery limestone, CAL, 62, 63
- Montian beds, XXVII, 270
- Montian fauna of Belgium, XV, 154
- Montmorillon, France, RMS, 471
- Montmorillonite, RMS, 456-462, 465-490, 620, 623, 626
crystal structure of, RMS, 460
identification of, by X-ray, RMS, 624, 625
in Atlantic sediments, RMS, 383
sediments rich in, RMS, 625
transformed to illite by addition of potash, RMS, 489
- Montmorillonite minerals, influence of, on clays, RMS, 480
- Montoya limestone, IV, 104; XXIV, 162
- Montpelier Quadrangle in Idaho, XXI, 721
- Montpellier, MSC, 174
- Monument and Hobbs fields, Lea County, New Mexico, hydrocarbons, XXIV, 866
mineralization, XXIV, 866
- Monument field, XXIV, 43, 40
- Monument Valley, Utah, nomenclature in, XIII, 1441
- Moodie, Roy L., XXVIII, 1215
- Moody, X, 506
- Moody, Clarence L., GAS, 654, 747; GC, 384, 390; PROB, 309, 654; STRAT, 605; 607; XV, 277; XVII, 615, 620, 621, 623, 624, 762;
- (Moody)
- XVIII, 1072, 1073, 1264, XIX, 697; XXII, 311, 312, 979, 1681; XXIII, 205, 283; XXIX, 25, 51
report of resolutions committee for 1943, XXVIII, 660
review, XVII, 1282; XIX, 575
- Tertiary history of region of Sabine uplift, Louisiana, XV, 531
twenty-third annual meeting, American Association of Petroleum Geologists, New Orleans, March, 1938, XXII, 117
- Moodv, Graham B., SC, 105, 110, XX, 1651, 1656
developments in California in 1944, XXIX, 646
- Moody, I., MSC, 1, 7, 8
- Moody, John D., XXVIII, 29
- Moody, Wilbur Laddie, memorial, V, 432
- Moody Gulch field, PROB, 185, 229
- Moody pool, XXIII, 854
- Moody-Seagraves, GAS, 703, 774
- Moody's Branch lithologic unit, XXVIII, 59
- Mook, C. C., XV, 1097
- Moon, hypothesis of sudden capture of, in Cretaceous, as an explanation of equatorward sliding of continents in Tertiary, CD, 175
- Moore, XIII, 471
- Moore and Condra, XXI, 506
- Moore, Buckstaff, and Schweer, XXV, 84
- Moore, B., RMS, 66
- Moore, B. N., XXVI, 165, 180
- Moore, Carl A., XXV, 1674
- Morrow group of Adair County, Oklahoma XXIV, 409
preparation of lantern-slide copy, XXVI, 1656
- Moore, Elwood S., SD, 513; IX, 275, 1294; XVII, 1527
description of concretions, Saratoga field, Texas, IX, 275
- Moore, Elwood S., and Butts, Charles, XXII, 1109
- Moore, Elwood S., and Maynard, J. E., XXVI, 776
- Moore, Fred H., distinguished lecture tours, XXIX, 1687, 1801
- Moore, G. H., and Beek, W. G., XX, 883
- Moore, George E., and Keller, W. D., XXIV, 1650
staining drill cuttings for calcite-dolomite differentiation, XXI, 949
- Moore, H. B., RMS, 289, 516, 518, 521, 522
- Moore, H. L., STRAT, 436
- Moore, Hastings, XXIII, 1754; XXIV, 8
discussion of Brown's paper on unconformity at base of Whitehorse, XXI, 1555
- Moore, Hastings, and Schweer, Henry, XXI, 1514
- Moore, Hastings, and Snider, L. B., stratigraphy of Weatherford area, Oklahoma, discussion, XII, 1024
- Moore, Hilary B., faecal pellets in relation to marine deposits, RMS, 516
- Moore, J. H., Fullerton pool, Andrews County, Texas, XXVIII, 1541
- Moore, M. G., XXVI, 221
- Moore, P. D., GAS, 9, 14, 41, 45; PROB, 347; XV, 1132; XXVIII, 1421; XIX, 1429, 1437; XXIV,
- (Moore)
- 1620, 1622, 1623, 1626, 1634; XXV, 318; XXVI, 1400; XXIX, 1161
- Paleozoic of southern plains of Alberta, ALTA, 13, XV, 1141
- Moore, R. B., and Schlundt, H., PROB, 997
- Moore, Raymond Cecil, GAS, 465; PTNM, 708, PROB, 340; STRAT, 64; III, 92, 137, 140, 419, 420; V, 166, 543, 553, VI, 43; VII, 623; X, 554, 1037; XI, 824, 1068, 1313; XII, 179, 180, 189, 191, 193, 201; XIII, 594, 605, 606, 885; XIV, 316, 806, 1071, 1539, 1545, XV, 176; XVII, 171, 244; XVIII, 266, 571, 585, 989, 1133, 1135, 1137, 1138, 1139, 1141, 1142, 1143, 1144, 1146, 1154, 1155, 1343, 1499; XIX, 1406, 1411; XX, 1462; XXI, 1158, 1159, 1415, 1517; XXII, 100; XXIII, 328, 1068, 1673, 1710, 1755, 1797, 1802; XXIV, 80, 279, 281, 303, 316, 337, 354, 719, 721, 1180, 2041; XXV, 25, 30, 32, 43, 78, 1231, 1624, 1652, 1665; XXVI, 708, 1587; XXVIII, 579; XXIX, 125, 126, 146, 160, 166
age of Barnett (Lower Bent) shale of central Texas, VI, 150
Bend Series of central Texas, III, 217
Carboniferous-Permian boundary, XXIV, 282
correlation of Pennsylvanian formations of Texas and Oklahoma, XIII, 883
discussion on Sahna basin, XII, 189
Division of Geology and Geography, National Research Council, XVI, 620
early Pennsylvanian deposits west of Nemaha Granite Ridge, Kansas, X, 205
editor's report for 1922, VII, 313; for 1923, VIII, 379; for 1924, IX, 695; for 1925, X, 546
environment of Pennsylvanian life in North America, XIII, 459
geologic history of crystalline rocks of Kansas, II, 98
ground-water resources of Kansas, review, XXV, 1412
historical geology, review, XVII, 1394
late Paleozoic crustal movements of Europe and North America, XIX, 1253
memorial of Erasmus Haworth, XVII, 343
memorial of Glenn Beckley Morgan, IX, 1220
Mississippian corals from a central Kansas well, XI, 1329
oil possibilities of Holbrook area in northeast Arizona, discussion, VI, 47
possible oil in southern Utah, VI, 244
presentation of scientific papers, VII, 87
relation of buried granite in Kansas to oil production, IV, 255
relation of mountain folding to oil and gas fields of southern Oklahoma, V, 32
report of eighth annual meeting of American Association of Petroleum Geologists, 1923, VII, 202
report on distribution of membership, American Association of Petroleum Geologists, VIII, 390

- (Moore)
 reviews, VII, 197, 302; XIII, 239;
 XV, 558
 schedule for field description of sedi-
 mentary rocks, VI, 254
 stratigraphic classification of Pennsylvanian rocks of Kansas, review,
 XXI, 275
 stratigraphy of part of southern Utah,
 VI, 199
 studies in petroleum geology, VI, 545
 studies on Carboniferous of Mid-
 Continent region, XIII, 191
 Wichita meeting of American Association
 of Petroleum Geologists, March,
 1925, IX, 678
 Moore, Raymond Cecil, and Girty,
 George H., age of Bend series, III,
 418
 Moore, Raymond Cecil, and Greene,
 F. C., XXV, 31
 Moore, Raymond Cecil, and Gregory,
 H. E., XI, 802; XIII, 1431; XVII,
 125; XIX, 1496, 1498
 Moore, Raymond Cecil, and Haynes,
 Winthrop Perrin, an outcrop of
 basic igneous rock in Kansas, IV,
 183
 Moore, Raymond Cecil, and Holl, F. G.,
 STRAT, 103, 127
 Moore, Raymond Cecil, and Jewett,
 J. M., XXV, 37
 Moore, Raymond Cecil, and Moss,
 R. G., XXIV, 303
 Moore, Raymond Cecil, and Plummer,
 Frederick B., GAS, 613, 627, 631;
 PTNM, 681; XI, 675; XIII, 573,
 885, 898; XVIII, 248; XXIV, 85,
 95; XXVI, 681
 Moore, Raymond Cecil, Elias, M. K.,
 and Newell, N. D., XXIV, 318;
 XXIX, 168
 Moore, Raymond Cecil, Frye, J. C., and
 Jewett, J. M., XXIX, 167
 Moore, Raymond Cecil, Newell, N. D.,
 Dott, R. H., and Borden, J. L.,
 STRAT, 441
 Moore, Raymond Cecil, Newell, Norman
 D., Knight, J. Brookes, and
 Brill, Kenneth, XXIII, 1811
 Moore, T. B., XI, 82
 Moore, T. V., XX, 737
 behavior of fluids in oil reservoirs,
 XXII, 1237
 Moore, T. V., and Wilde, H. D., Jr.,
 XXIV, 2164
 factors governing estimation of re-
 coverable oil reserves in sand fields,
 discussion, XVIII, 1081
 Moore, T. W., SD, 358; IX, 758
 Moore, T. W., Coleman, and Wilde,
 XXII, 1238
 Moore, Virgil, XXV, 562
 Moore, W. C., SD, 353; IX, 1290
 Moore, W. D., XIX, 1652
 Moore Brothers, XXII, 696
 Moore County, Texas, XXI, 1031;
 XXIII, 985, 1027
 dolomite prospects in, XXIII, 1043
 production of oil and gas, XXI, 1033
 recent deep test in, XXIX, 227
 stratigraphy in, XXIII, 1029
 structural geology in, XXIII, 1029
 subsurface geologic map of, XXIII,
 1028
 Moore pool, XXI, 1012
 Moore-Sherman ridge, XXIII, 1031
 Moore-Sherman structural trend,
 XXIII, 1029
 Moore-Watkins pool, Carson County,
- (Moore-Watkins)
 Texas, XXIII, 1015
 pre-Redbed columnar section,
 XXIII, 1015
 Moorefield and Boone formations, con-
 tact between, XXVIII, 1629
 Moorefield fault, XXVIII, 1628
 Moorefield fauna, XXVIII, 1627
 Moorefield formation, character,
 XXVIII, 1628
 distribution, XXVIII, 1627
 fossils and correlations of, XXVIII,
 1629
 thickness, XXVIII, 1629
 Moorefield formation and Ruddell
 shale, Batesville district, Arkan-
 sas, XXVIII, 1626
 Moorefield shale, III, 235; V, 549; VI,
 151; XXV, 1653; XXVIII, 1626
 in Interior Highlands of Arkansas,
 GAS, 542
 Mooretown sand in Tri-County field,
 Indiana, map, STR I, 29
 Mooretown sandstone in Tri-County
 field, XI, 608
 Mooretown sandstone and shale,
 XXII, 272
 Moorhouse, F. W., RMS, 518
 Mooringsport formation, XXIX, 1419
 Moos, August, XVIII, 737
 Zur Bildung der europäischen Erd-
 öllagerstätten, review, XVI, 220
 Moos, August, Steinbrecher, H., Stut-
 zer, O., and Enke, Ferdinand,
 Deutsches Erdöl, II, review, XVIII,
 1092
 Moose, J. E., and Searle, V. C., XIX,
 942
 Moose Jaw syncline, FOP, 18; XXV,
 1450
 Moose Mountain anticline, XXVII, 44,
 49
 faulting in, XXVII, 49
 Moose Mountain area, Alberta, strati-
 graphy and structure of, XXVII,
 38
 Cambrian in, XXVII, 46
 Carboniferous in, XXVII, 42
 Cretaceous in, XXVII, 41
 development in, XXVII, 49
 Devonian in, XXVII, 44
 gas and oil in, XXVII, 50
 Jurassic in, XXVII, 41
 Mississippian in, XXVII, 43
 Paleozoic-Mesozoic contact in,
 XXVII, 43
 Pennsylvanian in, XXVII, 42
 stratigraphic column, XXVII, 40
 structure map, XXVII, 48
 Triassic in, XXVII, 41
 Moose Mountain dome, XXVII, 38
 Moose Mountain structure, GAS, 14
 Moose River basin geologic section,
 FOP, 108; XXV, 1540
 Moosejaw syncline, GAS, 9
 Moraes Rego, L. F., XIX, 1743
 Moraines in North Sea, RMS, 331
 Moraine deposits, RMS, 211
 Moral, Austin chalk northwest of,
 MEX, 54
 Morales Canyon thrust fault, XXV, 261
 Morales formation, SC, 82; XX, 1628
 Morales syncline, SC, 83; XX, 1629
 correlation of Bitter Creek with,
 XXV, 249
 Monterey of, XXV, 234
 Pliocene of, XXV, 254
 Moran, Robert B., VII, 614; XXIII,
 689; XXIV, 1391
 rôle of geologist in development of
- (Moran)
 California oil fields, VIII, 73
 Moran, Robert M., and Fyfe, D., XXI,
 99, 103, 104, 109, 1348
 XXIX, 518, 540
 Moran area, GAS, 612
 Moran field, III, 49, 93, 94
 Moran formation, PTNM, 681; III,
 138; XXVI, 681
 Morandini, G., RMS, 639, 654
 Morapos escarpment at Moffat dome,
 Colorado, STR II, 103
 Morapos sandstone in Moffat dome,
 Colorado, STR II, 102
 Morath, O., and Koenigsberger, G.,
 XXIX, 1652
 Moravia, review, VI, 387
 More field, GAS, 169
 Moree, Robert W., notes on *Bulimna
 jacksonensis* zone, XIV, 227
 Morehouse formation, XXVIII, 276
 of northeastern Louisiana, late
 Paleozoic age of, XXVI, 1672
 Morehouse Parish, Louisiana, oil in,
 XXVIII, 276
 Morel pool, Graham County, Kansas,
 XXIII, 803, 805; XXVIII, 772
 Morelos, Puebla, Guerrero, and Mexico,
 Cretaceous in, XXVIII, 1124
 Moreman, W. L., X, 622; XXIV, 1186
 Morenci, Arizona, RMS, 515
 Moreni oil field, Roumania, VI, 526;
 XVIII, 881, 888; XXIII, 961
 Moreni salt dome, Roumania, SD, 182,
 206; IX, 1242; XIV, 1173
 Moreno and Panoche members of Upper
 Cretaceous, XXIX, 964-966
 Moreno formation, PROB, 186;
 XXVIII, 472; XXIX, 963
 Moreno group, XXVII, 280
 Moreno Gulch, CAL, 106, 312; XXIX,
 990
 Moreno lithology, typical, XXIX, 982
 Moreno-Panoche contact, XXIX, 985
 Moreno sand, XXVI, 1141
 Moreno shale, CAL, 117, 139; SC, 11,
 66; XX, 1557, 1612; XXIV, 1732;
 XXIX, 983
 age and correlation, X, 812
 diatom flora of, CAL, 110
 equivalent to Maestrichtian and
 Danian stages of Europe, XXIX,
 970
 foraminifera in, CAL, 110
 (Kmo) (Cretaceous) (H₂ J), SBP, 96,
 168, 169-194, 414
 sandstone dikes in, XIV, 417
 silicoflagellates in, CAL, 110
 type locality in Panoche Hills, CAL,
 106
 unconformable contact with overlying
 silt, CAL, 108
 Upper Cretaceous, XXIX, 970
 Moreno shales of Coalingo district pos-
 sibly barred-basin deposits, XXI,
 1140
 Morero, Joseph E., SBP, 287; XVI,
 189; XXIII, 1836; XXIV, 15
 Morero, Joseph E., Rettger, R. E., and
 Carsey, J. Ben, natural gas in West
 Texas and southeast New Mexico,
 GAS, 417
 Moreau, XXIII, 198
 Moreau, Cyril K., and Howe, Henry V.,
 XVII, 652; XVIII, 1069; XXI,
 1270; XXVII, 1123, 1125, 1127,
 1133, 1139, 1140; XXVIII, 1305
 geology of Iberia Parish, Louisiana,
 review, XVI, 425
 Morey, P. S., XXV, 131; XXIX, 1151

- Morgan, X., 934; XXIV, 1788
 Morgan, A. M., XXI, 716
 Morgan, Arthur, XXVIII, 1601
 Morgan, Cecil L., Tatum salt dome, Lamar County, Mississippi, XXV, 424
 Morgan, Cecil L., Alexander, C. W., and Norman, M. E., developments in southeastern states in 1944, XXIX, 815
 Morgan, Frank A., XIV, 796; XXI, 132 report of general business committee for 1932, XVII, 597 report of resolutions committee for 1938-1939, XXIII, 755
 Morgan, George D., PROB, 766; IX, 355, 984, 988, 989; XI, 678, XIII, 574, 575, 884, 885, 887; XIV, 60, 63; XVI, 120, 121, 124, 125, 959; XVIII, 573, 577, 580, 582, 584, 595, 978, 1048; XX, 301, 1346, 1354, 1458, 1459, 1460, 1462; XXII, 1569; XXIII, 223; XXIV, 105; XXV, 1670
 Morgan, Glenn Beckley, memorial of, IX, 1220
 Morgan, Henry, MEX, 76; XXVII, 1411; XXIX, 1417
 Morgan, J. J., XVI, 733
 Morgan, L. C., XIV, 787; XIX, 1406, 1408, 1418, 1420, 1425 central Kansas uplift, XVI, 483
 Morgan, L. C., and Johnson, Roswell H., GAS 1017; XII, 1095 critical examination of equal pound loss method of estimating gas reserves, X, 901
 Morgan, Lindsey G., XXVI, 51
 Morgan, Lindsey G., Reynolds, H. D., and Means, Eldon A., application of X-ray crystal analysis to a problem of petroleum geology, XXI, 1333
 Morgan, Percv G., X, 1228, 1230, 1233, 1245, 1250, 1258
 Morgan County, Colorado (well 239), SBP, 194-243, 407
 Morgan County gas field, Kentucky, GAS, 944
 Morgan-Flynn *et al.*, XXII, 676
 Morgan Hill, California, Tertiary sediments northeast of, XXVII, 640
 Morgan Lewis beds, Barbados, XXIV, 1553
 Morgan redbeds, VI, 226
 Morgan sands zone, Schuler oil field, Arkansas, XXII, 724; XXVI, 1471, 1482 analysis of oil from, XXVI, 1507 cross section, XXVI, 1484 fossiliferous, XXII, 967 water analysis, XXVI, 1513
 Morgan Township, Pennsylvania (well 420), SBP, 349-379, 410
 Morgan zone, XXIV, 1095
 Morita formation, XXVIII, 1188
 Morita pool, XXIX, 747
 Morley, H. T., XIII, 946; XXV, bet. 2166 and 2167
 Mormolron, France, RMS, 469-471
 Mormon field, IV, 160
 Mormon formation, CAL, 72
 Morne l'Enfer formation, XXVII, 1602
 Morne Vent limestone of Martinique, XXIV, 1596
 Mornhinveg, A. R., GAS, 749; XIX, 691
 Mornhinveg, A. R., and Garrett, J. B., Jr., MSC, 179; XXVIII, 1326 study of Vicksburg group at Vicksburg, Mississippi, GC, 335; XIX, 1645
 Morocco, research in, XVI, 450
 Morphologic units, XXIII, 1666
 Morphological varieties of reservoirs, XXIX, 1546
 Morphology, geological interpretation of, in East Indies, RMS, 349 of ammonite shells, XXIV, 1169 of ocean bottom, XXIII, 1666 of salt domes, XVII, 1083
 Morrill, Foster, and Dobson, C. E., GAS, 436
 Morrill, Jacques C., and Egloff, Gustav, STR II, 39, IV, 59; XII, 740
 Morrey, C. B., PROB, 43; VII, 605
 Morrey, Margaret, MSC, 110
 Morrey, Margaret, and Galloway, J. J., MSC, 177, 218, 226, 338, 354; XIX, 529; XXVI, 1651
 Morrison anticline, GAS, 554
 Morris, H. C., VII, 567
 Morris, L. H., XXVI, 258, 260
 Morris, N., Miss, XXIX, 72
 Morris, W. T., GAS, 344
 Morris, William, XIX, 481
 Morris, William "Bully," XXII, 428, 1091
 Morris County, XXVIII, 850
 Morris dome, Kentucky, VI, 31
 Morris field, PROB, 435; III, 273
 Morris sand, V, 290; XXVI, 1044; XXVII, 774
 Morrison, L. E., and Tanner, F. W., XXVII, 1186
 Morrison, T. E., XIV, 835; XXIII, 340
 Morrison, T. T., first authentic Cretaceous formation found on Gulf Coast salt domes of Texas, XIII, 1065
 Morrison, W. L., XXV, 1897
 Morrison and Sundance formations, XXV, 2034
 Morrison anticline, PROB, 821
 Morrison field, Clark County, Kansas, GAS, 477
 Morrison field, Pawnee County, Oklahoma, STR I, 148; GAS, 477; XI, 1087 a typical dome, STR II, 677
 Morrison formation, GAS, 369; XXI, 721; XXIII, 917, 1170, 1450; XXV, 137, 888, 1151, 1153, 2035; XXVI, 349; XXVII, 470, 858; XXVIII, 1198
 Baxter Basin gas field, Wyoming, GAS, 329
 Colorado, VI, 74
 Florence field, Colorado, STR II, 79
 fossil reptile remains in, XXVIII, 1204
 Iles dome, Colorado, STR II, 96, 99
 Iles dome, Colorado, gas in, STR II, 102
 (Jm) (Jurassic), SBP, 193, 195-255, 414
 Lost Soldier district, Wyoming, STR II, 642
 members of, XXV, 1750
 Moffat dome, Colorado, STR II, 96, 103
 Montana, V, 257; VI, 146
 New Mexico, IV, 75, 99; VI, 74
 section at Uravan, Colorado, showing upper part of Entrada sandstone and, XXV, 1756
 stratigraphic section, XXVIII, 1204
 type section, XXIII, 1155
 Utah, helium in, GAS, 1057
 (Morrison) Wyoming, V, 195
 Morrison-Kootenai beds, XXIX, 1270
 Morrison pool, PROB, 765
 Morrison sample from outcrop near Cisco, Utah, XXV, 1850
 Morrison sand, PROB, 165, 167, 408; XXIII, 907
 Westbrook field, Texas, STR I, 287, 288
 Morrison sand zone, XXIX, 823
 Morrison sandstone, XXV, 1860, 1861
 Morrison sandstone cores from Nieber dome, XXV, 1850
 Morrison sandstone sample from Beaver Creek, XXV, 1849
 Morrison series in Grass Creek field, Wyoming, STR II, 625
 Morrison shale, XXVI, 1562
 Morro Bay, RMS, 271
 an excellent example of sedimentation at work, XXVI, 155
 Morrow and Lampasas series in north-central Texas, XXIV, 82
 Morrow beds, XXV, 1669
 Morrow fauna, XXV, 1666
 Morrow formation, PROB, 422, III, 234, 251, 271, 290; IV, 180; V, 123, 344, 543-564; VI, 153
 Morrow geosyncline, XXII, 861, 889 new, development of, XXII, 863
 Morrow group, GAS, 525; XXIV, 418 in Jesse pool, XXII, 1567 in Roland anticline, GAS, 526 of Adair County, Oklahoma, XXIV, 409
 Morrow-Lampasas series, XXIX, 141
 Morrow series, XXIV, 80, XXV, 1661, 1676; XXIX, 144, 145, 1153
 Bryson field, STRAT, 541, 542 history, XXII, 861
 in Ouachita Mountains, XXII, 857
 in Ozarks, XXV, 1673
 of Bendian sediments, XXII, 853, 889
 subdivisions, XXII, 855
 Morrow time, closing stage of, XXII, 865
 Morse, M., XXV, 725
 Morse, Paul Franklin, memorial of, XIII, 1501
 petroleum prospecting in Mississippi, VII, 684
 Morse, Roy R., XXII, 1474
 meeting of Pacific Section, November, 1925, X, 100
 memorial of Frank Shackleford Boggs, Jr., XXVII, 1029
 outlook for research in exploration, XXIX, 1203
 Morse, Stanley M., XXIX, 186
 Morse, William Clifford, memorial of Ephraim Noble Lowe, XVIII, 428
 Paleozoic rocks, review, XV, 215
 Morse, William Clifford, and San Antonio Geological Society, memorial of Paul Franklin Morse, XIII, 1501
 Morsum Cliffs, RMS, 331
 Mortar beds, II, 73
 Mortensen, Nils, X, 1236
 Mortimore, M. E., X, 483
 Morton, A. A., XXVIII, 948
 Morton, F., Barr, K. W., and Richards, A. R., application of chemical analysis of crude oils to problems of petroleum geology, XXVII, 1595
 Morton, J. V., Survey, East Texas (well 306), SBP, 292-335, 408
 Morton, James K., SBP, 6
 Morton, S. G., XXII, 999

- Morton, Grant, Haskell, Stevens, and Seward counties, Kansas, and Texas County, Oklahoma, Hugoton gas field, STRAT, 78
- Morton Salt Company, SD, 227
- Mosaics of photographs, XXIX, 1762
- usefulness of, for geological purposes, XXIX, 1763
- Mosasaurs, XXVIII, 507
- Mosby sandstone, V, 263, VI, 146
- Moscovian beds, XXVIII, 1422
- Moscovian series, XXIV, 243
- Moscow coal basin, unconformity of Carboniferous of, XXIX, 133
- Mose Carr sand, V, 291
- Moser, G. E., V, 542
- Moses, H. F., XIX, 1432
- Mosquito fault, XXVI, 1377
- Mosquito Range, Colorado, stratigraphy and structure of Pennsylvanian and Permian rocks in Salt Creek area, XIX, 971
- Moss, Frank A., XV, 1428
- discussion of torsion balance results in California, XV, 1428
- Moss, H. S., XXIV, 2032
- Moss, Rycroft G., developments in Kansas in 1937, XXII, 666
- developments in Kansas, 1938, XXIII, 797
- Moss, Rycroft G., and Moore, R. C., XXIV, 303
- Moss Bluff dome, GC, 171-175, XIX, 357
- Moss Bluff salt dome discovery, discussion, XI, 308
- Moss Branch section of Seguin formation, disconformity in, XXVII, 615
- Moss Branch section and Pearson's Branch section of Seguin formation, XXVII, 614
- Mosser anticline in Yellowstone County, Montana, XXI, 989
- Mosser field, FOP, 44; XXV, 1476; XXVII, 435, 459
- Mossom, Stuart, RMS, 290; XXI, Pl. B, opp. 1085; XXVIII, 1675, 1729; XXIX, 1417
- activities in South Texas, 1937-1938, XXII, 750
- structure and stratigraphy of Florida, with special references to petroleum possibilities, review, XI, 893
- Mossom, Stuart, and Cooke, C. W., GC, 406; XVII, 636, 637; XXV, 269; XXVIII, 1341, 1723
- Mostowitsch, W., and Hofman, H. O., X, 1281; XX, 172
- Motombo field, Cuba, XVI, 813
- Mother Lode, CAL, 18, 43, 64, 66, 95; SC, 52; XX, 1598
- Mother Lode district, SC, 71; XX, 1617
- Mariposa formation of, CAL, 72
- Mother Lode fissure system, CAL, 43
- Motion. (See Currents)
- eddy, RMS, 7, 12, 75
- helical, RMS, 17
- laminar, RMS, 3, 15
- of individual particles in water, RMS, 12, 13
- Motion of water, RMS, 9
- critical velocity of, RMS, 6
- in masses, RMS, 104
- in sea as indicated by temperature, RMS, 61
- nature of, RMS, 6
- near the stream bottom, RMS, 18
- separation of, from tidal currents, RMS, 132
- shooting, RMS, 8
- (Motion)
- streaming, RMS, 8
- swirling, RMS, 15
- turbulent, RMS, 6, 12, 15, 19
- turbulent, effects of, in sea, RMS, 77
- Moulder pool, VI, 24
- Moulton, F. R., CD, 171
- Moulton, Gail F., GAS, 831, PROB, 74, 89, X, 1286, XI, 291, 292, 992; XII, 798, 810; XIII, 1314; XIV, 430, 866; XVI, 1030, XXIII, 462
- discussion of Cretaceous and Tertiary sediments of Kentucky, Illinois, and Missouri, XIV, 866
- discussion of structure in southwestern Indiana, XIII, 1314
- discussion of structure of Tri-County field, XIV, 430
- Francisco pool, Gibson County, Indiana, STR II, 138
- important new developments in south western Indiana, XI, 991
- loss of red color in rocks, discussion, XII, 767
- Martinsville pool, Illinois, STR II, 130
- New York district meeting, XXIX, 1529
- plane-table survey underground, XI, 425
- producing horizon in Wabash County, Illinois, XI, 991
- some features of redbed bleaching, X, 304
- Moulton, Gail F., and Bell, A. H., three typical oil fields of the Illinois region, STR II, 115
- Moulton, Gail F., and Fath, A. E., GAS, 305
- oil and gas field of Lost Soldier-Ferris district, Wyoming, review, IX, 363
- Moulton, Gail F., and Knappen, R. S., GAS, 248; PROB, 697; STRAT, 277, 281
- Moulton sand, GAS, 267
- lenticular, XXIII, 907
- Moulton zone, Cut Bank field, STRAT, 344
- Mound-building Indians, RMS, 159
- Mounds field, PROB, 435
- Mounds sand, III, 272; V, 128, 148
- in Glenn pool, Oklahoma, STR I, 237
- XI, 1060
- Mount All beds, Barbados, XXIV, 1557
- Mt. Auburn pool, XXVIII, 753
- Mount Carmel fault in Indiana, GAS, 834, 849
- Mt. Carmel field, XXVI, 1094
- Mount Diablo, California, MSC, 133; SC, 20; XX, 1566
- outcrop section F, SBP, 167-194, 411
- glass sand quarry in Lone member north of, SC, opp. 26; XX, opp. 1572
- Mount Diablo area, MSC, 172
- Mount Diablo Range, CAL, 109, 138, 166; MSC, 7, 105
- Tejon fossil flora in Tesla region of, CAL, 134
- Mount Diablo region, CAL, 11, 103, 312
- ash beds in San Pablo formation of, CAL, 205
- Briones formation of, CAL, 163, 193
- coal in San Ramon formation of, CAL, 131
- correlative of Kreyenhagen in, CAL, 151
- Cretaceous conglomerate of, CAL, 101, 103
- Eocene in, CAL, 123, 125, 127, 130,
- (Mount)
- 134
- fossils in limestone from Meganos, CAL, 130, 137
- Franciscan in conglomerate beds of, CAL, 125
- Kirker and San Ramon formations in, CAL, 148, 149
- land area during Eocene, CAL, 142
- Miocene fossils in, CAL, 208, 210
- Oligocene correlation of, CAL, 148, 150
- San Pablo formation of, CAL, 193
- structure section, CAL, 58
- Mt. Ebel member, XXIV, 801
- Mt. Ellsworth, XXVI, 198
- Mount Enterprise fault, XXI, 1067; XXIX, 60, 64
- Mount Everest, RMS, 53
- Mount Everets, Yellowstone National Park, Wyoming, section of Paleozoic and Mesozoic rocks measured at, and at Cinnabar Mountain, Park County, Montana, XXVIII, 368
- Mount Hamilton block, XIII, 218
- Mount Hamilton Range, CAL, 11, 312
- Mt. Hillers, XXVI, 198
- Mount Holly oil field, XXVI, 1257
- Mt. Holmes, XXVI, 198
- Mount Lyell, CAL, 251
- Mt. Pennell, XXVI, 198
- Mount Pisgah sand, IV, 306
- Mount Pleasant dome, VI, 81
- at Cushing field, Oklahoma, STR II, 399
- Mount Pleasant field, Michigan, GAS, 796, 806, 811; PROB, 548, 550; XXI, 782; XXII, 662; XXIV, 1950
- Mount Pleasant high, GAS, 796
- Mt. Pleasant Township, Pennsylvania (well 419), SBP, 349-379, 410
- Mt. Poso fault, XIII, 106
- Mount Poso oil field, MSC, 72, 153, 232, 237, 252, 257, 258, 262; PROB, 205, 743, 964; XII, 657
- Mount Selman-Cook Mountain series in Miranda and Pettus districts, XV, 760
- Mount Selman formation, GC, 592, 765; SD, 243, 252, 256, 259; XIX, 1361; XX, 76; XXI, 1429; XXVI, 258, 260
- along Rio Grande, GC, 601; XIX, 1370
- Clay Creek salt dome, XV, 49
- East Texas, XII, 541; XIII, 1350
- increase in thickness toward south in northern Mexico, GC, 602; XIX, 1371
- Texas, IV, 130; X, 51
- (Twe, Tq, Trk, Tbf) (Eocene), SBP, 294, 337-349, 415
- Mount Shasta, CAL, 26, 65, 127, 312
- Mount Shasta region, Eocene beds of, CAL, 128
- Mount Solomon anticline, PROB, 207
- Mount Sylvan dome, Smith County, Texas, GC, 1041; XII, 540; XIII, 1361
- section, GC, 1048; XIII, 1367
- Mount Sylvan dome and salt movements, Lower Claiborne of East Texas with special reference to, XIII, 1347
- Mount Tabor shale, XXIV, 1665
- Mount Toro, MSC, 135
- Mount Toro Range, CAL, 44
- Mount Uhwar, XXI, 117
- Mt. Vernon pool, XXVI, 1093; XXVII, 819

- Mount Wittenberg, MSC, 128
- Mountain-building, generation of oil by geologic distillation during, XI, 1139
- not explained by continental drift, CD, 190, 196
- Mountain-building forces, effect on occurrence and distribution of oil and gas, XXII, 424
- Mountain chains, problems of major, CD, 6
- Mountain folding by deep-seated convection, hypothesis of, XXIX, 1652
- relation of, to oil and gas fields of southern Oklahoma, V, 32
- Mountain Fuel Supply Company, GAS, 341; XXI, 989; XXII, 686, 1020; XXIII, 913, 917
- Mountain Glen shale, XXIV, 778
- Mountain ranges, arcuate, significance of horizontal plan of, CD, 159, 160
- relation of structural, to Mexican oil fields, MEX, 18, 161
- trend of, MEX, 5, 159, 163
- Mountain ranges and basins, correlation of, CD, 167
- Mountain streams, abrasion in, RMS, 40
- Mountain system, diagrams illustrating course of events in history of, XXIII, 1336-1343
- historical course of, XXIII, 1326
- Mountain systems of Mid-Continent region, PROB, 572
- pre-Cretaceous, parallel to present margins, on all continents, CD, 84
- three types of, CD, 185
- Mountain View field, GAS, 153
- Mountains, RMS, 269
- types of, CD, 185
- Moura, Pedro de, and Wanderley, A. F. W., XXIX, 540
- Moureu, Charles, GAS, 1072
- Movement of bitumens from source rock into reservoir rocks, causes of, XXIX, 1743
- of continents not a simple rectilinear translation, CD, 192
- of oil and gas from source bed into reservoir rock, PROB, 461
- of water, PROB, 280, 936
- of water, rate of, PROB, 274
- Movements of water and oil, PROB, 228
- Moving water, ability of, to carry débris RMS, 12
- transportation of detritus by, RMS, 5
- Mowry, Thermopolis, and Cloverly formations, XXV, 2034
- Mowry formation, PROB, 61, 62, 344, 728
- in Rocky Mountain states, PROB, 167, 168
- Mowry sands, GAS, 286
- Mowry shale, STRAT, 26; III, 357; IV, 38; V, 197, 265; VI, 146; XXII, 1026, 1633; XXV, 138, 887, 2035; XXVIII, 1204
- areal variation of properties of sediments in, in Rocky Mountain area, SBP, 216
- Ferris dome, Wyoming, STR II, 658 (Km) (Cretaceous), SBP 193-195, 198, 200-255, 414
- Lost Soldier district, Wyoming, STR II, 645, 649, 666
- productive at Wertz dome, XXIV, 1101
- (Mowry) waters from, XXIV, 1313
- Wyoming, PROB, 57
- Mowry shale waters, XXIV, 1314
- Mowry siliceous shale, XXVIII, 1198
- Moxey, W. G., XXII, 1426
- Moyer, Dorothy A., and Cushman, Joseph A., MSC, 12, 169, 257
- Moyer, F. T., SBP, 356, 357; STRAT, 538
- Moyers formation, XXII, 871
- in Ouachita Mountains, XXII, 870
- Moyers time, geosynclinal development at end of, XXII, 860
- Mrazec, Louis, SD, 46, 112, 141, 153, 178, 181, 183, 206; VI, 527, 528; VIII, 202; IX, 149, 153, 428, 856, 1188, 1190, 1228, 1239, 1243; XVI, 1062, XXVIII, 645
- Mrazec, Louis, and Hume, N., 438
- Mrazec, Louis, and Teissieyre, W., IX, 1190
- Mrazec, Louis, Macovei, G., and others, *Guide des Excursions Deuxième Réunion en Roumanie, Association pour l'Avancement de la Géologie des Carpates*, review, XIII, 182
- Mrazek, III, 328
- Mrazek, IX, 327
- Mraznica field, XVIII, 899
- Mucoid cement as cause of preservation of faecal pellets, RMS, 289
- Mud, RMS, 195, 221, 225, 231, 248, 259, 286, 291, 292; XXIII, 1861
- in Baltic sediments, RMS, 303
- of North Sea, RMS, 329, 335, 336
- Mud clouds in sea, RMS, 274
- Mud cracks, RMS, 525
- Mud-eating organisms, RMS, 261
- Mud flat bottoms, XXIV, 1167
- Mud flows in submarine canyons, RMS, 254
- in Trinidad, XXIV, 2124
- Mud fluid, use in drilling, VII, 127
- Mud grains, RMS, 509-512, 516, 524
- Mud laden fluids and tables on specific gravities and collapsing pressures, review, VI, 382
- "Mud-line," RMS, 237
- Mud-viscosity variations and drilling-time changes correlated with geological formations, XXIII, 1822
- Mud volcano, MEX, 157
- Mud volcanoes, XVIII, 664
- Burma, XVIII, 323
- Mudd, Seeley W., IX, 713
- Muddy, Dakota, and Lakota sandstone group, PROB, 688, 931
- Muddy Creek formation, XXVI, 1803
- Muddy Creek section, Wyoming outcrop section g, SBP, 243-255, 411
- Muddy formation, IV, 38
- Muddy Pass, Colorado, outcrop section m, SBP, 243-255, 411
- Muddy sand, GAS, 377; SBP, 198; V, 197; XXIII, 908; XXVII, 855
- Ferris dome, Wyoming, STR II, 658
- Grass Creek dome, Wyoming, STR II, 624
- Lance Creek field, Wyoming, STR II, 608
- Little Lost Soldier dome, Wyoming, STR II, 649
- productive at Fort Collins field, Colorado, XXIV, 1104
- productive on Horne Valley anticline, Carbon County, Wyoming, XXIV, 1104
- Salt Creek field, Wyoming, STR II, 596
- Muddy sandstone, XXV, 1853, XXVI, 1534
- Greasewood field, STRAT, 26
- Wyoming, XVI, 876
- Muddy water in Alkali Butte field, XXIV, 1259
- in Lake Creek field, XXIV, 1257
- Mudge, B. F., I, 23, 25, II, 71; V, 68
- Mudlumps, sediments of, size distribution of, RMS, 169
- Muds and calcareous oozes, compressibility of, PROB, 813
- Mudstone conglomerates in Stillwater and Wellington formations, XXI, 1559
- Mueffels, H. D., XII, 179
- Muehlberger, C. W., XIII, 310
- Mueller, Carl C., SBP, 6
- Mueller, F. W., XX, 565; XXIII, 1836
- Mueller, Ferdinand, XXVIII, 63
- Mueller, Hans, RMS, 535
- Muenster arch, XIII, 574; XXI, 1024; XXIII, 845; XXIV, 71, 1045; XXV, 1065; XXVI, 1040; XXVII, 771; XXVIII, 835
- Muenster Townsite pool, XXIII, 853
- Mugeantic olivine basalt near Lagarto, MEX, 148
- Mugrosa fossil zone, XXIX, 1099
- Muhlberg, Max, VII, 608
- Muhlberg, Max, and Koenigsberger, J., PROB, 997; XIII, 1258, 1260
- Muhlhofer, Ludwig, RMS, 18
- Mulenburg, Garrett A., memorial of Henry Andrew Buehler, XXVIII, 1240
- review, XXIX, 296
- Muir, J. Lawrence, XXI, 435, 1492, 1493
- anhydrite-gypsum problem of Blaine formation, Oklahoma, XVIII, 1297
- Muir, John Malcolm, GAS, 658, 1084; MEX, v, x, 13, 23, 27, 30-32, 36, 39, 47, 48, 57, 67, 91, 135, 165, 224; MSC, 179; PROB, 250; XII, 132, 397, 398; XV, 732; XX, 390, 433, 438, 444, 1494; XXVII, 1477, 1497, 1513; XXVIII, 1079, 1129, 1130, 1132, 1133, 1139, 1142, 1145, 1705, 1722
- geology of Tampico region, Mexico, MEX, iii; XX, 1495; review, XX, 1134
- limestone reservoir rocks in Mexican oil fields, PROB, 377
- memorial of, XXII, 509
- occurrence of natural gas in Mexican oil fields with notes on Lake Chapala region and Valley of Mexico, GAS, 997
- reviews, XVI, 617, 707; XX, 987
- Muir-Wood, H. M., XIII, 469
- Mulaev, XVIII, 668
- Mulato, MEX, 84, 85, 91, 109. (See El Mulato)
- Tamesí beds at, MEX, 84, 91
- Mulberry fault, GAS, 563
- Mulcahy, R. F., SD, 620
- Mulcahy and Sanchez well in Garrucho, analysis of black shale, MEX, 50
- Mulcahy well, Las Flores, MEX, 71, 202, 203
- Muldrough field, GAS, 835
- Mule Canyon section, XXV, 2146, 2148
- Mule Creek field, IV, 37
- Mule Creek field, review, VI, 385
- Muletown, CAL, 132
- Mulga tongue, XXIX, 1622
- possible correlative of Shandro shale, XXIX, 1623

- Infinitia* zone, XXIII, 33
 Mulky coal, XXV, 36, 54, 59
 Mull, Bert H., XXIV, 668
 Muller, XXV, 2162
 Muller, C., XX, 1491
 Muller, M., XIX, 38
 Muller, Siemon W., CAL, 68, 75, 123; XXIV, 2038, 2042; XXVII, 130, 195; XXVIII, 451, 482, 507, 953
 Muller, Siemon W., and Schenck, Hubert G., XXIV, 2041; XXIX, 133
 review, XXV, 1943
 standard of Cretaceous system, XXVII, 262
 Muller, Theodor, marine Paleocene and Eocene of north Germany and south Scandinavia, review, XXII, 315
 Muellerried, Friedrich K. G., MEX, 39, 74, 97
 Mullerried, F. K. G., XXVII, 1233, 1496, 1497, 1500, 1507, 1511; XXVIII, 1079, 1090, 1103, 1116, 1117, 1118, 1119, 1120, 1121, 1123, 1124, 1125, 1126, 1127, 1136, 1140; XXIX, 1440
 Multiple intake pipette for mechanical analyses, RMS, 548
 Multiple molecules, RMS, 66
 Multiple-oil-zone completion, XXIII, 1275
 Multiple-photograph orientation instrument, XIV, 576
 Multiple-stage cementation, temperature survey made in well after, XXI, 795
 Mummie pool, XXIX, 683
 Mundorf, T. Dean, elevations with plane table and speedometer, XXVIII, 1534
 Mundorff, M. J., XXIX, 910
 Munhall *et al.*, XXIII, 854
 Munich Tertiary basin, Bavaria, magnetic and torsion-balance survey of, XVIII, 69
 Municipal ownership of gas systems, inadvisability of, GAS, 1102
 Munier-Chalmas, XVIII, 376
 Munier-Chalmas and A. de Lapparent, MSC, 10, 90, 91, 92
 Munn, I., 33; X, 1033
 Munn, M. J., PROB, 20, 44, 254, 255, 274, 279, 410, 466, 845; II, 172; V, 155, 460, 650, 653; VII, 607; VIII, 697, 717; XI, 700; XIII, 145; XIV, 30; XV, 190; XVI, 927, 939; XXI, 953; XXIV, 116, 1642; XXIX, 1745
 Munn, M. J., and Griswold, W. T., PROB, 465
 Munn, M. J., and Shaw, E. W., VII, 214
 Munn's hydraulic theory, PROB, 254, 256
 Munroe, Donald J., XXIII, 1402
 Jackson gas field, Hinds and Rankin counties, Mississippi, GAS, 881
 Scanlan or Midway dome, Lamar County, Mississippi, XXII, 816
 Munson, H. E., STRAT, 299, 330; XV, 1161, 1167
 Munterville limestone, XXVI, 1587
 Munthe, H., RMS, 298, 317, 319, 321
 Munyan, Arthur C., XXVIII, 1676, 1677; XXIX, 920, 923, 927
 recent petroleum activities in Coastal Plain of south Georgia, XXII, 794
 subsurface stratigraphy and lithology of Tuscaloosa formation in south-
 (Munyan)
 eastern Gulf Coastal Plain, XXVII, 596
 Munyan, Arthur C., and Cooke, C. Wythe, stratigraphy of Coastal Plain of Georgia, XXII, 789
 Munyon, Arthur C., and Hunter, C. D., XXV, 807
 Munz, E., XXVII, 1179
 Mural limestone, XXVIII, 1094, 1188
 Muralla field, Duval County, Texas, XXIII, 1237
 Murchison, XXI, 833, 834
 Murchison, E. A., SBP, 297
 Murchison, E. A., McLellan, H. J., and Wendlandt, E. A., GAS, 677; PROB, 330, 332, 639, 659, 660, 676, 780
 Boggy Creek salt dome, Anderson and Cherokee counties, Texas, XVI, 584
 Murchison, Roderick I., XXI, 1441; XXIV, 237, 239, 240, 241, 245, 255, 259, 263, 264, 273, 277, 287, 289, 294, 327, 345, 346; XXV, 1403; XXVI, 402; XXIX, 1607
 recognition and naming of Permian in Russia, XXI, 833
 Murchison, Roderick I., and Sedgwick, A., XXIV, 289; XXIX, 130
 Murree bed, XXIV, 638
 Mürreite, Turkey, search for oil in, XX, 1372
 Murgoci, G. M., SD, 112, 122, 129, 141, 206; VI, 527, 528, 530; IX, 145, 154, 1190; XVIII, 781; XXVII, 160
 Murphy, James K., Purcell, Paul E. M., and Barton, H. E., Seymour pool, Baylor County, Texas, STRAT, 760
 Murphy, P. C., and Judson, Sidney A., XVI, 470; XVII, 1513
 crooked-hole problems in Gulf Coast district, XIV, 595
 deep sand development at Barbers Hill, Chambers County, Texas, XIV, 719
 Murphy, P. C., Judson, Sidney A., and Stamey, R. A., GAS, 707; PROB, 663; XVII, 1493, 1515
 overhanging cap rock and salt at Barbers Hill, Chambers County, Texas, XVI, 469
 Murphy Oil Company, GAS, 204
 Murphy sand in Scenery Hill gas field, Pennsylvania, STR II, 444, 446
 Murphys anticline, mud-flow vents north and south of, XXIV, 1575
 Murphys beds, Barbados, XXIV, 1554
 Murphysboro coal No. 2, XXIII, 1389
 Murphysboro seam and coal No. 6 in Coal Measures, XXIII, 1383
 Murray, XI, 1160; XV, 598, 600, 606, 607
 Murray, A. J. R., XIV, 263
 Murray, A. N., PROB, 366, 367, 553; STRAT, 443; XII, 1156; XV, 1295; XX, 1389, 1390, 1460; XXV, 619
 reviews, XIX, 418, 1241; XXIII, 1251; XXIX, 106, 107
 studies on porosity in limestones, XX, 1389
 Murray, A. N., and Howard, W. V., GAS, 81
 Murray, A. N., and Love, W. W., XX, 1392, 1396; XXI, 619
 action of organic acids upon limestone, XIII, 1467
 Murray, Grover E., Jr., XXIX, 53, 1008, 1018
 Midway microfauna of northwestern Louisiana, XXV, 738
 Murray, Grover E., Jr., and Thomas, E. Paul, Midway-Wilcox surface stratigraphy of Sabine uplift, Louisiana and Texas, XXIX, 45
 Murray, John, RMS, 50, 51, 231, 286, 375, 376, 377, 383, 385, 400, 401, 404, 409, 519, 638, 639, 644, X, 1276, 1277; XII, 413; XXIV, 1577, XXVI, 1189
 expedition, XXI, 1579
 Murray, John, and Hjort, Johan, XIX, 1593
 Murray, John, and Irvine, Robert, PROB, 911; XIV, 141; XX, 173, XXVI, 849, 851
 Murray, John, and Renard, A. F., XV, 267; XIX, 1593, 1596
 Murray, W. John, GAS, 1073
 Murray, W. John, Jr., XXVII, 83
 Murray Expedition, RMS, 51, 400, 401
 Murray Island, Australia, Foraminifera from, MSC, 12
 Murrell, John, XXVIII, 921
 Murrysville anticline at McKeesport field, Pennsylvania, STR II, 449
 Murrysville sand, XXVIII, 1585
 Muschelkalk, RMS, 331, 332, 335
 Muscovite, RMS, 467, 499, 529, 602, 620, 626; XXII, 868; XXVIII, 79
 identification of, by X-ray, RMS, 625
 Mushback, George E., GAS, 221
 Music Mountain field, XXV, 1139
 Music Mountain oil pool, McKean County, Pennsylvania, STRAT, 492; XXVI, 1116; XXVII, 842
 accumulation of oil, STRAT, 497
 Musick, MSC, 24
 Musil, Alois, XXII, 1220
 Muskat, Morris, XIX, 890; XXI, 1465; XXII, 1242, 1243, 1247, 1284; XXIV, 1366; XXV, 867
 flow of homogeneous fluids through porous media, review, XXII, 1282
 review, XX, 324
 Muskat, Morris, and Meres, M. W., XXII, 1242
 Muskat, Morris, and Wyckoff, R. D., XXIV, 2164
 Muskat, Morris, Wyckoff, R. C., Botset, H. G., and Reed, D. W., GAS, 1084; PROB, 808
 measurement of permeability of porous media, XVIII, 161
 Muskat's theory of production through tubing, XXII, 1243
 Muskegon anticline, PROB, 549
 Muskegon field, Muskegon, Michigan, STR I, 111; PROB 548; GAS, 788, opp. 794, 795, 796, 801-804, 810, 811; XXII, 406
 geology of, XVI, 153
 Muskegon Gas Company, GAS, 804
 Muskegon Pipe Line Company, GAS, 804
 Muskingum County, Ohio, Middle Kittanning coal in Otsego field, STR I, 132
 Muskogee County, Oklahoma, age and correlation of Pennsylvanian surface formations, and of oil and gas sands of, XIX, 503
 Muskogee field, XIX, 520
 Muskrat anticline in Fremont County, Wyoming, XXI, 991
 Muskrat field, XXIII, 919; XXV, 1152
 Muskrat Lake pool, XXVI, 1109

- Musper, XXII, 5, 7, 8
 Mussen, E. H., PROB, 406
 Musser, E. H., GAS, 128, 142, 178, 195, 196, 197, 213, 215
 preliminary report on Kettleman Hills oil field, review, XIII, 1488
 Mustang Creek field, XXVII, 744
 Mutsu Bay, Recent Foraminifera from, MSC, 12
 Mutual Oil Company, SD, 611, 612
 Mustquiz coal basin, XXVIII, 313
Mya truncata, faecal pellets of, RMS, 517, 520
 Mycobacteria, PROB, 263, 265
 Myers and Fitzpatrick, XXII, 658
 Myers, Abram F., XVIII, 1459
 Myers, Desaix B., GAS, 113, 118, XIII, 1095; XX, 949
 Myers, E. H., XXVII, 1060, 1076
 Myers, George W., XXII, 1235
 Myers, J. Q., XIV, 917
 Myers, P. A., XXIV, 1807
 Myers, Thurman H., XXI, 1585, XXV, 812; XXVII, 1200
 deep-sand developments in Appalachian region during 1939, XXIV, 970
 memorial of, XXV, 347
 Myers, W. A., GAS, 344
 Mygdal, Karl A., developments in north and west-central Texas, 1939, XXIV, 1044
 Mykawa field, Texas, GAS, 727
 Mykawa structure, GC, 179, 186; XIX, 365
 Myles, F. F., IX, 775
 Myles Mineral Company, SD, 427, 429, 430
 Myles Salt Company, Ltd., SD, 358
 Mylius, Louis Aubrey, GAS, 831; STR II, 134; XXII, 73, 74; XXIII, 816, 1359
 oil and gas in Monroe County, Illinois, V, 87
 review of Illinois for 1920, V, 107
 Mylius, Louis Aubrey, and De Wolf, Frank Walbridge, new Trenton field in Illinois, IV, 43
 Myo Range, Paleozoic in, CAL, 62
 Myrick Station limestone, XXV, 37, 71
 Myriopods, Quaternary, CAL, 287
 Myrtle formation, XXIX, 1397
 Mystic coal, XXV, 64
Mytilus, faecal pellets of, RMS, 516-520
- N
- Naborton field, II, 65; IV, 131
 Naborton formation, XXIX, 56
 Nacata pool, MEX, 192
 Nacatoch, SD, 247
 Nacatoch and Tokio formations near Troy, Arkansas, XXI, 1072
 Nacatoch formation, XXII, 1509; XXIII, 297
 Caddo field, XIV, 175
 Carterville-Sarepta and Shongaloo fields, XXII, 1478
 Louisiana, VII, 647; X, 232
 Mexia-Groesbeck district, GAS, 667, 671, 673
 Monroe field, GAS, 750, 751
 northeast Texas, GAS, 666-678
 Pine Island field, XIV, 175
 productive in Bellevue field, XXII, 1670
 south Arkansas, XXII, 977
 Nacatoch gas rock in Caddo field, Louisiana, STR II, 190
 Nacatoch gas sand in Mexia fault zone, (Nacatoch)
 Texas, STR I, 339
 in Mexia-Groesbeck district, Texas, STR I, 309
 Nacatoch oil, gravity, STR I, 367
 Nacatoch sand, PROB, 60, 417, 421-423; STR I, 323; XXIII, 895, 896; XXV, 637
 analysis of Bellevue oil from, STR II, 249
 Arkansas, V, 632; VI, 54, 350, 361, 473, 477, 479
 Bellevue field, Louisiana, STR II, 232, 240, 249
 Cavett anticline, STR II, 174
 chief source of production at Bellevue field, XXII, 1660
 Homer field, Louisiana, STR II, 197, 209, 210, 214
 Homer field, Louisiana, section, STR II, 211
 Homer field, Louisiana, subsurface structure map, STR II, 220
 Hosston field, Louisiana, STR II, 194
 Irma field, Arkansas, STR I, 1, 11 (Kn) (Cretaceous), SBP, 294
 Louisiana, I, 153; II, 62; IV, 118; V, 304; VI, 142, 181, 194, 247
 Mississippi, V, 492
 northern Louisiana, STR II, 185
 Pine Island field, Louisiana, STR II, 169, 173, 192
 southwestern Arkansas, XIV, 843
 Stephens field, Arkansas, STR II, 6, 8, 9, 11
 Texas, V, 420
 Nace, Raymond L., XXV, 141, 142
 Nacimiento, MEX, opp 30, 31; MSC, 114
 Nacimiento and Big Pine faults, SC, 104; XX, 1650
 Nacimiento and San Andreas fault zones, SC, 132; XX, 1678
 Nacimiento fault, XXVIII, 453
 Nacimiento fault zone, CAL, 12, 30, 41, 113, 312; XXV, 261
 Nacrite, RMS, 467, 470, 484, 485
 Nada field, Texas, XXIX, 787
 Nadai, A., XVIII, 1199
 Nádai, A., and Wahl, A. W., XIX, 804
 Nadallac, Marquis de, SD, 397
 Nadeau Brothers, XXIV, 1107
 Nafiz, H., and Malik, A., MSC, 173
 Naft Khanea field, Iraq, XXIII, 962
 Naft Khaneh field, Iraq, XVII, 239
 Nageli, H., XXIV, 1586, 1591
 Nagelschmidt, G., RMS, 619, 625
 Nail pool, XXVII, 780
 Nairn pay zone, XXVII, 760
 Najouki Creek, SC, 21; XX, 1567
 Nalivkin, B. V., XXVI, 408
 Nalivkin, D. V., XXII, 1015; XXIII, 773; XXIV, 244, 255, 259, 276, 280, 296, 297, 327; XXIX, 134
 scientific results of Permian conference, XXII, 771
 Names defined in type region of proposed American standard section of Permian, preferable at present to use of Russian names, XXIV, 358
 Names of wells, SBP, 403, 412
 Names suitable for stratigraphic use, XXIV, 356
 Namurian, XXIX, 131
 of Europe, correlations, XXIX, 136
 Namurian stage, XXIV, 245
 Nan Shan geosyncline, XXVIII, 1420
 Nance, J. W., XXVIII, 14
 Nanjemoy formation, XXIX, 80
- Nansen, Fridtjof, PROB, 997; RMS, 50, 104, 648; XVI, 40
 Napa, CAL, 112, 123, 312
 Napa County, California, MSC, 109
 outcrop section D, SBP, 167-194, 411
 Napa County oil field, PROB, 184
 Naphtha, PROB, 116, 117, 122, 222
 Turner Valley field, GAS, 45-48
 Naphtha and ozocerite on Lake Baikal, Siberia, IX, 811
 Naphtha characterization and secondary fractionation, XXVII, 1598
 Naphthalene, GAS, 1118
 Naphthen- und Methanole. Ihre geologische Verbreitung und Entstehung, review, XXI, 354
 Naphthene and methane oils, their geological occurrence and origin, review, XX, 1499
 Naphthene oils, PROB, 140, 182, 186, 194, 228, 230, 237
 Naphthenic acids, XX, 289
 in Venezuelan oil-field waters, XV, 897
 Naphthenic oil, primary impregnation of Forest sands with, XXVII, 1616
 in Bernstein field, XXVII, 1602
 Naphthenic type crude oil, XXVII, 1601
 graph, XXVII, 1604
 Naples, MSC, 31, 117, 123, 127, 131, 135, 195, 201, 203, 206, 207, 212, 213, 215, 219, 221, 224, 244, 245, 247, 249, 250, 252, 255, 257, 259, 262, 265, 267-272, 275-278, 280-282, 289, 290, 295, 297, 299, 300, 303, 304, 308, 309, 311, 313, 319, 321, 323, 324, 327, 329, 331-333, 335, 337-341, 344, 347-351, 354
 Naples Coastal Bluffs, MSC, Fig. 6 (in pocket)
 Naples faunules, MSC, Fig. 14 (in pocket)
 Naples fossils, XXIV, 1992
 Naples-Gaviota Pass, MSC, 2
 Naples section in Ventura County, MSC, 86
 Naples shale, XXIV, 1992
 Napo anticline in Ecuador, XI, 1274
 Napo limestone in Ecuador, XI, 1264
 Napo oil-bearing Cretaceous beds, XI, 1277
 Napo region, eastern Ecuador, geologic section, XI, 1266
 Napoleon beds, XXVIII, 187
 Napoleon sandstone, XXII, 131; XXIV, 1967
 Nappe structure, XV, 1000, 1001
 Naramore, Chester, VII, 619
 Naranjo, MEX, 43, 51, 78, 235, Fig. 12 (in pocket)
 stratigraphical data from wells in, MEX, 235
 Naranjos, Los, Mesón beds near, MEX, 133
 Naranjos field, temperatures of oil at, MEX, 227
 Narical member, XXVIII, 17
 Narraben and upper Marine series, mineralogy of, XXIV, 645
 Nash, A. W., XXII, 777
 Nash, Paul E., XII, 394
 Nash dome, PROB, 670
 Nash Draw an unfilled solution valley, XXVIII, 1624
 Nashville, Tennessee, structural contour map of, XXVII, 1048
 Nashville arch, XXIV, 1647
 Nashville basin, V, 646, 654

- Nashville dome, Tennessee, GAS, 853
854, 865; PROB, 515, 518; XI,
908, 916; XXII, 427, 1546; XXIII,
1847; XXVII, 1039, 1041, 1054;
XXVIII, 70
relationship to Appalachia, XX, 1079
section of crest of, XXVII, 1058
Upper Paleozoic development of,
XX, 1071
- Nason, Frank, MEX, 11
- Natchitoches area, Louisiana, general
geology of, XXIX, 25
geologic cross sections of, XXIX,
29-33
geologic formations in, and their
water-bearing properties, XXIX,
37
ground water and geologic structure
of, XXIX, 23
map showing locations of wells in,
XXIX, 24
map showing topography at, XXIX,
36
stratigraphy of, XXIX, 27
structural geology of, on a regional
monoclinal flexure, XXIX, 26
structural map contoured on top of
Wilcox formation, XXIX, 28
- National Bureau of Standards, SBP, 7
- National defense, natural gas with re-
gard to its place in, XXV, 1291
- National Defense Commission, XXV,
1290
- National defense positions open for in-
dustrial specialists, XXV, 1833
- National defense program, petroleum
geologists in, XXV, 1203
- National Museum, MSC, 184
- National Oil Company, SD, 719, 727,
730-733, 740, 741, 757
- National Oil Scouts and Landmen's
Association, oil and gas field de-
velopment in United States, in 1939,
review, XXIV, 1685
in 1940, review, XXV, 1942
in 1941, review, XXVII, 555
in 1942, review, XXVIII, 127
in 1943, review, XXIX, 107
- National Oil Scouts Association of
America (Inc.), Year Book, 1932,
review, XVI, 706
Year Book, 1934, review, XVIII,
1213
- National production, graph showing re-
lation of Oklahoma production to,
XXVII, 793
relation of Oklahoma production to,
from 1930-1941, XXVI, 1061
- National Research Council, RMS, 1,
29, 49, 51, 280; XXIV, 280
color chart of committee on sedi-
mentation of, IX, 1018
Division of Geology and Geography,
XXVII, 1554
Division of Geology and Geography,
annual report for 1933-1934, re-
view, XIX, 302
marine ecology as related to paleon-
tology, review, XXVI, 287
Permian committee of, XXIV, 338
report of committee on sedimenta-
tion, 1940-1941, review, XXVI,
1294
report of representative on division
of geology and geography of,
XXIV, 1148
report of representative to, XXIV,
1507
transactions American Geophysical
Union, 1937, review, XXII, 111
- National Research Council and oil
geology, VII, 467
- National Research Council committee
on standards of radioactivity,
XXIV, 1534
- National Research Fellowships in
Natural Sciences, XXIX, 1692
- National Reserved Zone in Colombia,
XXIX, 1124
- National Roster of Scientific and
Specialized Personnel, XXV, 1204
- National Roster of Technical and
Specialized Personnel, inadequate
information on evaluation of serv-
ices of petroleum geologists on,
XXV, 1207
- National service committee, announce-
ment of, XXVI, 1299
memorandum of, XXVI, 1792;
XXVII, 412
memorandum of changes in personnel
procurement regulations, XXVI,
1862
memorandum to members of, XXVI,
1310
program, XXIX, 1791
progress report, XXVI, 1554
- Natland, Manley L., MSC, 11, 78, 81;
RMS, 258, 259, 280; SC, 48, XX,
1594; XXIV, 1455; XV, 253;
XXVI, 155
- Natland, Manley L., and Hill, Mason
L., abstract, XXII, 1717
- Natrolite, most abundant zeolite, XXV,
292
- Natrona County, Wyoming, outcrop
section g, SBP, 243-255, 411
production in, XXI, 764
(wells 207-221), SBP, 194-243, 406
- Natural coal gas, analysis of, XXVII,
532
in West Virginia, XXVII, 529
- Natural gas, GAS, 1073; XX, 285. (See
Gas, natural)
as factor in oil migration and accumu-
lation in vicinity of faults, VII, 14
from Oriskany formation in central
New York and northern Pennsylv-
vania, XV, 671
from Paleozoic horizons in southern
Cincinnati Arch region, GAS, 853
geology and occurrence of, in Ama-
rillo district, Texas, XVII, 877
in Alberta, GAS, 1
in Appalachian province, regional
variations in composition of, XXII,
1153
in Arkansas basin of eastern Okla-
homa, GAS, 511
in Australia and New Guinea, XVIII,
226
in Bend Arch district, Texas, GAS,
609
in Brantford area, Ontario, XXV,
1950
in central and eastern Ohio, GAS,
897
in Colorado, northern New Mexico,
and Utah, GAS, 363
in Eastern Interior Coal basin, GAS,
813
in eastern Kansas, GAS, 483
in eastern Kentucky, GAS, 915; XXI
1352
in Interior Highlands of Arkansas,
GAS, 533
in Mexican oil fields, with notes on
Lake Chapala region and Valley of
Mexico, occurrence of, GAS, 997
in Montana, GAS, 245
- (Natural)
in Poland, XVIII, 892, 1218
in Quebec and the maritime prov-
inces, GAS, 89
in Roumania, geology of, XVIII, 871
in Washington, Idaho, eastern Ore-
gon, and northern Utah, GAS, 221
in West Texas and southeast New
Mexico, GAS, 417
in West Virginia, GAS, 989
- Natural gas meeting increased fuel re-
quirements of defense industries,
XXV, 1292
new uses for, XXV, 1294
of Gulf Coast salt-dome area, GAS,
683
requirements for, occasioned by war,
XXVIII, 1561
salt, and gypsum in pre-Cambrian
rocks at Edwards, New York,
XVI, 727
with regard to its place in national
defense, XXV, 1291
- Natural gas and oil in India, XVIII,
283
- Natural gas and petroleum, migration
and accumulation of, XXIX, 460
- Natural gas-carbon dioxide ice industry,
GAS, 1118
- Natural gas fields of Burma, XVIII,
315
- Natural gas fields of Michigan, GAS,
787
- Natural gas fields of Ontario, GAS, 59
- Natural gas fields of Transylvania,
Roumania, notes on, VIII, 202
- Natural gas gasoline, GAS, 1118-1122
- Natural gas industry, GAS, 1090, 1091,
1103-1112
- Natural gas land valuation, principal
factors of, III, 378
- Natural gas occurrences in Russia
(U.S.S.R.), XVIII, 746
of Germany, XVIII, 719
- Natural gas pools of southern Okla-
homa, GAS, 575
- Natural gas properties, valuation of,
GAS, 1011
- Natural gas reserves, data on, GAS,
1098-1102
estimation of, GAS, 1035
in Michigan stray sandstone horizon
of central Michigan, extent and
availability of, XXI, 123
in United States, 1938, XXV, 1293
- Natural gas resources of California,
GAS, 113
- Natural gases rich in helium, nitrogen,
carbon dioxide, and hydrogen,
sulphide, geology of, GAS, 1053
sedimentary, from oil and coal fields
of Japan, with special reference to
their geologic occurrence, XI, 187
- Natural-gasoline and condensate pro-
duction in United States, XXVII,
976
- Natural-gasoline output, increase in,
XXVII, 976
- Natural history of Gulf Coast crude oil,
PROB, 109
- Natural levees, RMS, 156-173
buried, RMS, 163
deposits of, RMS, 167
submarine, RMS, 161
- Natural reduction of sulphates, problem
of, X, 1270
- Naumann, E., XXV, 839
- Naumann, Einar, IX, 252, 257, 258
- Naumann, Ernst, XXI, 1274
- Nauset, RMS, 239

- Nauss, Arthur W., XXIX, 958
 Cretaceous stratigraphy of Vermilion area, Alberta, Canada, XXIX, 1605
- Nautical charts of Baltic, RMS, 312
- Nautiloids, Blaine and Dog Creek, XXVIII, 1029
- Nautilus* among living cephalopods similar to ancient ammonites, XXIV, 1177
- "Nautilus," Finnish research ship, RMS, 298
- Navajo Indian reservation, New Mexico, development and relation of oil accumulation to structure in Shiprock district, XIII, 117
- Navajo Mountain, XXVI, 198
- Navajo sandstone, VI, 204, 218, 244; XIII, 139; XXIII, 125, 137; XXIX, 1022
- of Utah, XXI, 724
- overlain by marine beds of Carmel formation, XXI, 1261
- Naval Reserve No. 1, PROB, 202
- Navarro, SD, 247, 249, 252, 256, 258, 266; II, 133
- correlative with upper Méndez, MEX, 17, 73, 74
- Navarro and Escondido formations in Texas, XI, 13
- Navarro and Limestone counties, Texas, STR I, 334, 359
- Navarro and Taylor formations in east-central Texas, XII, 41
- Navarro age, Upper Cretaceous clastic facies of, in Florida, XXVIII, 1709
- Navarro beds, ammonoids in, XXIV, 1188
- Navarro clays, SD, 265
- Navarro County, Texas, fault-line fields in, XXVI, 1053
- (wells 383-387), SBP, 292-335, 409, 410
- Navarro Crossing area, Houston County, Texas, XXIII, 891
- Navarro Crossing field, Houston County, Texas, XXII, 1600; XXIV, 1066; XXV, 1086; XXVI, 1054
- production in, XXVII, 787
- Navarro formation, CAL, 111; SD, 215, 243, 248, 261
- arguments against equivalence with San Miguel formation, XV, 796
- Arkansas, VI, 54
- East Texas, STRAT, 609; XII, 542
- Luling field, Texas, STR I, 273
- Mexia, Texas, GAS, 674
- Mexia fault zone, Texas, STR I, 327
- Monroe field, GAS, 750, 757
- Texas, I, 75; III, 300, 301; V, 7, 26, 382; VI, 324, 494; X, 39, 41, 53, 61; XII, 55
- Navarro group, XXII, 1632
- correlated with Maestrichtian of Europe, XXV, 642
- (Kn) (Cretaceous), SBP, 294-335, 337-349, 414
- Lisbon field, XXIII, 293
- of Texas, summary of faunal studies of, XXV, 637
- Navarro-Midway break, MEX, 91
- Navarro Oil Company, SD, 252
- Navarro sand, XXI, 1047
- Navarro-Selma member, XXVIII, 45
- Navarro shales, Texas, X, 50
- Navarro-Taylor, Texas, X, 769
- Navarro-Taylor contact, XXVIII, 43
- Navaopu (phase of Fleming beds), I, 36
- Navina pool, XXVI, 1067
- Navy, possibilities for geologists in, XXVI, 1299
- Nawiasky, P., PROB, 39
- Nazareth Bank, RMS, 400
- Neal, Roy O., XI, 1302
- Neal, Roy O., and Perrott, G. St. J., GAS, 1116
- Neale, XXV, 1011
- Neale field, Beauregard Parish, Louisiana, XXIV, 2036
- Near East, oil fields and pipe lines in, 1940, XXV, 361
- Near East fields, evolution of, XXV, 362
- Near East-Mediterranean area, oil-producing districts in, XXV, 360
- Near East oil, distribution of, XXV, 363
- Near-shore deposits in Gulf Coast region, XXIX, 1311
- of western area of Great Salt Lake, XXII, 1352, 1357
- organic content of, RMS, 446
- Near-shore sediments, PROB, 28, 30
- hemipelagic deposits, RMS, 219
- Neave, S. L., and Buswell, A. M., PROB, 917; XV, 445, 449, 452
- Neavorsen, E., RMS, 607
- Nebo oil field, XXV, 1033; XXVIII, 275
- gravity of oil at, XXVIII, 275
- Nebraska, PROB, 276, 574, 680
- basin areas in, during Cretaceous, XXVI, 1535
- Cambrian on Nemaha granite ridge, XXV, 1634
- concentration of Ordovician waters in, PROB, 277
- correlation of Big Blue series in, review, XVI, 495
- Cretaceous in, XXV, 1696
- cross section from Saunders County, to Minnehaha County, North Dakota, XXVI, 1571
- cumulative production for, to end of 1942, XXVII, 813
- deep wells of, review, XV, 976
- Nebraska, developments in 1936, XXI, 1003
- in 1939, XXIV, 1007
- in 1940, XXV, 1111
- in 1944, XXIX, 707
- Nebraska, Devonian in, XXV, 1110
- Devonian dolomite in, XXIV, 1007
- drilling activity in 1940, XXV, 1109
- drilling activity in 1941, XXVI, 1082
- exploration in 1938, XXIII, 923
- Hunton productive in, XXV, 1646
- location map of key wells in, XXVI, 1524
- New Mexico, and Wyoming, parts of, and eastern Colorado, map showing general features of, FOP, 62; XXV, 1494
- northwest, cross section from, to southeast Montana, XXVI, 1569
- northwestern, test on Agate anticline, XXIII, 101
- oil possibilities, VI, 88
- oil reserves, VI, 44
- Pennsylvanian in, XXIII, 1697
- Permian in, XXIII, 1697; XXV, 1686
- pre-Pennsylvanian stratigraphy of, XXIII, 1597
- references on oil prospects in, FOP, 82; XXV, 1514
- subsurface cross section of Permian from Texas to, XXIII, 1694, 1702-1703
- (Nebraska)
- thickness and structural study of major divisions of Cretaceous system in, XXVI, 1517
- well in, SBP, 406
- western, FOP, 80; XXV, 1512
- western, activities in 1941, XXVI, 1085
- western, map, FOP, 81; XXV, 1513
- western, structure section, FOP, 81; XXV, 1513
- western, wildcats, 1942, XXVII, 812
- western, wildcats, 1943, XXVIII, 773
- wildcatting in 1940, XXV, 1109
- Nebraska and Kansas, recent developments in 1936, XXI, 1000
- Nebraska developments in 1941, XXVI, 1084
- in 1942, XXVII, 811
- Nebraska Geological Survey, XXVI, 1518
- Nebraska samples (well 199), SBP, 192-243, 406. (See also Rocky Mountain samples)
- Nebraska State Geological Survey, XXVI, 1517
- Nebraska wildcats, 1940, XXV, 1111
- 1941, XXVI, 1083
- Nebraskan stage, CAL, 266
- Nechaev, A. V., XXII, 778
- Necto-benthonic habitat, Texas Cretaceous ammonoids mostly in, XXIV, 1199
- Necto-benthonic organisms, XXIV, 1167
- Necton, XXIV, 1167
- Netherlands East Indies, small foraminifera from late Tertiary of, XXV, 761
- Nedom, Henry Arthur, memorial of, XXIV, 1150
- Need for geologists in locating strategic minerals, XXVI, 1302
- Needham, C. E., PTNM, 598, 676; XXII, 525; XXIV, 309; XXVI, 81, 598, 676; XXIX, 1772
- abstract, XXII, 1705
- correlation of Pennsylvanian rocks of New Mexico, XXIV, 173
- Needham, C. E., and Bates, Robert L., XXVIII, 832
- Neely, Joseph, XXV, 884
- Newman salt dome, Warren County, Mississippi, XXV, 424
- stratigraphy of Sundance formation and related Jurassic rocks in Wyoming and their petroleum aspects, XXI, 715
- Neely, Joseph, and Fountain, H. C., XXVI, 232, 238, 250
- Negative lantern slides, XXVI, 1669
- Neglected Gulf Coast Tertiary microfossils, XXVI, 1188
- Negritos field, V, 586, 592, 600
- Negritos formation in Peru, XII, 11
- Negritos-La Brea anticline, XII, 31
- Negritos-La Brea district, Peru, XII, 36
- Negro Mountain anticline of Pennsylvania, XXIV, 972
- Negro River, PROB, 57
- Nelber dome, Frontier water in, XXIV, 1240
- Nell, III, 155
- Nekton, XXI, 1108
- Nektonic forms, XXV, 833
- Nellie, Doyle, Milroy, Hanbury, Wheeler, and Cruce pools, redbeds in, GAS, 586
- Nellie Bly formation, XXIV, 725
- Nelson, L. A., XVIII, 1538; XXIV, 5

- (Nelson)
abstract, XXII, 1704
Paleozoic stratigraphy of Franklin Mountains, West Texas, XXIV, 157
Nelson, R. N., CAL, 56, 57, 129, 130, 192; SBP, 92; SC, 88, 89; XIII, 500, 502, 503; XX, 1634
Nelson, V. E., McFarlan, A. C., and Freeman, L. B., Corniferous at Irvine, Estill County, Kentucky, XXVIII, 531
Nelson, W. S., STRAT, 327
Nelson, Wilbur A., XI, 907; XII, 149, 150, 153, 157, XIV, 847, XV, 1233
description of oil and gas areas in Tennessee and conditions affecting new areas, V, 645
abstract, V, 99
Nelson, Wilbur A., oil developments along Kentucky-Tennessee line during 1923, VIII, 454
oil-horizons of Kentucky, northeastern Mississippi, and Tennessee, VIII, 621
Nelson Reservoir gas area, GAS, 260
Nemaha and Greenwich trends, map of Kansas showing location of, XXIII, 644
Nemaha buried mountains, XXII, 1589, 1597
Nemaha Granite Ridge, FOP, 82; GAS, 459, 461, 468; XII, 179; XVII, 796; XXIV, 1005, XXV, 1514, 1626
Kansas, early Pennsylvanian deposits west of, X, 205
early Pennsylvanian sediments west of, discussion, X, 636
Nemaha Granite Ridge folds, map of Oklahoma showing location of, and area of thickest sedimentation from Cambrian time through Devonian, XXIV, 2008
Nemaha Mountain range, Granite Ridge, the best-known example of buried hill in the United States, STR II, 160, 693
Nemaha Mountains (Granite Ridge), region, Kansas, PROB, 292, 410, 615, 616; V, 330; XIII, 422; XIV, 1549
flank production, STR I, 60; XI, 919
relation of oil accumulation to structure, STR I, 68, 69
stratigraphy of, STR I, 61
Nemaha range, GAS, 488
Nemaha ridge, XXV, 1662
structural history of, XVIII, 1609
Nenano coal field, VI, 293
Neocene, MSC, 23
Neocene deposits of Kern River and Temblor Basin, MSC, 153
Neocene faunas, MSC, 169
Neocene record in Temblor Basin, MSC, 7
Neocomian, MEX, 12, 15, 17, 19, 22, 34, 93, 94
Brazil and Peru, XXI, 1347
Central America and Mexico, XXVIII, 1079
Isthmus of Tehuantepec, XXVIII, 1120
Northern fields, MEX, 19
Pungarabato-Huetamo area of Guerrero and Michoacán, XXVIII, 1122
Texas, V, 7
Neocomian, Valanginian, and Hauterivi-
- (Neocomian)
vian in Sierra de Catorce, San Luis Potosi, XXVIII, 1141
Neocomian and Aptian, Huasteca area of eastern Hidalgo, northern Puebla, and northern Veracruz, XXVIII, 1128
Neocomian and Berriasian, Oaxaca, XXVIII, 1120
Neocomian ammonites, XXVIII, 1130
Neocomian beds in Chiapas, fauna of, XXVIII, 1118
Neocomian division, CAL, 109, 110, 112
Neocomian fauna of Lower Cretaceous of Magdalena valley, XXV, 1794
Neocomian formation, XXVII, 1230
Neocomian fossil localities in Central America and Mexico, XXVIII, 1081
Neocomian fossils, XXIX, 1074
in Cocuy series east of Páramo de Chita, XXV, 1795
Neocomian Lower Cretaceous, Mexico, map, XXVIII, 310
Neocomian rudistids and corals, Puebla, XXVIII, 1125
Neocomian sands in Jurassic and Permo-Triassic in Makat dome, XXIII, 509
Neocomian sequence at four localities in Mexico, XXVIII, 1088
Neocomian state, XXIX, 1084
Neogene, CAL, 157; MEX, 9, 133, 138; MSC, 170
in East Indies, XXII, 35
in eastern Europe, XVIII, 777
in Ponto-Caspian and Mediterranean oil fields, XVIII, 761
Neogene basins, California, MSC, 2
Neogene batholithic intrusions in East Indies, XXII, 53
Neogene formation in Japan, XVIII, 909
Neohipparion molle mammalian fauna, MSC, 157
Neokrogen, XXVIII, 1512
Neosho County, Kansas—a water-flooding operation, Chanute pool, STRAT, 57
Nepheline, RMS, 602
Nepheline basalt, GAS, 781
in Richland Parish gas field, Louisiana, XII, 985
Nephelitic syenite, MEX, 145, 161
Nequoia Arch, XI, 817
Neritic, MSC, Fig. 5 (in pocket)
Neritic bottoms, XXIV, 1167
Neritic sediments, MEX, 94, 95
Neritic zone, MSC, 82, 84; RMS, 238
Tumey sandstone deposited in marine waters of, XXVIII, 969
Nernst, XVII, 1076
Nero and Hemphill oil fields, XXVI, 1268
Nero-Hemphill area, Wilcox producing sands of, XXVI, 1270
Neroly, MSC, 133, 167
unconformable on Temblor in Wells Ranch syncline, XXV, 236
Neroly and Clerbo successions, XXV, 249
Neroly formation, CAL, 163, 312
Neroly member, MSC, 71
Nescatunga gypsum, Medicine Lodge gypsum, Shimer gypsum, and Dog Creek shale in Comanche County, Kansas, view showing, XXIII, 1801
Nescatunga gypsum bed in Jenkins clay, XXIII, 1794
- Ness County, Kansas, development of, XXIX, 564
Nesson anticline, XXII, 691; XXIII, 925; XXVII, 1570, 1593
Net-plane distances of minerals, RMS, 626
Netherlands East Indies, XXVIII, 1504
comparison of coast lines and areas of, with United States of America, XXII, 4
map, XXVIII, 1443
Miocene foraminifera from Sumatra and Java, XXVIII, 1758
production in, XXIII, 960
Netherlands East Indies expedition, RMS, 51
Netherlands East Indies reserves, XXVIII, 1499
Netherlands New Guinea, oil indications in Miocene, Pliocene, and Cretaceous in, XXVIII, 1451
stratigraphy and structure of, XXVIII, 1451
Nettleton, L. L., XV, 283; XIX, 1505; XX, 1415, 1416; XXVIII, 1305; XXIX, 1652
fluid mechanics of salt domes, GC, 79; XVIII, 1175; discussion, XVIII, 1712
geophysical prospecting for oil, review, XXIV, 2186; XXV, 318
graphic solution of strike and dip from two angular components, XV, 79
recent experimental and geophysical evidence of mechanics of salt-dome formation, XXVII, 51
studies on origin and mechanics of salt-dome intrusion, XX, 1415
Network patterns of Bayou Francois, XXIII, 1218
Neuberg, Carl, PROB, 39; XV, 443
Neuman, Fred R., XII, 767
Neumann, F. E., XXII, 1267
Neumann, Frank, Louisiana earthquake of October 19, 1930, review, XV, 291
Neumann, L. M., Bass, N. W., Ginter, R. L., Mauney, S. F., Ryniker, Charles, and Smith, H. M., relationship of crude oils and stratigraphy in parts of Oklahoma and Kansas, XXV, 1801
Neumann, L. M., Bass, N. W., Ginter, R. L., Mauney, S. F., Ryniker, Charles, Smith, H. M., and Newman, Thomas F., relationship of crude oils and stratigraphy in parts of Oklahoma and Kansas, XXVI, 284
Neumayr, XXIV, 1192
Neuquén basin, XXIX, 557
Neuquen district, Argentina, XI, 263
Neuquen embayment, XXIX, 501
Neva lime gas production at Blackwell field, Oklahoma, STR I, 167
at South Blackwell field, Oklahoma, STR I, 171
Neva limestone, II, 77
Nevada, CAL, 26, 65, 226; RMS, 456
Boulder Dam, XXVI, 1801
Jurosonora in, CAL, 75, 92
marine reptiles in, CAL, 70
marine Triassic in, CAL, 68, 75
north-central, oil seep in, XI, 1117
oil reserves, VI, 44
oil seep in north-central, XI, 1117
Paleozoic in, XXVI, 1803
Paleozoic sections in, CAL, 61, 65
Pleistocene lakes, CAL, 257

- (Nevada)
 Pliocene in, XXVI, 1803
 pre-Cambrian in, XXVI, 1803
 Quaternary in, XXVI, 1803
 reverse type faulting in, CAL, 284
 southern, Colorado Plateau, and western Texas, correlation of stratigraphic sections in, XX, 1200
 southern, problems of Pennsylvanian-Permian boundary in, XX, 1198
 southern, succession of Carboniferous and Permian deposits in, XXIV, 309
 Tertiary in, XXVI, 1803
 Thousand Creek formation of, CAL, 221
 Triassic, massive mountains in, CAL, 70
 Weber conglomerate of Eureka, CAL, 61
- Nevadian orogeny, CAL, 281; PROB, 737; SC, 5; XX, 1551, XXVII, 187; 212; XXIX, 447
 phases of, SC, 8; XX, 1554
 Nevadian revolution, SC, 79; XX, 1625
 Neville, W. C., XIX, 365
 Nevins, Charles Merrick, STRAT, 304; X, 1037; XIII, 639; XV, 166; XVI, 165, 863; XXII, 1411
 discussion of *en echelon* faults, XIII, 639
 origin of petroleum—a method of approach, XXIX, 285
 permeability, its measurement and value, XVI, 373; XVII, 868
 porosity, permeability, compaction, foreword, PROB, 807
 principles of structural geology, review, XV, 1399; XX, 1374
- Nevin, Charles Merrick, and Sherrill, R. E., PROB, 812, 820; XIII, 628, 633, 1074; XVIII, 31
 nature of uplifts in north-central Oklahoma and their local expression, XIII, 23
 studies in differential compaction, XIII, 1, 179
 studies in differential compaction—a reply, discussion, XIII, 1396
- New Albany shale, XXIII, 1179; XXIV, 778
 Eastern Interior Coal basin, GAS, 814
 Indiana, review, VII, 85
 New Brunswick, GAS, 105
 carbon ratio variations, PROB, 90
 New Brunswick and Nova Scotia, FOP, 119; XXV, 1551
 New Brunswick geanticline, CD, 130
 New Burnside anticline, XXII, 1683
 New Centralia field, Illinois, XXII, 653
 New Design group of Mississippian of Eastern Interior basin, XXIV, 823
 New Design paleontology, XXIV, 829
 New development for oil and gas in Oklahoma during the past year, and its geological significance, II, 53
 in Orange field, Orange County, Texas, XXIII, 602
- New developments in north and west-central Texas, 1940, XXV, 1064
 1941, XXVI, 1040
 New discoveries, estimated, and proved crude-petroleum reserves, XXVII, 974
 New England, RMS, 231-243
 New evidence concerning age of Spavinaw granite, Oklahoma, XXVII, 1626
- New-field wildcat discovery, XXIX, 631
 New fields discovered in Arkansas in 1944, XXIX, 806
 discovered in California in 1938, XXIII, 935
 discovered in Mississippi in 1944, XXIX, 821
 discovered in North Louisiana in 1944, XXIX, 806
 discovered in South Louisiana, in 1944, XXIX, 792
 discovered in Wyoming in 1944, XXIX, 1596
 New Grosny oil field, Russia, PROB, 912
 water problems in, XI, 1035, discussion, XII, 950
 New Guinea, RMS, 349; XXIII, 960
 Miocene in, XXIII, 960
 note on present knowledge of Tertiary sequence in Papua and the Mandated Territory of, XXVII, 1266
 references on geology of, XXVII, 1267
 search for oil in, XI, 157
 Tertiary in, XI, 171
- New Guinea and adjacent islands, map of, XXII, 44
 New Guinea and Australia, natural gas in, XVIII, 226, 549
 New Guinea and Papua, oil exploration work in, review, XV, 715
 New Harmony field, Illinois and Indiana, XXV, 1122; XXVI, 1598; XXVII, 820
 areas of production in, XXVI, 1604, 1605
 electric-log cross sections, XXVI, 1599-1602
 lateral variation in Chester sandstones producing oil and gas in lower Wabash River area, with special reference to, XXVI, 1594
 lithology of productive sandstones in, XXVI, 1606
 map showing location of, XXVI, 1595
 productive areas of sandstones in, XXVI, 1603
 structure map of. Contours on base of basal Golconda limestone, XXVI, 1597
- New Haven-Crystal oil and gas area, Michigan, XXII, 154
 New Haven limestone, XXIII, 1512
 of Kay in Illinois coal basin, XXIII, 1512
 New Home dome, Smith County, Mississippi, XXIX, 831
 New Hope field, Franklin County, Texas, XXVIII, 844; XXIX, 836
 gas-oil ratio in, XXIX, 773
 gravity of oil at, XXVIII, 844
 production at, XXVIII, 844; XXIX, 773
- New Iberia dome, Louisiana, SD, 36, 203
 New Iberia field, II, 16, 36
 New ideas in petroleum exploration, symposium on, XXIV, 1355
 New Idria, California, CAL, 173
 outcrop section H, SBP, 167-194, 411
 New Idria fault, XIII, 224; XVII, 1166
 New interpretation of Monongahela-Dunkard contact, Washington County, Ohio, XXII, 103
 of some laccolithic mountains and its possible bearing on structural traps for oil and gas, XXVI, 197
- New Jersey, RMS, 209, 231, 233, 235, 237
 beaches, RMS, 208
 Cretaceous beds in, XXII, 801
 Lower and Upper Cretaceous in, XXII, 803
 map, XXIX, 890
 Tertiary in, XXII, 803
 New Jersey to Florida, oil and gas possibilities in Atlantic Coastal Plain from, XXII, 799
- New Jersey and Georgia, subsurface stratigraphy of Atlantic Coastal Plain between, XXIX, 885
 New Jersey Coastal Plain, subsurface geology of, XXIX, 889
 New Jersey subsurface stratigraphy, XXIX, 889
 New library research tool, XXIII, 1567
 New London field, XXVIII, 268
 New mathematical and stereographic net solutions to problem of two tilts—with applications to core orientation, XXIII, 663
 New method of making underground observations, suggestions of, IV, 83
- New Mexico, PROB, 73, 161, 163, 167-169, 172, 350, 409, 413, 414, 577, 680, 682, 691, 932
 Abo sandstone in, X, 833, XXI, 848
 abundance of sodium sulphate in, XXV, 152
 Artesia field, STRAT, 875; STR I, 112
 basal beds of Salado formation in Fletcher potash test near Carlsbad, XXVI, 63
 bibliography on Mississippian formations in, XXV, 2158
 brachiopods distinctive of Virgil and lower Cisco series found in, XXIV, 178
 carbon dioxide in, GAS, 1065, 1066
 carbon ratios of Cretaceous coals in, in their possible relation to oil, VIII, 519
 Castile gypsum, X, 848
 chart showing correlation of Pennsylvanian rocks of, XXIV, 174
 Chaves County structure, IV, 53
 chemical analyses of four brines, Eddy County, XXV, 154
 Chupadera formation, X, 837
 coal, V, 328
 correlation of Pennsylvanian rocks of, XXIV, 173
 counties productive in, XXIV, 1034
 Cretaceous in, XXI, 995; XXII, 527
 development in, XXI, 994
 development and relation of oil accumulation to structure in Shiprock district of Navajo Indian reservation, XIII, 117
 developments in 1938, XXIII, 920
 developments in 1939, XXIV, 1040
 Devonian in, XXV, 2109; XXVII, 858
 discoveries in 1940, XXV, 1062
 discoveries in 1943, XXVIII, 820
 drilling activity in 1939, XXIV, 1030
 east-central, Triassic-Permian-Pennsylvanian section, XIII, 652
 eastern, and West Texas, regional structure of, map, XXV, 76
 eastern, concerning granite in wells in, V, 163
- New Mexico, eastern, Texas Panhandle, western Oklahoma, and southwestern Kansas, correlation table for,

- (New Mexico)
 GAS, 391
 New Mexico, exploratory tests during 1940, XXV, 1063
 extensions of fields, 1936, XXI, 1039
 extensions to old fields, XXVII, 858
 fields in, XXIV, 1034
 fossils of Chupadera formation, X, 838
 general geology, IV, 95
 geologic section from Fisher County through Andrews County, Texas, to Eddy County, XXIV, 37
 geology of, an index to probable oil resources, IV, 95
 geophysical operations in 1943, XXVIII, 830
 geothermal experiments on Permian rocks in, XXI, 1194
 Getty pool in eastern Eddy County, temperature tests through Permian rocks of different lithologic character, XXI, 1193
 granite in, V, 163, 166, 605
 Gym limestone, X, 847
 Hobbs field, Lea County, GAS, 430, XVI, 51
 Hogback field, XIII, 122
 important deep tests in, during 1938 and 1939, XXIV, 1034
 important pre-Permian tests in, XXVII, 770
 important well in, XXV, 1059; XXVI, 1009
 important wildcats, XXVII, 749
 Lake Valley formation, Sly Gap Canyon, Sheep Mountain, XXIV, 1680
 lateral gradation in Seven Rivers formation, Rocky Arroyo, Eddy County, XXVI, 80
 limestone production in, 1936, XXI, 1037
 Loco Hills field, STRAT, 875
 Lovington field, Lea County, XXIV, 1030
 Maljamar-Artesia area, GAS, 436
 Miocene in, XXII, 527
 Mississippian in, XXV, 2109
 Mississippian formations of Sacramento Mountains, XXV, 2107
 new source for sodium sulphate in, XXV, 152
 northeastern, section on Dry Cimarron River showing tentative correlation with southwestern Colorado section, XXV, 1763
 northeastern, stratigraphy and structure of, IV, 73
 New Mexico, northern, and Colorado, oil and gas fields and main structural features of, XXIV, 1105; XXVII, 451.
 New Mexico, northern, Colorado, and Utah, natural gas in, GAS, 363
 New Mexico, northern, oil and gas fields in, XXVII, 449, 461
 northern, stratigraphy of Colorado group, Upper Cretaceous, XXIX, 232
 northern, surface types of oil and gas fields in, XXVII, 456
 northwestern, Cretaceous waters, PROB, 950, 951
 northwestern, Cretaceous waters, PROB, 950, 951
 northwestern, development in 1943, XXVIII, 791
 New Mexico, northwestern, northern Arizona, southern Utah, and south-
- (New Mexico)
 western Colorado, correlation of Permian of, XIII, 1413
 New Mexico, northwestern, oil and gas in, XXVII, 464
 northwestern, possible equivalents in, of sequence from Entrada sandstone to Junction Creek sandstone, XXV, 1759
 New Mexico, northwestern, Wyoming, and Colorado, oil and gas fields in, PROB, 719
 New Mexico, oil and gas resources of, XXVII, 1010
 review, XVII, 567
 New Mexico, oil development, IV, 80
 oil reserves, IV, 95; VI, 44
 Onondagan equivalent in, XXVII, 222
 Paleozoic formations in San Andres Mountains, XXIV, 1680
 Pennsylvanian production in Rattlesnake field, XXI, 1250
 Pennsylvanian system in, XXVII, 1158
 Permian in, STRAT, 752; XXI, 856; XXV, 155; XXVI, 63
 probable lower Mississippian age of Caballos novaculite, XXIV, 1679
 production in San Juan Basin, XXI, 999
 Quaternary in, XXVI, 63
 radioactivity logs in Cooper pool, Lea County, showing correlation, interval changes, and expression of potash beds, XXV, 1786
 Rattlesnake field, XIII, 127
 review, VI, 387
 Rustler limestone, X, 848
 San Juan Basin, hydraulic accumulation of oil in, VII, 216
 "Sand Belt" area of Lea County, and Ward and Winkler counties, Texas, STRAT, 750
 schist east of Santa Rosa, XI, 88
 sections near Carlsbad, XXV, 1724
 sodium sulphate in, XXV, 159
 source beds in, PROB, 60
 southeast, operations, 1938-1943, XXVIII, 813
 southeast, salt, potash, and anhydrite in Castile formation of, XXIII, 1682
 New Mexico, southeast, and West Texas, map of, showing location of basins, XXIII, 1683
 natural gas in, GAS, 417
 transverse section of Permian basin, XIV, 969
 New Mexico, southeastern, detailed cross section from Yates area, Pecos County, Texas, into, XV, 1087
 New Mexico, southeastern, developments in 1940, XXV, 1062
 in 1941, XXVI, 1035
 in 1942, XXVII, 767
 in 1944, XXIX, 750
 New Mexico, southeastern, drilling wells, close of 1943, XXVIII, 830
 southeastern, exploratory wells completed in 1943, XXVIII, 825
 southeastern, fields of, XXIX, 731
 southeastern, geophysical prospecting and core drilling in, during 1938, XXIII, 840
 southeastern, operations in, XXVI, 1010
 southeastern, operations in 1939-1944, XXIX, 733
- New Mexico, southeastern, and adjacent parts of western Texas, Permian stratigraphy of, XIII, 927
 New Mexico, southeastern, and southwestern Texas, Permian stratigraphy and structure of parts of, XIII, 957
 New Mexico, southeastern, and West Texas, base map of, showing location of fields and more important wildcats, XXIV, 1035
 southeastern, and West Texas, Big Lake pool, STR II, 502
 southeastern, and West Texas, correlation chart, Permian and post-Permian rocks, XXVI, 1013
 New Mexico, southeastern, and West Texas, developments in 1936, XXI, 1034
 in 1937, XXII, 694
 in 1938, XXIII, 836
 in 1939, XXIV, 1033
 in 1940, XXV, 1044
 in 1941, XXVI, 1007
 in 1942, XXVII, 747
 in 1943, XXVIII, 806, 827
 in 1944, XXIX, 725
 New Mexico, southeastern, and West Texas, fields in, XXI, 1040
 southeastern, and West Texas, map, XXIX, 726
 southeastern, and West Texas, map showing areal geology, structure, and oil and gas fields, insert, PTNM, prec. 535; XXVI, prec. 535
 southeastern, and West Texas, map showing fields, XXVI, 1008
 southeastern, and West Texas, map showing fields and wildcats, XXIII 837; XXV, 1058
 southeastern, and West Texas, Permian of, PTNM, 535; XXVI, 535
 southeastern, and West Texas, production in 1944, XXIX, 732
 southeastern, and West Texas, references on developments in 1943, XXVIII, 831, 832
 southeastern, and West Texas, references on geology of, XXVII, 751
 southeastern, and West Texas, stratigraphy of, XXVIII, 827
 southeastern, and West Texas, Tansill formation, XXV, 1713
 southeastern, and West Texas, Upper Permian Ochoa series of Delaware basin, XXVIII, 1596
 southeastern, and West Texas, Yates field, STR II, 483
 south-north cross section from Pecos County through Ector County, Texas, to Roosevelt County, XXIV, 15
 south-north cross section from Pecos County through Winkler County, Texas, to Roosevelt County, XXIV, 29
 southwest, fields of, XXVIII, 812
 southwestern, newly discovered section of Trinity age in, XXII, 524
 spacing of wells in, in 1940, XXV, 1046
 stratigraphy, IV, 73, 95; V, 18, 23, 25, 546, 550, 552, 562; VI, 47
 structure in northeastern, IV, 73
 structures of western Chaves County, IV, 53
 Table Mesa field, XIII, 136
 Triassic in, XXVI, 63

- New Mexico, Utah, and Colorado, correlation of Jurassic formations of, XXI, 723
- New Mexico, well in, SBP, 408
- New Mexico, Wyoming, and Nebraska, parts of, and eastern Colorado, map showing general features of, FOP, 62; XXV, 1494
- New Mexico and Colorado, a probable buried mountain range of Permian age east of present Rocky Mountains in, V, 605
- San Juan Basin, FOP, 72; XXV, 1504
- New Mexico and Texas, Capitan limestone and associated formations of, XIII, 645
- East Lea County high, GAS, 426
- Permian in, XXIV, 22; XXV, 73, 78, 1715
- Permian formation of Pecos Valley, XXI, 833
- Permian stratigraphy in, XXI, 859
- upper Permian formation of Delaware basin of, XIX, 262, 561
- New Mexico and Texas Permian, correlation of, XIII, 997
- New Mexico and West Texas, correlation chart for, XXIV, 4
- important drilling wells in, XXVII, 749
- map showing relative position and size of Wason field to other fields, XXVII, 480
- Ordovician in, XXII, 696
- position of San Andres group, XXV, 73
- references on geological developments in 1941, XXVI, 1011
- references on oil prospects in, FOP, 97, 101; XXV, 1529, 1533
- New Mexico and West Texas Permian basin, regional cross sections, XXIV, 12
- section through, showing operators and wells, XXIV, 38
- section through, showing wells, operators, and locations, XXIV, 30
- New Mexico and western Texas, Dismal's map, XXI, 841
- New Mexico bioherms, XXV, 2127
- New Mexico fields, XXV, 1059; XXVI, 1009; XXVII, 749
- producing zones in, XXVII, 456
- New Mexico operations, 1937-1942, XXVII, 750
- New Mexico Pennsylvanian, correlation of fauna of, with Mid-Continent fauna, XXIV, 176
- New Mexico potash salts, XXV, 152
- New Mexico samples (well 302), SBP, 285-292, 408. (See also West Texas samples)
- New Mexico-West Texas symposium: Part I. Editorial introduction, XXIV, 1
- New oil and gas development in Oklahoma, IV, 277
- New Orleans, RMS, 161, 179
- New Orleans Mining Co., SD, 389
- New Plymouth area, some igneous rocks from, XXIX, 1048
- New pools, extensions, and formations in Oklahoma discovered in 1939, XXIV, 1015, 1016
- discovered in 1942, XXVII, 796
- discovered in 1944, XXIX, 711
- New pools, extensions, new producing formations, and important dry holes drilled in 1944 in Oklahoma, (New) map, XXIX, 718
- New pools, map showing extensions, new producing formations, and important dry holes drilled in 1942, XXVII, 795
- New pools and extensions discovered in Illinois in 1942, stratigraphic distribution of, XXVII, 817, 818
- discovered in north and west-central Texas in 1944, XXIX, 758
- New Providence fauna, XXIV, 807
- New Providence formation, XXIV, 796
- New Providence shale, VI, 26
- central Tennessee, isopach map of, XX, 1074
- New publications, VI, 488
- New River, XXIII, 1217
- New River and related drainage, XXIII, 1218
- New River series, XXIX, 144
- New Salem, Texas (wells 350, 352), SBP, 292-335, 409
- New sand development, important, in Gulf Coast, XXIV, 1089
- New Sand Hills pool, XXV, 1057
- New sands discovered in South Louisiana in 1944, XXIX, 799
- in older fields in South Texas, XXVII, 745
- New Scotland limestone, XXIV, 1985
- New source for sodium sulphate in New Mexico, XXV, 152
- New South Wales, carbon ratios, PROB, 76
- correlation of lower Coal Measures, with middle Ecca of South Africa, XXV, 406
- possibilities of heavy-mineral correlation of some Permian sedimentary rocks, XXIV, 636
- discussion, XXIV, 1682
- New Teapa field, GAS, 1008
- New Trenton field in Illinois, IV, 43
- New York, PROB, 2, 101, 103, 340, 460, 461, 472, 480, 844; RMS, 215, 228, 611, 661
- Allegany County field, STR II, 272
- Bradford field, STRAT, 875
- Cambrian formations in, XXII, 95
- Cattaraugus County field, STR II, 272
- New York, central, and northern Pennsylvania, natural gas from Oriskany formation in, XV, 671
- New York, central, black shale deposition in, XV, 165
- counties productive in, XXV, 1137
- deep well in Richburg field, STR II, 289
- developments in 1940, XXV, 1137
- developments in 1944, XXIX, 666
- Devonian in, XXIII, 1181
- eastern, Ordovician cherts, XXI, 27
- example of accumulation due to lenticularity of producing formation, STR II, 700
- gas-producing counties and formations in, XIX, 866
- geology of part of Finger Lakes region, XVI, 675
- gravity of oils in Allegany County, STR II, 284
- increase in wildcat drilling in 1943, XXVIII, 723
- map of oil fields of Cattaraugus, Allegany, and Steuben counties, STR II, 270
- natural gas, salt, and gypsum in Cambrian rocks at Edwards, XVI, (New York) 727
- northern, outcrop of Upper Devonian Genesee black shale across, XXIX, 286
- oil fields of, IX, 798
- oil reserves, VI, 44
- Ordovician in, XXII, 94
- Oriskany fields in, XXVI, 1112; XXVIII, 724
- Oriskany production in, XXVI, 1111
- outcrop of Oriskany formation from, to Virginia, XXII, 544
- New York, Pennsylvania, and eastern Ohio, exploratory drilling in 1943, XXVIII, 719
- New York, pre-Cambrian rocks in, XXII, 95
- production in Oriskany sand in 1941, XXVI, 1114
- production of natural gas in, XXII, 87
- reviews, VI, 386, 389
- salt well and shaft section in, XXI, 1587
- section through Nile-Richburg pools, STR II, 281
- southern, wells completed during 1939 in Oriskany sand area of, XXIV, 970
- New York, southwestern, and Pennsylvania, map of oil and gas fields, STR II, 408
- New York, southwestern New York gas field, STRAT, 875
- stratigraphy of Hamilton group of, XXI, 311, 316
- wells in, SBP, 410
- western, map showing contours based on top of Medina, XXII, 84
- western, map showing contours based on top of Trenton, XXII, 90
- western, Medina and Trenton of, XXII, 79
- New York and northern Pennsylvania, subsurface distribution of Hamilton group of, XXI, 311
- New York and Pennsylvania, Bradford field, STR II, 407
- Bradford sand in Bradford field, STR II, 425
- Oriskany explorations in, XXI, 1582
- Oriskany gas fields of, XV, 837
- summary of geology of natural gas fields of, GAS, 949
- New York area, source of Oriskany sediments in, XXII, 563
- New York City field, XXVI, 1042
- gravity of oil in, XXVI, 1042
- New York developments in 1942, XXVII, 837
- New York maps and sections, list of, XXII, 467
- New York oil fields, STR II, 269
- New York samples (wells 410-412), SBP, 349-379, 410. (See also Appalachian samples)
- New York state, drilling in 1943, XXVIII, 725
- Oriskany production in 1942, XXVII, 836
- in 1943, XXVIII, 724
- in 1944, XXIX, 668
- New York state, wildcat drilling for Oriskany gas in, XXVII, 838
- New York Natural Gas Corporation, data on storage pools operated by, XXVIII, 1566
- storage operations, XXVIII, 1577
- New Zealand, CAL, 115; RMS, 496

(New Zealand)

- carbon dioxide in, GAS, 1067
divisions of Tertiary of, XXV, 763
divisions of Upper Cretaceous and Tertiary in, XXV, 1813
East Coast district, X, 1243-1252
foraminifera from, MSC, 12
helium in, GAS, 1061
oil and gas prospects of, X, 1227
ranges of Tertiary fossils in, XXV, 766
reviews, VI, 261, 263
Taranaki district, X, 1239
Taranaki oil field, XVI, 833
Westland district, X, 1236
New Zealand and Australian Tertiary stages, correlation of, XXV, 1814
New Zealand stages and European equivalents, XXV, 763
New zone in Cook Mountain formation, the Crassatella textita Harris-Turritella cortezi Bowles zone, XXIV, 1663
New zones, new pools, and extensions discovered in Oklahoma during 1940, XXV, 1094
Newark series, XXIX, 918
Newbern, R. B., XVIII, 856
Newberry, J. S., PROB, 71; STRAT, 821; VII, 605, 620; XXIX, 1742, 1743
Newburg formation, XXV, 814
Newburg sand, FOP, 138, XXV, 1570; XXVII, 852
Ohio pools, STRAT, 383
Newburg sandstone in eastern Ohio, GAS, 907
Newby, XIX, 798, 915
Newby, E. R., XVI, 180
Newby, Jerry B., XIII, 157; XVI, 959
Newby, Jerry B., Torrey, Paul D., Fetke, Charles R., and Panyity, L. S., PROB, 316, 844
Bradford oil field, McKean County, Pennsylvania, and Cattaraugus County, New York, STR I, 407
Newby, Warner Wilson, IV, 54
memorial of, XI, 109
Newcastle Quadrangle, STRAT, 849
Newcastle sand, V, 198
Newcastle sandstone, XXVI, 1534
Osage field, STRAT, 851, 854
Newcombe, Robert B., GAS, 789, 794, 795, 800, 849; PROB, 430, 539, 546, 550; STRAT, 238, 239; XVI, 146; XXI, 124; XXII, 132, 133, 135, 136, 137, 138, 156, 159; XXIV, 1952, 1953, 1967, 1970, 2160; XXV, 714, 727, 729; XXVII, 1050; XXVIII, 181, 188
developments in Michigan during 1939, XXIV, 974
geology of Muskegon field, Michigan, XVI, 153
natural gas fields of Michigan, GAS, 787
oil and gas development in Michigan, review, XIII, 685
oil and gas fields of Michigan, review, XVIII, 149
review, XXI, 1597
structure and accumulation in Michigan basin and its relation to Cincinnati arch, PROB, 551
Newcombe, Robert B., and Lindberg, George D., glacial expression of structural features in Michigan: preliminary study, XIX, 1173
Newcomer Society, note on, V, 419
Newell, Donald Frost, XXIV, 1817

(Newell)

- memorial of, XXIX, 1368
Newell, F. H., XVI, 378
Newell, H. D., and Kimmel, Bernhard, XXV, 134
Newell, Norman D., PTNM, 607, 608, 643, 661, 689, 708, 709, 755; STRAT, 441; XIX, 1304; XXIV, 248, 281, 296, 434, 717, 719, 721, 725; XXV, 437, 1674, 1683; XXVI, 242, 607, 608, 643, 661, 689, 708, 709, 755, 1377, 1393; XXIX, 125, 126, 168, 1767
Newell, Norman D., and Wilson, C. W., XXIV, 82, XXIX, 153
Newell, Norman D., and Wilson, C. W., Jr., XXI, 1409
Newell, Norman D., Knight, J. Brookes, Moore, Raymond C., and Brill, Kenneth, XXIII, 1811
Newell, Norman D., Moore, R. C., and Elias, M. K., XXIV, 318
Newell, W. J., XV, 953
Newellton dome, Tensas Parish, Louisiana, XXIV, 485, 1028
Newfoundland, FOP, 126; RMS, 147; XXV, 1558
Mississippian in, FOP, 130; XXV, 1562
northwestern, geological map, FOP, 127; XXV, 1559
northwestern, structure section, FOP, 128; XXV, 1560
oil in western lowland of, in faulted Ordovician zone, FOP, 126; XXV, 1558
references on oil prospects in, FOP, 130; XXV, 1562
Newfoundland and Ireland, geological relations between, CD, 129-131
Newfoundland Geological Survey, Geological Survey of Canada, Quebec Bureau of Mines, possible future oil provinces of eastern Canada, FOP, 107; XXV, 1539
Newhall-Potrero and Del Valle oil fields, correlation of, XXVI, 196
Newhall - Potrero field, California, XXII, 702, 707; XXVII, 871
Newhouse, W. H., XIX, 416
Newkirk field, IV, 177; V, 138, 568
Newkirk sand in Mervine field, Oklahoma, STR I, 163
Newland, David H., PROB, 548; SBP, 356; XVIII, 1298, 1299
Newlon, J. H., STRAT, 846
Newly discovered section of Trinity age in southwestern New Mexico, XXII, 524
Newman, E. A., recent developments in Michigan basin, XXII, 659
Newman, Grace, SD, 683; VIII, 425; X, 162
Newman, Thomas F., GAS, 385; XVII, 878; XXV, 1801; XXVI, 284
Newman salt dome, Warren County, Mississippi, XXV, 424
Newport, California, CAL, 270, 273, 312; MSC, 77, 154, 222, 226, 230, 232, 240, 244, 248, 251, 258, 261, 264, 276, 291, 293, 333, 343, 344; RMS, 275
Newport, Oregon, faunules from near, MSC, Fig. 14 (in pocket)
Newport to Beverly line of folding, PROB, 748
Newport and Astoria, Oregon, check list of Foraminifera near, MSC, 70
Newport Bay, CAL, 195
Newport Beach field, California, Mio-

(Newport)

- cene at, XII, 273
Newport field, California, XXVIII, 743 (well 95), SBP, 87-153, 404
Newport-Inglewood belt, SC, 114, 125, 127; XX, 1660, 1671, 1673
boundary between granitic and metamorphic basement, SC, 132; XX, 1678
epicenter for earthquakes, SC, 129; XX, 1675
Newport-Inglewood structural alignment, GAS, 173, 177, 180, 186, 188, 195
Newport-Inglewood uplift, GAS, 172; CAL, 47
Newport Lagoon, foraminifera of, MSC, 13
Newport submarine canyon, RMS, 252, 253
Newsom, J. F., XIV, 412
Newsom, J. F., and Branner, J. C., XXVII, 117
Newton, Henry, XX, 1329, XXI, 717
Newton, Henry, and Jenney, W. P., XXI, 717
Newton, I., RMS, 43
Newton, R. Bullen, XXIV, 1558
Newton, William A., XXIV, 1771
Newton, William A., and Weller, J. Marvin, XXIII, 1498, 1506, 1518
Newton Creek limestone, XXVII, 584
fossils of, XXVII, 584
Newtonian law of gravitation, XXIX, 1632
Newton's second law of motion, RMS, 43
Neylandville marl, XXV, 637
Niagara, XXII, 1447
Niagara dolomite, XXII, 1451, 1547
in east-central United States, XXII, 1532
productive in Illinois, XXII, 1533
Niagara escarpment, FOP, 114; XXV, 1546
Niagara group in Ohio, XXIV, 679
in Ohio, source material in, XX, 801 (SI) (Silurian), SBP, 351, 355, 357-379, 415
Niagara limestone, PROB, 509
Kentucky, II, 40; IV, 305; VI, 25
Oklahoma, V, 122
West Virginia, III, 156
Niagara-Salina break, PROB, 549
Niagara series, XXV, 814
Niagaran, CAL, 63
Big Sinking field, STRAT, 179
Martinsville field, Illinois, STR II, 132, 136
Niagaran (Middle Silurian) fauna, XXIV, 164
(Silurian) dolomite in Pittsfield-Hadley gas field, GAS, 832
Niagaran and Alexandrian series in western Tennessee, basis of Silurian correlations, XXVI, 4
Niagaran bioherms, XXV, 2127
Niagaran dolomite of Silurian age productive in Pike County gas field, XXIII, 820
Niagaran dolomites, XXVIII, 741
Niagaran limestone, productive in Martinsville pool, XXIII, 817
Niagaran limestones in Kentucky, GAS, 857
Niagaran sands productive in Kentucky and Tennessee, XXII, 418
Niagaran sections, Missouri-Tennessee, correlations of, XXVI, 4
Niagaran series, lithologic similarities

- (Niagaraan)
in, XXVI, 6
Niblett, XXV, 1011
Nicaragua, MSC, 110, 178-180
southern, Upper Cretaceous in, XXVIII, 1107
Niceville, Okaloosa County, Florida, comparison of standard Miocene section of western Florida with section in, XXV, 271
micropaleontology and stratigraphy of a deep well at, XXV, 263
Niceville well, relation of, to surface section, XXV, 268
Nicholas, John S., XXV, 1204
Nicholls, C. P. L., XXII, 216
Nichols, C. R., XXIV, 1537
Nichols, C. R., and Williston, S. H., review, XII, 445
Nichols, H., Janney, Jr., MEX, 42, 225, PROB, 378
Nichols, John B., GAS, 511
Nichols, P. B., geograph invented by, XXIII, 1829
Nichols, P. B., and Hiestand, T. C., drilling-time data in rotary practice, XXIII, 1820
Nichols, R. L., XXVI, 1826
Nichols, Thomas, XXVI, 204
Nicholson, XXV, 374
Nick Springs field, XXV, 1033
Nickel, XIII, 519
Nickel, PROB, 241, 451; RMS, 149
in petroleum, significance of, review, VIII, 832
Nickell, C. O., STRAT, 551
Nickell, F. A., XXI, 221
development and use of engineering geology, XXVI, 1797
Nickerson sand, XXVII, 1153
Nicolesco, C. P., *gisement pétroliers de Iraq*, review, XVIII, 381
petroleum in Persia, review, XIII, 396
petroleum reserves of Madagascar, review, XV, 87
Nicotlet, J. N., XIX, 1111
Niederman, H., RMS, 281
Nielsen, H. M., MEX, 45, 76
Nielsen, H., XIX, 1358, 1368, 1378
Niemann, Andrew, GAS, 119
Nienhagen field, XXIII, 965
Nienhagen salt dome, XIV, 1167
Nigger Creek, character of water, XXIV, 1226
Nigger Creek and Cedar Creek, Texas, production, STR I, 361
Nigger Creek fault, similarity to Mexia structure, STR I, 352
Nigger Creek field, Texas, PROB, 340, 341, 420, 779; STR I, 323, 367, 409
Nigger Creek oil, character, STR I, 418
Nigger Creek pool, Limestone County, Texas, discovery of, X, 997
Nigger Creek structure, surface fault in, STR I, 412
Nigger Ed Canyon section, XXV, 2152
Nigger Heaven Dome Oil and Gas Company (well 4), SBP, 130-153, 403
Niggli, P., RMS, 564, 572
Niggli, P., and Johnston, J., XIII, 361
Nightingale, W. T., GAS, 342, 346, 351, 357, 1059; PROB, 728; XIII, 781; XXV, 2059; XXVII, 1317
geology of Baxter Basin gas fields, Sweetwater County, Wyoming, GAS, 323
geology of Hiawatha gas fields, southwest Wyoming and north-
- (Nightingale)
west Colorado, GAS, 341
geology of Vermillion Creek gas area, in southwest Wyoming and northwest Colorado, XIV, 1013
petroleum and natural gas in non-marine sediments of Powder Wash field in northwest Colorado, XXII, 1020, 1604
Nikiforov, P., XIII, 40
Nikiforova, O. I., XXII, 772, XXIV, 276, 297
Nikitin, B., and Komleff, L., XXIV, 1533
Nikitin, M., XXIV, 248, 250
Nikkel pool, McPherson and Harvey counties, Kansas, STRAT, 105
accumulation of oil, STRAT, 113
analysis of oil and water, STRAT, 117
Nikolaeff, V. M., and Lindtrop, Norbert T., oil and water content of oil sands, Grozny, Russia, XIII, 811
Nile, RMS, 19
Nile-Richburg pools, New York, STR II, 281
Nile Valley and Gulf of Suez, erosional features, theory, XXVI, 1218
Nine Mile Creek structure, PROB, 945
"99" zone in West Coyote field, GAS, 206
in West Coyote Hills field, PROB, 225
Ningchin disturbance, XXVIII, 1424
Ninnescah shale, gradation of, into deltaic Garber of Oklahoma, XXI, 1557
in Kansas subsurface, XXIII, 1774
of Cimarron redbeds, XXIII, 1767
section showing subdivision of, at outcrop, and thinning of formation northward across Kansas, XXIII, 1768
view showing calcareous benches, location of vertebra locality, and *Estheria*-bearing sandstones, XXIII, 1770
Ninnescah shale member of Cimarron series, XXIII, 1767
Niobrara, MEX, 44, 46, 57, 58, 61
Niobrara and Carlile, XX, 1192
Niobrara chalk, XXI, 955
in Logan County, Kansas, XII, 1016
Niobrara County, Wyoming, geologic structure map of Lance Creek oil field, XXV, 1156
production in, XXI, 764
structure map of Lance Creek field, XXIV, 1109
Niobrara formation, XXI, 991; XXVI, 352, 1561
a possible source of oil at Florence field, Colorado, STR II, 87
a recognizable marker in New Mexico, Utah, Colorado, Kansas, Nebraska, South Dakota, and Wyoming, XXI, 913
Canada, IV, 314
collapse breccia of, XVIII, 1496
Greasewood field, STRAT, 25
Kansas, VI, 70, 550; XIII, 596
(Kln, Kun) (Cretaceous), SBP, 193-195, 197-255, 414, 415
Lost Soldier district, Wyoming, STR II, 646
Nebraska, isopach map, XXVI, 1527
Nebraska, structural map of top of, XXVI, 1533
northeastern Colorado, XVII, 412
outcrop section n, k, SBP, 243-255,
- (Niobrara)
411
Rocky Mountain area, areal variation of properties of sediments in, SBP, 213, 214
Sierra San Carlos, MEX, 56
Texas, II, 73
United States in general, V, 10, 23
Wyoming, V, 202
Niobrara fossils, XXI, 911
Niobrara sediments, XXVI, 1535
Niobrara shale, PROB, 171; XXII, 1027
gravity, PROB, 172
Niobrara-Timpas-Fort Hays limestone, XXI, 912
Nipomo-Cuyama Gorge, MSC, 2
Nipomo Quadrangle, MSC, 25, 75, 131, 199, 200, 202, 203, 206, 212, 230, 231, 236, 244, 249, 255, 262, 263, 265, 273, 274, 276, 281, 285, 300, 303, 304, 308-311, 313, 314, 323, 331, 335, 339, 344, 347
Nipomo Quadrangle faunules, MSC, Fig. 14 (in pocket)
Nipomo Quadrangle section, MSC, 86
Nippewalla group of redbeds between Stone Corral and Blaine formations, XXIII, 1782
Nishio, Keijiro, XVI, 740
Nita crevasse, XXIII, 11
Nitrate, RMS, 150, 423, 437
relation of, to plant growth, RMS, 146
Nitrates, PROB, 28
Nitrite, RMS, 422, 423
Nitrogen, PROB, 37; RMS, 146, 429, 435, 438, 442, 445, 450
effect of, on biologic activity, RMS, 71
helium, carbon dioxide, and hydrogen sulphide, fields in United States and Canada, GAS, 1053-1064
in gas in Appalachian region, XXII, 1181
in sea, RMS, 145
in tidal deposits, RMS, 200
low content of, in carbon tetrachloride extracts, SBP, 69
relation to carbon content of ancient sediments, SBP, 31
relation to texture, RMS, 263
size-distribution of, in ancient sediments, SBP, 41
Nitrogen and helium gases in Europe, GAS, 1060
Nitrogen bases, XX, 287
Nitrogen compounds in sea, RMS, 50
Nitrogen content, SBP, 394, 397, 399
Appalachian area, SBP, 365, 367
as an index of organic content, SBP, 21
basic data of, SBP, 412
California outcrop samples, SBP, 176, 177
California samples, SBP, 115-118, 138
central California samples, SBP, 138
distribution of, among ancient sediments, SBP, 40, 41
Dominguez field, SBP, 156-165
East Texas, SBP, 308, 309, 311
effect of bitumen content on, SBP, 126-130
Gulf Coast, SBP, 340, 344
Los Angeles Basin, SBP, 115, 116, 118
loss of, by weathering, SBP, 187-189

(Nitrogen)

- method of determination, SBP, 36, 40
 Mid-Continent, SBP, 268, 269
 number of analyses, SBP, 403-411
 of Big Injun gas, XXII, 1180
 of natural gas, XXVI, 32
 of organic matter, RMS, 4, 445
 of sediments, PROB, 29, 35; RMS, 261, 264, 421, 431-432
 of sediments in Southern California, RMS, 262
 of subsurface sediments, RMS, 264
 per cent of, in organic matter, SBP, 19, 20
 relation of, to carbon, SBP, 31-35
 relation of, to organic matter, SBP, 44
 relation of, to reduction number, SBP, 43-44
 relation of, to source beds, SBP, 381-384
 Rocky Mountains, SBP, 222, 223
 Rocky Mountains outcrop samples, SBP, 246-248
 small scale variations of, SBP, 162-165
 use of, in regional studies, SBP, 81
 West Texas, SBP, 287, 288
 Nitrogen determinations, SBP, 36
 Nitrogen gas in sea, RMS, 71
 Nitrogen-reduction ratio, RMS, 434; SBP, 59-61, 394-402; XXV, 1927
 Appalachian area, SBP, 368, 369, 371
 California, SBP, 121-125, 141-143
 California outcrop samples, SBP, 180-183
 central California samples, SBP, 141-143
 definition, SBP, 59-61
 Dominguez field, SBP, 156-165
 East Texas, SBP, 318-321
 effect of bitumen on, SBP, 126-130
 effect of texture on relation of, to oil shows in Dominguez field, California, SBP, 160
 effect of weathering on, SBP, 187-189
 Gulf Coast, SBP, 340-344
 in sediments, XXI, 1386
 influence of other factors upon, SBP, 160-165
 Los Angeles Basin, SBP, 121-125
 lower in productive beds than in barren, XXI, 1394
 median reduction number and median nitrogen content related to measured reflectivity with respect to, XXV, 1928
 Mid-Continent, SBP, 271-276
 nature of, SBP, 59-61
 of all samples, variation of, with respect to distance from oil zones, SBP, 386
 of ancient sediments, size-distribution of, SBP, 61
 of Austin chalk and Eagle Ford shale in East Texas Basin, areal variation of, SBP, 320
 rate of change stratigraphically and areally, SBP, 391-394. (See also discussions for individual regions)
 relation to environment of deposition, SBP, 391, 392
 relation to nitrogen and reduction number, SBP, 162-165
 relation to oil zones, SBP, 381-395
 relation to oil zones, Appalachian, SBP, 377-379
 relation to oil zones, California,

(Nitrogen)

- SBP, 144-167
 relation to oil zones, California outcrop samples, SBP, 191-194
 relation to oil zones, East Texas, SBP, 330, 331
 relation to oil zones, Gulf Coast, SBP, 346-349
 relation to oil zones, Mid-Continent, SBP, 282
 relation to oil zones, Rocky Mountains, SBP, 240-243
 relation to oil zones, Rocky Mountains outcrop samples, SBP, 249-251
 relation to oil zones, West Texas, SBP, 289, 290
 relation to other properties of sediments, SBP, 390-394
 relation to production of oil in Oklahoma and Kansas, XXI, 1396
 relation to source beds, SBP, 381-392
 relation to source beds, limitations of use of, SBP, 390-392
 Rocky Mountains, SBP, 227-231
 Rocky Mountains outcrop samples, SBP, 249-255
 size-distribution of, distance classes with respect to oil zones, SBP, 388
 small-scale variations of, SBP, 162-165
 use of, in identifying source beds, SBP, 392-394
 use of, in regional studies, SBP, 81
 variations of, SBP, 59-61
 West Texas, SBP, 287, 288
 Nitrogen-reduction ratio and color of Upper Devonian shale in Appalachian region, SBP, 368
 Nitrogen-reduction ratio and volatility, areal variation of, in Mid-Continent region, SBP, 271
 of central California sediments, areal variation of, SBP, 142
 Nitrogen-reduction ratios and oil content in sediments, correlation of, XXI, 1398
 Nitrogenous compounds, PROB, 30-32, 35, 450, 921
 Nitroglycerin shooting used in wells in West Texas, XXV, 1048
 Noble, A. H., MEX, ix, 145, 176
 Noble, Earl B., GAS, 119; XX, 950; XXIV, 1435; XXV, 1166; XXVII, 1608; XXIX, 957
 memorial of William Warren Orcutt, XXVI, 1306
 Rio Bravo oil field, Kern County, California, XXIV, 1330
 test on Agate anticline, northwestern Nebraska, XXIII, 101
 Noble, Homer A., XVII, 499, 516, 526, 534; XXVIII, 197
 developments in upper Gulf Coast of Texas in 1944, XXIX, 785
 Noble, L. F., CAL, 12, 33, 35, 39, 40, 41, 257; VI, 208; X, 822, 851; XI, 791; XIII, 207, 1427, 1439; XVI, 24; XVII, 118, 146, 735; XX, 1199, 1201; XXV, 210; XXVII, 1262
 Noble, L. F., and Gregory, H. E., XIII, 1418
 Noble County, Oklahoma, structural history of Billings field, intercepted in terms of isostasy, XXIV, 2006
 Noble field, Richland County, Illinois, XXII, 73, 651, 657
 Noble limestone at Rock Crossing, Texas, XXI, 525

Noble structure, XXII, 651

- Nocona field, Texas, GAS, 1054
 Nodal points, RMS, 129
Nodosarina zonule, MSC, 17, 72, Table I and Figs. 4 and 14 (in pocket)
Nodosaria blanchi zone, XXIX, 794
Nodosaria koma zone, MSC, 68
Nodosarina, MSC, 196
 Nodular limestone, MEX, 31
 possible equivalent of Critzer limestone, XXV, 32
 Nodular oil shale, CAL, 199; PROB, 223
 of Playa del Rey field, XIX, 180-190
 relation of, to producing zones in Playa del Rey field, XIX, 183
 Noe, XIII, 460
 Noé, Adolph C., and Stutzer, Otto, XXVII, 1197
 Noel-Schaefer pool, Carson County, Texas, XXIII, 1012
 pre-Redbed columnar section, XXIII, 1013
 Noelke field, gravity of oil in, XXV, 1047
 Noelke pool, XXVI, 1020
 Nounskey, M. E., XXII, 776; XXIV, 245, 259
 Nolan, XIX, 1230
 Nolan, Dan, X, 747
 Nolan, Edward Dana, V, 178
 memorial of, XI, 221
 Nolan, P. E., XXI, 1465
 memorial of Irving McKay Streeter, XVIII, 277
 Nolan, T. B., CAL, 61
 Nolan, Tom F., XXVIII, 816; XIX, 1227
 Nolan County, Texas, XXI, 471; XXIV, 1055
 Noll, W., RMS, 464, 484, 485, 489, 625
 Nollm Oil and Gas Company, XXIII, 815
 Nolte, W. J., XIII, 946, XVI, 579
 Nolten, XIV, 561
 Nolting, John P., Jr., and Fridley, Harry M., XXVII, 1198
 Nolting, John P., Jr., and Headlee, A. J. W., XXVII, 1200
 Nomenclature, XXI, 432
 binomial system of, XXVII, 945
 biostratigraphic, MSC, 88
 dual, for time-stratigraphic and rock-stratigraphic units, XXIV, 2038
 for coals of Eastern Interior basin, development of three different systems of, result of lack of cooperation of state agencies, XXIII, 1375
 for Jurassic rocks in western Wyoming, evolution of, XXI, 722
 of Caliente Range, XXV, 211
 of Catahoula formation, XVII, 530
 of Colorado group of Laramie Basin, Wyoming, XX, 1190
 of conglomerate beds in Puente Hills, California, XXIV, 651
 of Jurassic formations in Colorado and Utah, XXI, 721
 of Jurassic formations in Wyoming, XXI, 720
 of Permian back-reef sediments in New Mexico, XXVI, 84
 of sedimentary formations, XXII, 1280
 of Triassic and Jurassic formations in Utah and Wyoming, XXI, 722
 of Upper Cretaceous, need for revision, XXI, 912
 of Upper Jurassic formations in

- (Nomenclature)
southwestern Colorado, XXV, 1753
of zones in limestone in Turner Valley, XXIV, 1626
Permian, West Texas-New Mexico region, XXIV, 6
Permian formations of Colorado, XIII, 1439
pre-Permian, West Texas-New Mexico region, XXIV, 6
present, of Upper Cretaceous, confining, XXI, 1592
problem of, involved within Sundance formation, XXI, 758
stratal, MSC, 95
stratigraphic, applied to Mississippian, XXIX, 136
stratigraphic, discussion, XXV, 2195
stratigraphic, references on, XXV, 2201
stratigraphic, report of Association committee on, XV, 700
technique of stratigraphic, discussion, XXIV, 2038
- Nomenclature and age of Trinity and older deposits of East Texas, Louisiana, and Arkansas, XXVII, 1231
- Nomenclature and classification of rock units, XVII, 843; XXIII, 1068
of rock units, rules for, XXIII, 1072
stratigraphic, XXIX, 1208
- Nomenclature and correlation of Permian rocks in United States, diversity of opinion and usage in, XXIV, 337
- Nomenclature maps of oil and gas fields of Oklahoma, XXIV, 1018
- Nomenclature problem, XXIV, 1073
- Nomenclature problems of East White Point field, XXV, 2005
- Nomland, Jorgen O., CAL, 236, 250; MSC, 172; PROB, 792; SC, 63; XIII, 222; XVII, 1162, 1171, 1172, 1174, 1175; XVIII, 447, 477, 478, 489, 493; XX, 1609; XXIII, 33, 34
memorial of, XXVII, 1030
- Nomland, Jorgen O., and Schenck, H. G., CAL, 89; XXVII, 192; XXVIII, 499, 507
- Nomographic solution for apparent dip in vertical section not perpendicular to strike, XX, 816
- Non-conductors, geo-electric investigations of—four new examples, XIV, 1165
- Nonconformities, PROB, 510
- Non-conformity, XXVI, 37
- Nonesuch formation of Keweenawan series of northern Michigan, bitumen in, XVI, 737
- Nonion, Reliz Canyon, MSC, Fig. 14 (in pocket)
- Nonion fauna, MSC, 278
lower, MSC, 251, 254
middle, MSC, 251, 284, 329
upper, MSC, 235, 254
upper, middle, and lower, from type Monterey shale, MSC, Fig. 14 (in pocket)
- Nonion faunas of Santa Maria and Paso Robles basins, MSC, 17
- Nonion-Nonionella fauna of Gould Hills, MSC, Fig. 14 (in pocket)
- Nonion-Nonionella faunules from Kettleman Hills, MSC, Fig. 14 (in pocket)
- Nonion schencki fauna, XXI, 1343
- Nonion schencki zone, MSC, 67, 68; XXV, 231
- Nonion zonule, MSC, 18, 160, 329, Table I and Fig. 4 (in pocket)
- Nonionella cockfieldensis beds, XXV, 2015
- Nonionella cockfieldensis zone, G.C., 426; XIX, 690, 693, 695
in Gulf Coast, XXII, 1006
- Nonionidae, MSC, 82, 124, 128, 134, 229
- Non-marine and marine sediments, possible criterion for distinguishing, XXIII, 1716
- Nonmarine beds in Arkansas coal field, XXI, 1403
- Non-marine deposits, criteria for distinguishing marine deposits from them, XXIII, 151
- Non-marine origin of petroleum in North Shensi, and Cretaceous of Szechuan, China, XXV, 2058
- Non-marine sediments of Powder Wash field in northwest Colorado, petroleum and natural gas in, XXII, 1020, 1604
of Wasatch formation, occurrence of petroleum and natural gas in, XXII, 1023
tabulation of, XXIII, 1719
- Non-ownership states, Louisiana an example, XXII, 1083
- Non-piercement anticlines, PROB, 644
- Non-recoverable gas, XXV, 1320
- Non-recoverable oil, XXV, 1318
- Nontron, France, RMS, 471
- Nontronite, RMS, 467, 470, 471
relation of, to glauconite, RMS, 515
- Noodle Creek field, XXIII, 855
- Noodle Creek limestone, STRAT, 718, 719, 721
- Noodle Creek pool, Jones County, Texas, STRAT, 698; XXIII, 856
accumulation of oil, STRAT, 706, 708
reserves, STRAT, 716
- Noodle Creek zone, XXIII, 856
- Nooncanbah of Kimberly and Wadagge of North-West, correlation between, XXV, 391
- Nooncanbah series, XXV, 387
- Nopcea, Baron F., FAL, XVII, 938
- Nordamerikanischen Erdölfeldern, Geologische Studienreise in, review, XIX, 125
- Nordamerikanischen Kontinenten, Gebirgsurrahmung des, review, XX, 829
- Nordstrom zone, PROB, 226, 405
Santa Fe Springs field, GAS, 203
- Nordstrom zone oil, colorimetric method of testing, XXI, 1481
- Noric stage, zone, CAL, 67, 68, 302
- Normal coals, PROB, 82
- Normal crude oil, PROB, 117
- Normal diagonal shear, stress diagram, XXVII, 1247
- Normal diagonal shearing in Fitts oil field, XXVII, 1248
in Jesse oil field, XXVII, 1249
- Normal diagonal shears, XXVII, 1246
criteria for recognition of, XXVII, 1250
- Normal fault, XXVII, 1245
- Normal faulting along margins of basins, XXIII, 1329
- Normal faults in Rocky Mountain region, X, 113
of East Africa, XXI, 113
- Norman, M. E., Alexander, C. W., and Morgan, C. L., developments in
- (Noiman)
southeastern states in 1944, XXIX, 815
- Norman Wells field, Canada, XXVIII, 864; XXIX, 656
gravity of oil at, XXVIII, 866
- Norman Wells oil area, map of Northwest Territories showing, XXVIII, 865
- Norman Wells-Whitehorse pipe line, XXIX, 656
- Normandy, RMS, 344
- Normanskill, CAL, 62
- Normanskill formation, XXI, 27
- Norphlet tongue, XXVII, 1422
- Norris, B. B., GAS, 210
- North (Russian) Sakhalin, fossils, Tertiary, X, 1156
- North and Middle Parks, Colorado, FOP, 50; XXV, 1490
- North and south Buckeye field, sections through, showing lenticular character of oil zones, XXIV, 1974
- North and South Dakota, FOP, 76; XXV, 1508
- Cretaceous in, FOP, 77; XXV, 1509
map showing general features of, FOP, 78; XXV, 1510
oil and gas in Minnelusa sands in, FOP, 77; XXV, 1509
- Ordovician in, FOP, 77; XXV, 1509
- Pennsylvanian in, FOP, 77; XXV, 1509
references on oil prospects in, FOP, 77; XXV, 1509
- North and South Groesbeck fields, Texas, lease and subsurface structure map, STR I, 339
- North and west-central Texas developments in 1939, XXIV, 1044
in 1942, XXVII, 771
in 1943, XXVIII, 834
in 1943, map, XXVIII, 836
in 1944, XXIX, 757
in 1944, map, XXIX, 761
- North and west-central Texas new developments in 1940, XXV, 1064
in 1941, XXVI, 1040
- North and west-central Texas, new pools and extensions discovered in 1944, XXIX, 758
oil production in barrels, XXV, 1079
production in 1944, XXIX, 762
wells completed in, XXV, 1078
wells drilled in 1941, XXVI, 1049
- North Adams field, XXVII, 823
- North America above sea level, transition Triassic to Jurassic, CAL, 71, 75
- Carboniferous-Permian boundary in, XXIV, 298
- classification of Mississippian and Pennsylvanian rocks of, XXIX, 125
- classification of Pennsylvanian system of, XXIX, 140
- comparison of Permian ammonoid zones of Soviet Russia with those of, XXII, 1014
- environment of Pennsylvanian life in, XIII, 459
- faunal migration across, CAL, 161, 301, 302
- geologic map of, CAL, 40
- index fossils of, XXVIII, 1220
- Jurassic history of, CAL, 66, 72, 75, 76, 90-93, 110, 281; XXI, 219
- Laurentia, old stable land area of, CAL, 41
- marine faunas of, CAL, 70, 301

- (North America)
 marine Triassic history of, CAL, 302
 Niagaran of eastern, CAL, 63
 Oligocene climate of, CAL, 151, 154
 outline map of, sinusoidal projection, XXIX, 436
 Permian ammonoid fossils of Russia, correlated with those of, XXII, 1016
 Permian section in, XXIII, 1678
 problem of classification of Mississippian and Pennsylvanian in, XXV, 1646
 standard Permian section of, XXIII, 1673; XXV, 80
 uniform flora from Cretaceous rock, CAL, 114
 vertebrate fauna of, CAL, 162
 west coast, MSC, 25
 west coast, land in Triassic, CAL, 71
 North America and Europe, comparison of Carboniferous-Permian boundary in, XXIV, 321
 comparison of classification and correlation of Mississippian and Pennsylvanian of, XXIX, 131
 comparison of geological history of, XXIX, 881
 importance of agreement in definition of boundaries of Carboniferous and Permian systems in, XXIV, 292
 late Paleozoic crustal movements of, XIX, 1253
 North American Exploration Company, XIX, 20
 North American orogeny, CAL, 35
 North American salt domes, origin of, SD, 1; IX, 831, 843, 853, 864, 872
 North Andean geosyncline, XXIX, 1075, 1076
 North Atlantic geology, XXVI, 771
 North Atlantic Ocean, pelagic sediments of, RMS, 373
 references on, RMS, 394
 North Bangor field, XXVII, 833; XXVIII, 763
 North Bay City field, XXVII, 733
 North Bellevue oil field, structure map of, contours on top of Nacatoch sand, XXII, 1673
 North Belridge oil field, GAS, 137-139; MSC, 66, 206, 232, 264, 308; PROB, 188, 746, 797; XXVII, 870
 deep zone in, XXVII, 872
 Wagonwheel zone of, XXI, 984
 North Bethel field, XXI, 1009
 North Bornholdt pool, XXIV, 999
 North Buckeye and South Buckeye pools in Gladwin County, Michigan, XXI, 659
 North Buckeye field, sections through, showing stratigraphic relationship of oil and water zones, XXIV, 1971
 showing contours on base Bell shale, XXIV, 1958
 North Buckeye pool in Gladwin County, Michigan, XXI, 663
 North Caddo pool in Stephens County, Texas, STR II, 478
 North Cankton field, XXIX, 794
 North Carolina, RMS, 209, 235, 446, 471
 Cretaceous in, XXIX, 916
 Cretaceous to Pleistocene and Recent in, XXII, 806
 Eocene in, XXIX, 910
 map, XXIX, 909
 Pamunkey Eocene in, XXIX, 911
 unconformity between Cretaceous and Tertiary sediments in, XXII, (North Carolina)
 807
 wells drilled to basement rocks in, XXII, 802
 North Carolina Geological Survey, XXIX, 909
 North Carolina State Museum in Raleigh, XXIX, 910
 North Carolina subsurface stratigraphy, XXIX, 909
 North Cartersville field, XXVIII, 269
 North Casper Creek field, Wyoming, Dakota water in, XXIV, 1265
 (wells 219, 220), SNP, 194-243, 406
 North Cheek and Cheek areas, Texas, XXII, 740
 North Coalina district, disturbances in Middle Miocene, SC, 44; XX, 1590
 North Coast area of Colombia, XXIX, 1129
 North Collins field, GAS, 952
 North Como fault, XXVIII, 1209
 North Cowden field, Ector County, Texas, XXIV, 1031; XXV, 593; XXIX, 746
 a gas-drive field, XXV, 625
 acidizing at, XXV, 627
 analysis of salt water from, XXV, 623
 analysis of typical gas sample from, XXV, 625
 anhydrite productive in wells in, XXV, 611
 areal distribution of pay sands, XXV, 608
 artificial-lift wells at, XXV, 629
 bottom-hole pressures, XXV, 618, 620
 completion practices at, XXV, 627
 contoured on top of Rustler formation, XXV, 602
 contoured on top of Yates sand, XXV, 604
 contoured on "top lime" horizon, XXV, 606
 development of, XXV, 593
 drilling in with oil at, XXV, 627
 drilling methods and practices at, XXV, 625
 flowing wells at, XXV, 629
 gas cap at, XXV, 623
 gas cap and water data, XXV, 624
 gas-oil ratios at, XXV, 625
 Grayburg formation of Whitehorse group, productive in, XXV, 607
 isopach maps, XXV, 613, 614, 616
 methods of producing wells at, XXV, 629
 north-south cross section of producing beds in, XXV, 612
 northwest-southeast cross section of producing beds in, XXV, 610
 pipe line from, XXV, 629
 production at, XXV, 595, 619
 production of gas and oil in, XXV, 607
 proration in, XXV, 628
 shooting at, XXV, 627
 stratigraphy, XXV, 599
 structural history of, XXV, 611
 thickness of interval between top of Rustler and top of Yates formations, XXV, 616
 topography, XXV, 596
 well-spacing regulations, XXV, 628
 North Cowden pool, XXIII, 841; XXIV, 1037
 North Cowden reservoir, gas-oil levels in, XXV, 621
 oil-water levels in, XXV, 621
 water encroachment in, XXV, 621
 North Cowden sandy zone in Goldsmith field, XXIII, 1530
 North Cowden structure, XXV, 1053
 North Crowley field, Acadia Parish, Louisiana, XXII, 744; XXVIII, 1274
 electric-log cross section, XXVIII, 1273
 faulting at, XXVIII, 1303
 North Currie, GAS, 678
 North Currie field, Texas, STR I, 312
 North Currie pool, Texas, production, STR I, 317
 North Currie structure in Mexia fault zone, Texas, STR I, 340
 isopach map, STR I, 329
 North Cut Bank field, Glacier County, Montana, XXIII, 907; XXIV, 1104
 Cutbank member of Kootenai formation productive at, XXIV, 1107
 gravity of oil at, XXIV, 1107
 section, XXIX, 1301
 Sunburst sand productive at, XXIV, 1107
 North Dakota, bibliography on stratigraphy of, XXVI, 378
 Cambrian in, XXVI, 341
 Cretaceous in, XXIII, 926; XXVI, 350; XXVII, 1568
 cross section from Saunders County, Nebraska, to Minnehaha County, XXVI, 1571
 cross-section of Tertiary strata in Dakota basin from Sentinel Butte to central Burleigh County, XXVII, 1572
 depth-temperature curve, PROB, 1004
 Devonian in, XXVI, 347
 Eocene in, XXIII, 926; XXVII, 1568
 exploration in 1938, XXIII, 925
 generalized columnar section, XXVI, 338
 geologic map, XXVI, 340
 important dry holes in, XXVII, 859
 Jurassic in, XXVI, 349
 Middle Jurassic in, XXIX, 1019
 Mississippian in, XXIII, 926; XXVI, 349
 oil reserves, VI, 44
 Oligocene and Miocene in, XXVII, 1568
 Ordovician in, XXVI, 343
 Paleocene in, XXVII, 1568
 Pennsylvanian in, XXIII, 926; XXVI, 349
 Permian in, XXVI, 349
 Pleistocene in, XXVI, 357
 pre-Cambrian in, XXVI, 336
 Recent in, XXVI, 357
 Silurian in, XXVI, 343
 stratigraphy of, XXVI, 336, 1673
 discussion, XXVI, 1414, 1776
 North Dakota, Tertiary in, XXVI, 355
 Tertiary geology and oil and gas prospects in Dakota basin, XXVII, 1567
 Triassic in, XXVI, 349
 well logs giving typical sections of formations in, XXVI, 358
 Williston basin wildcat test, Oliver County, XXVII, 1618
 North Dayton, Texas, GAS, 709; PROB, 116
 North dome, PROB, 186; SC, 56; XX, 1602
 Kettleman Hills, CAL, 46, 47, opp. 254; PROB, 230
 North Earlsboro field, XXI, 1010

- North Ellis pool, PROB, 776
 North Elton area in Allen Parish, Louisiana, XXIV, 1085
 North Fairport pool, PROB, 777
 North Geary, XXV, 1157
 North Geary dome, XXIV, 1110
 North German depression, RMS, 331, 334
 North German oil province, XII, 465
 North German plain, XVI, 1144
 North Germany, PROB, 329
 North Glendale gas field, XXVI, 1094
 North Government Wells field, XXI, 1423
 North Groesbeck, GAS, 678
 North Groesbeck structure in Mexia fault zone, Texas, STR I, 339
 North Haakon County, South Dakota, structure in, review, X, 533
 North Kansas basin, XVII, 796
 North Killam field, XXIII, 865
 North Kvar, RMS, 307
 North Lisbon and Bellevue fields of northern Louisiana, correlation of Upper Jurassic formations in, XXVII, 1428
 North Lisbon field, Claiborne Parish, Louisiana, columnar sections of Upper Jurassic formations in, XXVII, 1426
 relationships of Jurassic formations in, XXVII, 1469
 North Lisbon gas-distillate field, XXVI, 1264
 North Louisiana and Arkansas, important wildcats and dry holes completed in 1944, XXIX, 809
 North Louisiana and South Arkansas, developments in 1941, XXVI, 1250
 North Louisiana syncline, XXIII, 283
 North Markham field, Texas, XXIX, 790
 result of surface study, torsion-balance, and reflection surveying, XXIII, 880
 North McCallum field, Colorado, XXVIII, 791; XXIX, 1599 (well 236), SBP, 194-243, 407
 North McFaddin field, XXII, 756
 North Mid-Continent developments in 1939, XXIV, 994
 in 1941, XXVI, 1073
 in 1942, XXVII, 806
 North Mid-Continent region, map showing location of important wells drilled in Forest City basin and adjacent areas in 1939, XXIV, 1004
 North Monahans field, Texas, XXIX, 747
 North Nero oil field, XXVI, 1270
 North Noble field, XXIII, 1499
 Cypress production at, XXIII, 1495
 North Overisel pool, XXV, 1131
 North Owensville field, XXVIII, 753
 North Owensville pool, XXVIII, 758
 North Pacific, MSC, 168
 North Park, Colorado, structure section, FOP, 61; XXV, 1493
 North Park section, Colorado, outcrop section n, SBP, 243-255, 411
 North Penn Gas Company, GAS, 978
 North Platte River, character of water, XXIV, 1223
 North Platte structure, Dakota water in, XXIV, 1265
 North Polar Expedition, reticularian and radiolarian rhizopoda of, MSC, 11
 North polar region, sketch showing rift valleys, CD, 169
 North Pole, RMS, 369
 North Redondo, XXI, 979
 North Round Mountain, California, XXII, 704
 North Sea, RMS, 104, 175, 200, 201, 203, 205
 bogs of, RMS, 333
 configuration of coast of, RMS, 334-336
 currents of, RMS, 333
 geologic history of, RMS, 331-334
 petrology of deposits of, RMS, 322
 North Sea, sediments of, RMS, 322-342
 references on, RMS, 339
 North Sea, southern, petrological relations of sediments of, RMS, 343
 southern, petrological relations of sediments of, references on, RMS, 347
 storms of, RMS, 326, 336
 submarine configuration of, RMS, 336
 tidal currents of, RMS, 325, 326
 North Shensi, non-marine origin of oil in, XXV, 2065
 stratigraphy, XXV, 2059
 non-marine origin of petroleum in, and in Cretaceous of Szechuan, China, XXV, 2058
 North Shensi basin, reddish clay and loess in, XXV, 2060
 North Siberian shelf, RMS, 78
 North Sweden field, Duval County, Texas, XXII, 754
 North Tepetate field, Louisiana, XXIII, 879; XXIX, 796
 North Texas, STRAT, 541, 551, 669
 Mississippian in, XXVI, 1042
 Pennsylvanian in, XXVI, 1043, 1046
 Permian in, XXVI, 1046
 North Texas Geological Society, developments in north and west-central Texas in 1940, XXV, 1064
 in 1941, XXVI, 1040
 in 1942, XXVII, 771
 in 1943, XXVIII, 834
 in 1944, XXIX, 757
 North Texas Geological Society field trip, May, 1940, XXIV, 952
 North Texas petroleum fields, geologic structures and producing areas in, III, 44
 North Withers field, XXVII, 734
 Northamptonshire iron field, magnetic resurvey of part of, review, XII, 1122
 North-central and West Texas, major subdivisions of Pennsylvanian and Permian in, XXIV, 80
 North-central fields of Montana, Colorado group waters in, XXVI, 1337
 Kootenai waters in, XXVI, 1348
 Madison limestone waters in, XXVI, 1366
 Quadrant formation waters in, XXVI, 1360
 North-central Michigan, oil and gas production in, XXII, 402
 North-Central Plateau of Mexico, XX, 1289
 North-central Texas, STRAT, 545, 786
 North-central Texas developments, in 1939, XXIV, 1046
 in 1940, XXV, 1074
 in 1941, XXVI, 1041
 North-central Texas, geology of, XXIV, 65
 Glass Mountain subdivisions and terminology suitable for related beds of, XXIV, 80
 (North-Central)
 Lower Ordovician and Upper Cambrian subsurface subdivisions in, XXIX, 413
 Pennsylvanian in, XXIV, 81
 preliminary paper on stratigraphy of Pennsylvanian formations of, III, 132
 stratigraphic classification table of Paleozoic strata of, XXIV, 66
 underground position of Ellenburger formation in, IV, 283
 North-central Texas and Panhandle, developments in, 1936-1937, XXI, 1015
 North-central Texas and southern Oklahoma, oil and gas fields of, XXI, 1020
 Northeast Coalinga field, California, Gatchell oil sand productive in, XXIV, 1113
 gravity of oil at, XXIV, 1113
 production from, XXIV, 1113
 structure section at, showing westward pinch-out of Gatchell sand and relationship between gas, oil, and water, XXIV, 1116
 Northeast Sand Hills, XXIX, 750
 Northeast Texas district, developments in 1936, XXI, 1063
 Northeastern Ohio Geological Society field trip, June, 1940, XXIV, 952
 Northern California, Domengine fauna, CAL, 138
 geomorphogeny of, CAL, 14, 255
 Horsetown in, CAL, 14, 111
 Knoxville in, CAL, 109
 laminated siltstone in, CAL, 104
 Pliocene fauna of, CAL, 233
 Pliocene volcanic rocks in, CAL, 243
 Northern Coast Ranges, CAL, 1, 11, 13, 64, 142, 188, 274
 Cretaceous in, CAL, 99, 109
 Eocene beds near Clear Lake in, CAL, 14, 123, 125
 fossils of Knoxville in, CAL, 14
 Horsetown formation in, CAL, 14, 107
 Martinez and Tejon in, CAL, 123
 Pliocene in, CAL, 251
 Northern Counties Oil Company, Ewers-Mooney 1 (well 2) SBP, 130-153, 403
 Northern fields, Mexico, GAS, 999-1005, MEX, 21, 76, 161, 163; PROB, 377, 380, 397
 folding deep-seated and vertical, MEX, 162
 production from, MEX, 164, 173
 structural trends, PROB, 387
 structure, MEX, 161, 171, Fig. 22 (in pocket)
 subsurface map of, MEX, Fig. 22 (in pocket)
 volcanic plugs in, MEX, 151
 well pressures in, MEX, 229
 wells in, reaching Otates horizon in Tamaulipas limestone, MEX, 30
 Northern Franciscan area, CAL, 12, 28, 30, 37
 a thrust sheet, CAL, 37
 Franciscan sands of, CAL, 91
 intrusive masses in, CAL, 82
 metamorphic rocks in, CAL, 84
 organisms in, CAL, 93
 Northern Franciscan basin divided by beginning of Tertiary, SC, 53; XX, 1599
 Northern Gas and Pipe Line Company, GAS, 413

- Northern geosynclinal basin, SC, 8; XX, 1553
geology of parts of, SC, 70, XX, 1616
Northern Geosynclinal Basin and Coal-
ing District, SC, 52, XX, 1598
Northern Great Plains, lithology and
correlation of, Big Snowy group in,
XXVII, 1287
Mississippian in, XXVII, 1287
post-Paleozoic-pre-Mesozoic paleoge-
ology in, XXVII, 1290
Northern Great Plains and northern
Rocky Mountains, geographic dis-
tribution of Mississippian forma-
tions in, XXVII, 1302
Northern Great Plains region, structure
of, contoured on top of Dakota
sandstone, XXVI, 1568
Northern Hemisphere, RMS, 122
Northern Hiawatha region, XXVII,
856
Northern Illinois State Teachers Col-
lege, RMS, 192
Northern Louisiana, review of oil and
gas development in, II, 61
Northern Michigan, oil and gas occur-
rences in, XXII, 401
Northern Natural Gas Company, GAS,
478; XXIII, 1056
Northern oil fields along Panuco River,
XXVIII, 315
Northern Ordnance, Inc., XXVIII, 792
Northern Ordnance Company, XXIX,
675
Northern source areas of Whittier con-
glomerates, XXIV, 666
Northrop, John D., GAS, 1054,
XVIII, 1455; XXVII, 419
Northrop, John D., Hill, B., et al., GAS,
1089
North-South correlation of Pennsyl-
vanian of Oklahoma, I, 134
North-West artesian basin in Western
Australia, XXV, 378
Raggatt's standard section of, XXV,
379
Northwest Basin, Western Australia,
geology of, XX, 1028
Jurassic in, X, 1143
oil prospects of, X, 1136
Permo-Carboniferous rocks of, X,
1139
structure of, X, 1144
Northwest Dill pool extension, XXV,
1100
Northwest Jacalitos, XXIX, 650
Northwest Long Beach field, XXIII,
941
Northwest Louisiana Gas Company,
XXII, 1485
Northwest Louisiana Natural Gas
Company, GAS, 770
Northwest Mannville well No. 1, Ver-
million area, log of, XXIX, 1609
Northwest Territories, map showing
Norman Wells oil area, XXVIII,
865
Northwest Territories and Yukon, Can-
ol geological investigations in
Mackenzie River area, XXIX,
1669
Northwestern Europe, salt mines of,
SD, 49
structure of the salt domes of, SD, 45
Northwestern Utilities Company, GAS,
3, 24
Norton, E. G., SD, 20; IX, 850
theory of origin of salt domes, IX, 850
Norton, George H., STRAT, 86, 96,
104; XIII, 955; XIX, 1411; XXI,
(Norton)
511, 1514, 1523, 1566; XXIII,
1679, 1680, 1818; XXV, 1685,
1686; XXVI, 238, 242, 248
discussion of Permian redbeds in
Kansas, XXIII, 1818
lower redbeds of Kansas, XXI, 1557
Permian redbeds of Kansas, XXIII,
1751
Norton, Richard D., MSC, 13, XV,
1293
Norton, W. H., XIV, 1215; XVIII,
1602, 1616
Norway, RMS, 99, 322, 325, 357, 369
coast of, RMS, 329, 335, 336
fjords of, RMS, 95-99, 261, 356-372,
444
Norway Point formation, XXVII, 589
Norwegian Sea, RMS, 104
Norwegian Trough, RMS, 325, 329,
331, 333
Nos Naranjos oil field, V, 464
Nose, anticlinal, at Big Lake field,
Texas, STR II, 514, 516
anticlinal, in Martinsville area, Illi-
nois, STR II, 133
anticlinal, in Pine Island field, Louisi-
ana, STR II, 173
Burkett pool, Kansas, STR II, 157
Cromwell field, Oklahoma, STR II,
305
Fankhouser pool, Kansas, STR II,
157
Kevin-Sunburst field, Montana, STR
II, 263
Osage County field, Oklahoma, STR
II, 382, 385
Petrolia field, Texas, STR II, 548
Stephens County field, Texas, STR
II, 472
surface, at Petrolia field, Texas, STR
II, 554
Noses, PROB, 17
definition of, STR II, 685
Noses and terraces, rôle of, STR II, 684
Nosoni formation, CAL, 63
Noszky, J., XVIII, 938
Notches field, Wyoming, Dakota water
in, XXIV, 1265
Tensleep and Dakota waters in,
XXIV, 1298
(well 217), SBP, 194-243, 406
Note, explanation of scheme of Table
151, basic data on samples ana-
lyzed in study of source beds of
petroleum, SBP, 530
Notes on appraisals, XXVI, 1283
on early history of water-well drilling
in United States, XXVII, 1268
on Frio formation, XXIV, 376
on oil fields of Wyoming, IV, 37
on oil shales of southwestern Wyom-
ing, IV, 195
on present knowledge of Tertiary se-
quence in Papua and the Mandated
Territory of New Guinea, XXVII,
1266
on present status of problem of ex-
ploration, XXVI, 1214
on some foraminifera from Marys-
ville Buttes, California, XXIV,
2051
on stratigraphy of Panama and Costa
Rica, III, 363
on structures and oil showings in Red-
beds of Coke County, Texas, III,
117
on Texas Permian, I, 93
Notestein, Frank B., XVIII, 305, 310;
XXIV, 1615; XXVI, 258, 794, 833;
(Notestein)
XXIX, 1075, 1103, 1135
Notestein, Frank B., Hubman, Carl W.,
and Bowler, James W., XXIX,
1070, 1124, 1126
Nothosaur, XXV, 135
*Notuni de Geologia Zacaminel de
Sare*, review, XX, 108
*Nouvelles données sur la structure du
Bassin Transylvain*, review, XIX,
1695
Nouys, XIX, 1811
Nova Scotia, GAS, 105, 107; PROB, 9,
635; RMS, 227
Nova Scotia and New Brunswick, FOP,
119; XXV, 1551
Nova Zembla, RMS, 227
Novaculite at base of Magdalena in
New Mexico, XXIV, 1679
in Black Knob Ridge, Oklahoma,
Radiolaria in, XXI, 11
in Potato Hills, XXI, 10
Novaya Zemlya, XXI, 1441
Novelli, G. D., XXVII, 1175, 1180
Novillo Cañon, basal Turonian uncon-
formity in, MEX, 48
strike of basement complex in, MEX,
159
Novillo formation, XXVII, 1416, 1479
Nowak, Jan, VI, 525, 528, 530; XV,
2, 8, 12, 28, 36, 37; XVI, 1072;
XVIII, 781
Geologie der polnischen Oelfelder, re-
view, XV, 557
Nowata, density of shale at, PROB,
816
Nowata, Osage, and Washington coun-
ties, Oklahoma, results of recent
field studies in, XXIV, 716
Nowata field, V, 561; XXI, 1006
Nowata formation, I, 135; V, 293, 509;
VI, 464
Nowata shale, XXV, 40
Nowels, K. B., PROB, 409, 410
Nowels, Kenneth B., VII, 384; XI, 375
development and relation of oil ac-
cumulation to structure in Ship-
rock district of Navajo Indian
reservation, New Mexico, XIII,
117
preliminary report on water condi-
tions in First Wall Creek sand,
Salt Creek oil field, Wyoming,
VIII, 492
Nowlan, Harry H., developments in
south Texas district in 1936-1937,
XXI, 1042
San Antonio Section Eighth Annual
Meeting, XX, 1513
Nucleus, contraction of, CD, 9
of earth, CD, 15
Nucula, faecal pellets of, RMS, 517,
518, 521, 522
Nuculid bivalves of genus *Acila*, MSC,
512
Nueces and San Patricio counties,
Texas, Oligocene stratigraphy of
East White Point field, XXV, 1967
Nueces County, Texas, GC, 665
geochemical log, dry hole, XXIV,
1426
Saxet oil and gas field, XXIV, 1805
Nueces geosyncline, XXI, 1432
Nueces River, ancestral, XXV, 2008
ancient, distributary ridges of, GC,
218; XVII, 922
terraces of, GC, 244; XVII, 951, 953
Nuestra Señora del Cofre land grant,
MSC, 100
Nueva Morelos, MEX, 36, Fig. 12 (in

- (Nueva Morelos) pocket
 Nuevo Laredo, Navarro beds younger than in Texas, southwest of, MEX, 74
 Nuevo León, Mexico, PROB, 391
 Galeana-Montemorelos-Linares area of, Lower Cretaceous sequence, XXVIII, 1149
 northern, and parts of Tamaulipas and Coahuila, Cretaceous section in, XXVIII, 1177
 oil possibility in, IX, 123
 State of, MEX, 11, 98
 Nufer and Floyd, XXV, 1666
 Nugent, Nicholas, XIX, 475
 Nugget, Twin Creek, Preuss, and Stump formations, stratigraphic section of, measured on South Piney Creek, XXI, 727
 Nugget formation, XXI, 720, 723
 equivalent to basal Sundance formation, XXI, 770
 Nugget sand, PROB, 165
 Nugget sandstone, XXIX, 1022
 in Idaho, XXIII, 1172
 in Iles dome, Colorado, STR II, 93
 in southeastern Idaho, view showing cross-bedding, XXIII, 1174
 Number of analyses, SBP, 403-411
 Number of minerals in mineral counts for reliable determinations, RMS, 605, 606
 Number of samples studied, SBP, 15-17
 Number versus weight frequency in mineral studies, RMS, 606, 609
 Number and range in depth of samples analyzed from each well and outcrop section in study of source beds, SBP, 403
 Numerov, B., XIII, 40, 42, 45
 geophysical methods of prospecting in Union of Socialist Soviet Republics, XIV, 93, 325
 Numerov graphical method for torsion-balance corrections, XIII, 40
 Nummulites, XXV, 1209
 Nummulitidae, MSC, 12
 Nunn pool, Kansas, XXIII, 806
 Nura Nura limestone, XXV, 387
 Nutrient substances in basins, RMS, 101, 102, 359
 in sea, RMS, 50, 142-152, 438
 Nuttall, W. L. F., MEX, 90, 105, 109, 110, 119, 123, 125, 126, 130, 131; MSC, 177, 178, 211, 217, 293; XVIII, 310, 568, 586, 1049; XIX, 1660; XX, 434, 435, 438, 439, 440, 441
 Nutting, C. C., XIV, 705
 Nutting, P. G., PROB, 808, 826; RMS, 473; STRAT, 290, 291; XIII, 822; XIV, 28; XVI, 375, 383; XIX, 880, 891; XX, 256; XXIX, 1163, 1164, 1165
 lower Cosmos sand, STRAT, 293
 physical analysis of oil sands, XIV, 1337
 some physical and chemical properties of reservoir rocks bearing on accumulation and discharge of oil, PROB, 825
 technical basis of bleaching-clay industry, XIX, 1043
 Nutty, P. M., STRAT, 168, 194
 Nye, S. S., PTNM, 688; XIX, 258, 259; XXI, 849, 856; XXVI, 688
 Nye or Stillwater anticline, XX, 1173
 Nye-Bowler lineament, Stillwater and Carbon counties, Montana, geol-
- (Nye-Bowler) ogy of, XX, 1161
 Nye shale, MSC, 69, 163, 222, 226, 230, 232, 244, 248, 251, 261, 264, 276, 291, 293, 333, 343, 344
 Nye shale faunules, MSC, Fig. 14 (in pocket)
- O
 Oak, Donald P., Dillard, W. Reese, and Bass, N. Wood, Chanute pool, Neosho County, Kansas—a water-flooding operation, STRAT, 57
 Oak Canyon field, XXVII, 871
 gravity of oil at, XXVI, 1142
 production in, XXVI, 1142
 Oak Canyon field deep zone, XXVI, 1151
 Oak Canyon oil field, XXVI, 188
 Oak Grove sand, MSC, 176; XXV, 264
 Oak Ridge overthrust, XXVIII, 745
 Oak Ridge-South Mountain ridge, PROB, 742
 Oakdale, CAL, 99, 193, 194
 Oakes, E. T., XXI, 1071; XXIII, 283
 Oakes, Malcolm C., Broken Arrow coal and associated strata, western Rogers, Wagoner, and southeastern Tulsa counties, Oklahoma, XXVIII, 1036
 geology and mineral resources of Washington County, Oklahoma, review, XXIV, 2185
 memorial of Roger W. Sawyer, XXV, 1610
 results of recent field studies in Osage, Washington, and Nowata counties, Oklahoma, XXIV, 716
 Oakes, Malcolm C., and Jewett, John M., upper Desmoinesian and lower Missourian rocks in northeastern Oklahoma and southeastern Kansas, XXVII, 632
 Oakes (Blossom) sand, PROB, 417
 Oakes-sand, Homer field, Louisiana, STR II, 197, 211
 section, STR II, 212
 Oakford storage pool, XXVIII, 1575
 Oakford storage pool, rock pressure versus gas in storage, showing complete input and output cycle, XXVIII, 1576
 Oakhurst pool, Oklahoma, STR I, 211; PROB, 763
 Oakland anticline, XXII, 651
 in Clark and Cumberland counties, Illinois, XXII, 651
 Oakland City oil horizon in Tri-County field, Indiana, XI, 608
 Oakland City sand in Tri-County field, Indiana, STR I, 26, 29, 33
 Oakland conglomerate, CAL, 118, 312
 Oakland fault traversing Tuscaloosa gravels, XXV, 2049
 Oakley, K. P., and Edmunds, F. H., XXIV, 293
 Oakridge, CAL, 9, 312
 Oakridge anticline, PROB, 190, 191; SC, 104; XX, 1650
 Oakridge field, XXVIII, 743
 Oakridge-Las Posas upland, SC, 104; XX, 1650
 Oakridge Uplift, SC, 14, 30, 100; XX, 1560, 1576, 1646
 Oaks, relation of, to sedimentation on Mississippi River, RMS, 162
 Oakvale formation, I, 36; IV, 130; V, 223
 Oakville, Cuero, and Goliad formations of Texas Coastal Plain between
- (Oakville)
 Brazos River and Rio Grande XXIX, 1721
 references, XXIX, 1732
 Oakville, Lagarto, and Reynosa formations, stratigraphy of, between Nueces and Guadalupe rivers, Texas, XVII, 523
 Oakville-Catahoula undifferentiated in Amelia field, XXIII, 1643
 Oakville escarpment, GC, 529, 560; XVII, 498, 527
 Oakville formation, GC, 530, 531; XVII, 528, 529; XXI, 495; XXIX, 1722
 age and fauna, XXIX, 1723
 conglomerate of limestone and siliceous pebbles in, XXIX, 1722
 lithology, XXIX, 1722
 stratigraphic and structural relations, XXIX, 1723
 Sugarland field, GC, 724; XVII, 1377
 unconformable on Catahoula formation, XXIX, 1723
 Oakville-Lagarto contact at Brenham dome, GC, 785; XIX, 1335
 Oakville sand, Driscoll pool, GC, 623, 628; XVII, 819, 824
 Raccoon Bend field, GAS, 719; GC, 687, 688; XVII, 1470, 1472
 Oakville sand series, XXIV, 1815
 Oakville sandstone, Driscoll Ranch, GC, 262; XVII, 818
 (To) (Miocene), SBP, 336-349, 416
 Oakville sandstone and clay with calcareous nodules, XXIX, 1723
 Oakville zone, XXIII, 868
 Oakwood dome, Texas, XII, 537, XIII, 611
 Oat Gulch section, XXIX, 984
 Oaxaca, Neocomian and Berriasian in, XXVIII, 1120
 State of, MEX, 92, 95, 97
 Turonian in, XXVIII, 1121
 Valley of, XX, 1306
 O'Bannon, P. H., XXIII, 1635
 O'Bannon, P. H., and McCarter, W. B., GAS, 713
 Sugarland oil field, Fort Bend County, Texas, GC, 709; XVII, 1362
 Oberfell, G. G., GAS, 1124; XX, 46
 Oberfell, G. G., and Burrell, G. A., XI, 191
 Oberg oil field, Germany, XII, 483; XVI, 1146
 Oering, E. A., IX, 984
 Objective facts, weight of, in defining a system, XXIV, 347
 Oblique fault, XXV, 2192
Obolus appollinus, XXI, 1443
 Osborne, Harry W., STRAT, 22
 discovery of oil at Greasewood Flats, Weld County, Colorado, XVI, 256
 Oregon formation, XXIV, 41, 91; XXVI, 222
 O'Brien, James C., XXV, 1204
 O'Brien, M. P., RMS, 9, 79
 O'Brien, Springs anticline, Wyoming, STR II, 660
 Obruchev, W. A., XXI, 1215
 Obrutchev, XXVIII, 1417
 Observations on accumulation of free oil, discussion, XXVI, 285
 on evolution of Pacific Ocean, XXV, 1811
 on post-Permian deposits in north central Oklahoma, I, 136
 Observations on two deep borings near Balcones faults, III, 124

- (Observations)
discussion, III, 129
Observations, underground, suggestions of, new method of making, IV, 83
Obtulowicz, J., XVIII, 894
Ocala dome, XXVII, 906
Ocala facies, XXVIII, 59
Ocala formation, XXIX, 920
Ocala limestone, CAL, 130; XXII, 791, 796, 999; XXVIII, 1683, 1685
map of Florida and parts of Georgia and Alabama showing thickness of, XXVIII, 1729
unconformable on underlying beds in Florida, XXVIII, 1731
Ocala mollusks, XXIX, 924
Ocala uplift, XXVIII, 1683
Ocampo, Sebastian, II, 133
Ocampo, Mexico, MEX, 62, Fig. 12 (in pocket)
Occupations, critical, petroleum, natural gas, and natural gasoline activity, XXVI, 1556
Occurrence of gas, Amarillo district, GAS, 390
eastern Kansas, GAS, 486
geologic, in southern California, GAS, 120
Gulf Coast area, GAS, 699
in coal in Illinois, GAS, 834
in shale in Illinois, GAS, 833
Interior Highland area, GAS, 537
Mexico-Groesbeck district, commercial, GAS, 667
Michigan, GAS, 789
minor, in northeast Texas, GAS, 674
mode of, in Colorado, New Mexico, and Utah, GAS, 364
on salt domes, GAS, 699
without associated oil, GAS, v
Occurrence of Middle Jurassic rocks in Western Interior of United States, XXIX, 1019
Occurrence of natural gas in Hugoton field, geology pertaining to, XXIII, 1058
in Mexican oil fields, with notes on Lake Chapala region and Valley of Mexico, GAS, 997
Occurrence of oil and gas in Big Lake field, GAS, 445
Occurrence of petroleum in Mackenzie River region, Canada, review, VII, 303
Occurrence of sulphur waters in Gulf Coast of Texas and Louisiana, and their significance in locating new domes, SD, 774
Occurrence and accumulation of oil in Laredo district, Texas, XXI, 1422
Occurrence and activity of bacteria in marine sediments, RMS, 416
Occurrence and types of crude oils in Rocky Mountain region, XXVII, 1305
Ocean. (See Atlantic and Pacific)
general postulates concerning, RMS, 51
gyrals in, RMS, 77, 123
Ocean, physical processes in, RMS, 48
references on, RMS, 136
Ocean, uniformity of composition of, RMS, 51, 52
Ocean bottom sediments, determinations of radium content in, by means of electroscopie, XXIV, 1531
Ocean circulation, RMS, 109, 387
forces maintaining, RMS, 63
Ocean currents, RMS, 102, 105, 106, (Ocean)
108, 236
deep, velocity of, RMS, 54
path of, not due to deflective forces of earth's rotation, RMS, 108
Ocean deposits, RMS, 445-446
Ocean differences from enclosed basins, RMS, 51
Ocean floor, material of, CD, 16, 18
Ocean water, analysis of, PROB, 957; XXVI, 841
Oceanic formation, Barbados, XXIV, 1577, 1586
age of, XXIV, 1585
succession of beds in, XXIV, 1577
Oceanic islands not all pure silica, CD, 211
Oceanic-Scotland unconformity in Barbados, age of, XXIV, 1588
Oceanic series of Barbados, XXIV, 1552
Oceanography, biological, RMS, 142
references on, RMS, 151
Oceanography, history of, RMS, 50
present status of knowledge of, RMS, 49
relation of, to sedimentation, RMS, 48
scope of, RMS, 49
Oceans and continents, distribution due to vertical movements, according to Gregory, CD, 210
Oceanside, CAL, 170
Ochelata group in Oklahoma, XXIV, 725
Ochoa, evaporites of, XXVIII, 1598
lower, time, XXVI, 243
unconformable on Guadalupian sediments everywhere except in Delaware basin, XXVIII, 1598
upper, time, XXVI, 245
Ochoa basin, XXIII, 1683
potash in, XXIII, 1692
Ochoa epoch of Permian in West Texas region, close of, PTNM, XXVI, 763
Ochoa-Guadalupe contact, coincidence with Castile-Delaware Mountain contact, with Castile-Capitan contact, and with Salado-Tansill contact, XXV, 1727
Ochoa, Guadalupe unconformity, XXV, 1727
Ochoa rocks in Delaware basin, sections, XXVIII, 1600, 1602, 1603
Ochoa section, salt solution in, XXVIII, 1622
Ochoa sediments, divisions, XXVIII, 1599
limited to Delaware basin depression, XXVIII, 1598
Ochoa series, PTNM, 608; STRAT, 752; XXIV, 341; XXV, 80; XXVI, 252, 608
hydration and solution of calcium sulphate of, XXVIII, 1624
in Delaware basin, correlation of, PTNM, 710; XXVI, 710
in Glass Mountains, PTNM, 662; XXVI, 662
in Guadalupe Mountains region, fossils from, PTNM, 613; XXVI, 613
included in Permian because of similarity to most distinctive portion of the type Permian of Russia, XXIV, 355
limited to Delaware basin, XXIII, 1678
of Permian in New Mexico, XXIII, 1676
potash deposits of upper Salado (Ochoa)
halite most economically important features of, XXVIII, 1625
relation to underlying beds, PTNM, 609; XXVI, 609
Sand Belt, STRAT, 752
subdivisions of, XXIV, 342
subsurface section best type locality for series, XXIV, 355
Upper Permian, of Delaware basin, West Texas and southeastern New Mexico, XXVIII, 1596
Ochoa time, features of, in West Texas region, PTNM, 760; XXVI, 760
maps showing paleogeography of, PTNM, 752, 761; XXVI, 752, 761
Ochsenius, Carl, SD, 119, XXII, 1273
Ochsenius, Karl, XVIII, 1291
Ochsenius, theory of, XXI, 1126
Ockerman, J. W., XX, 1089
Ocks, Kansas (well 243), SBP, 255-285, 407
O'Connell, Marjorie, XVI, 943; XXVII, 1517
O'Connell, Marjorie, and Brown, Barnum, XVI, 537; XIX, 116
O'Connell, Marjorie, and Grabau, A. W., XV, 175; XXI, 1146; XXIII, 1182, 1190
O'Connell zone, PROB, 226
at Santa Fe Springs field, GAS, 203
O'Connor, P. B., XXIII, 1091
O'Connor, Tom, Mrs., XXII, 1185
O'Connor, W. M., XIX, 770
Ocotillo member, XXV, 1722
Ocotillo silt member, XXV, 1725
Octahedral layer in clays, RMS, 461
O'Dea zone, XXIII, 942
Odell, William W., GAS, 1141
Odem field, XXVI, 1004
Odén, Sven, RMS, 313, 540, 542, 550, 551, 553, 554
Odén balance, RMS, 543
Odén's method, RMS, 550, 551
Odenville limestone (upper Canadian) in Alabama, XXIV, 1644
Oder, C. R. L., XXIV, 1657
O'Donahue, T. A., XIX, 833, 839
O'Donnell, A., VII, 619
O'Donnell, Lawrence, Jefferson Island salt dome, Iberia Parish, Louisiana, GC, 983; XIX, 1602
O'Donnell, Thos. A., XVIII, 1459
O'Donnell, Tom, VII, 614
Odor of samples of bottom sediments of Lake Pontchartrain, XXIII, 15
Odum, Hilmar, XV, 150
Oehman, XIII, 1147
Oehman's apparatus for surveying bore holes, XIII, 1147
Oelgeologie, Grundfragen der, review, XIV, 1234
Oelheim-Edesse field, XVI, 1146
Oelheim oil field, XII, 486
Oeloe Aer fault zone, Sumatra, XXIV, 359
Offermann, H., XVIII, 727
Officer, Herbert George, memorial of, XXI, 972
Officer, H. G., Aurin, F. L., and Gould, C. N., XVI, 120; XVII, 241, 247, 248, 251, 253; XXI, 1520
Officer, H. G., Clark, Glenn C., and Aurin, F. L., core drilling for structure in north Mid-Continent area, X, 513
Officer, H. G., Gould, Charles N., and Aurin, F. L., subdivision of Enid formation, X, 786
Official Agricultural Chemists, SBP, 36

Offord, R. J., and Rosewaine, P. V., GAS, 27, 46
 Offsetting arrangement of oil or gas fields, STR II, 689
 Offshore, RMS, 207
 Offshore bar, RMS, 165, 208, 215
 Dora pool, STRAT, 419
 gas fields of Michigan, STRAT, 238
 Music Mountain pool, STRAT, 499
 Venago district, STRAT, 537
 Offshore-bar sands in Greenwood County, Kansas, relation of thickness to differential compaction, XXII, 833
 Offshore bars along Atlantic coast, XXI, 37, 38
 offset arrangement, XXI, 43
 possible origin of shoestring sands, XXI, 35
 probable origin of shoestring sand bodies, XVIII, 1333
 Offshore bars and oil sands, growth ridges in, XXI, 44
 Offshore basins, sediments of, RMS, 245
 Offshore deposits, RMS, 275
 on continental shelf in Gulf Coast region, XXIX, 1313
 Oficina field, XXIII, 959
 Ogallala beds, CAL, 303
 Ogallala formation, XXIII, 1054, XXVII, 485
 in Kansas, XIII, 599
 Ogawa, K., XVI, 1030
 Ogburn prospect, XX, 1419
 Ogden, C. K., XXIX, 1516
 Ogilvie, Ida H., XVIII, 1659
 Ogní gas field, XVIII, 752
 O'Hara bed, XXIII, 1357
 O'Hara formation, VI, 27
 Ohern, Daniel Webster, I, 32, 134; III, 137, 270; V, 548; VII, 621; VIII, 319, 323; XIII, 164, 884; XXIV, 723, 725
 contribution to stratigraphy of red-beds, II, 114
 fifty years of petroleum geology, review, XII, 679
 O'Hern field, Duval and Webb counties, Texas, STRAT, 722
 accumulation of oil, STRAT, 730, 746
 analyses of oil and water, STRAT, 740-741
 reserves, STRAT, 740
 example of double trap reservoirs, XXIX, 1574
 O'Hern sand, XXI, 1429
 Lopez field, STRAT, 689
 O'Hern field, STRAT, 726-728
 Ohio, PROB, 2, 4, 9, 12, 17, 73, 74, 103, 106, 254, 326, 373, 430, 465, 485, 497, 498, 521, 524, 841; RMS, 213; STRAT, 385
 Austburg pool, GAS, 907
 Barnesville field, XI, 956
 Baumé gravity of crude oil in, PROB, 103
 Berea pool, XI, 954
 Berea sand of, STRAT, 821
 Bremen oil field, STRAT, 875
 Cadiz Quadrangle, STRAT, 876
 Cambrian in, XXIV, 687
 Cambridge gas field, GAS, 907; STR I, 133; XI, 954
 Cincinnati anticline in, STR I, 124
 Cleveland gas field, STRAT, 876
 Clinton gas field, STRAT, 876
 Clinton sandstone in, GAS, 908
 completions in, by sands, in 1940, XXV, 1146
 completions in 1941, by counties,

(Ohio)
 XXVI, 1125
 counties productive in, XXVII, 847-850
 developments in 1940, XXV, 1144
 developments in 1944, XXIX, 679
 Devonian in, STRAT, 384; XI, 1026
 drilling activity during 1941, XXVI, 1123
 eastern PROB, 500-506
 eastern, gas in Oriskany sandstone in, XXII, 261
 eastern, general structure of producing sands in, XI, 1023
 eastern, petroliferous iron ore of Pennsylvanian age in, XXVIII, 1051
 eastern, structural conditions, STR I, 124, 138, 139
 eastern, structural conditions in portions of, XI, 945
 eastern, syncline in, XI, 949
 eastern, West Virginia, and eastern Kentucky, occurrence of oil and gas in, PROB, 485
 eastern, wildcat tests drilled in Oriskany sand area of, during 1939, XXIV, 972
 gas production in 1941, XXVI, 1124
 geology, STR I, 124
 Holmes County, GAS, 908
 Homer gas field, STR I, 135; XI, 956
 Jackson County, GAS, 908
 Jefferson County, GAS, 907
 Keener sandstone in, GAS, 903
 Knox County, GAS, 908
 Lawrence County, GAS, 907
 Lawrence County, to Bell County, Kentucky, structure section, GAS, 928
 Lebanon Township pool, XI, 952
 lensing sands of, STRAT, 876
 Lexington and Highbridge groups in, GAS, 909
 Licking County, GAS, 908
 Logan group in, GAS, 903
 Macksburg 300-Foot and 500-Foot sandstone in, GAS, 901, 902
 map showing thickness of Big Lime in eastern, GAS, 913
 Massillon or Salt sandstone in, GAS, 902
 Maxton sandstone in, GAS, 902
 Medina sand in, V, 367
 Mississippian in, STRAT, 384; XI, 1026
 natural gas in central and eastern, GAS, 897
 new interpretation of Monongahela-Dunkard contact, Washington County, XXII, 103
 northern, PROB, 545
 oil and gas bearing horizons of Ordovician system in, V, 104, 609
 oil and gas field in Sutton Township, STR I, 130
 oil and gas fields of eastern, PROB, 504; STRAT, 876
 oil fields in, SBP, 410
 oil pool in Lebanon Township, STR I, 131
 oil production in 1941, XXVI, 1123
 oil reserves, VI, 44
 Ordovician oil, review, V, 104
 Ordovician oil and gas sands, V, 609
 Paleozoic and pre-Cambrian rocks of Vance well, Delaware County, XXIV, 672
 Pennsylvanian in, STRAT, 384; XI, 1026

(Ohio)
 pre-Cambrian in, XXIV, 687
 production in 1941, XXVI, 1126
 production, review, VI, 383
 productive anticlines, PROB, 10
 recent secondary recovery of oil in, XXIV, 494
 sands productive in, XXVII, 850
 shale production, STR II, 708
 Silurian in, STRAT, 384, XI, 1026; XXIV, 676
 Silurian in Vance well, Delaware County, XXIV, 676
 stratigraphic section in, XXIV, 676
 Sugar Grove gas field, STRAT, 876
 Sutton Township pool, XI, 951
 synclinal oil pools in eastern, STR II, 703
 Temperanceville field, STR I, 135; XI, 956
 Trenton limestone field, STRAT, 876
 water flooding for oil recovery in, XXIV, 494
 wells completed in 1941, by sands, XXVI, 1126
 wells completed in 1942, XXVII, 847
 wells completed in 1943, XXVIII, 735
 wells in, SBP, 410
 West Virginia, and Pennsylvania, problems of underground gas storage in, XXVIII, 1561
 western, Trenton oil areas, STR I, 126
 Ohio and Chattanooga shales in east-central United States, XXII, 1528
 Ohio and Indiana, Lima-Indiana district, GAS, 843
 Ohio and Ontario, section, FOP, 141; XXV, 1573
 Ohio and Pennsylvania, chart showing vertical position of oil and gas in, XXII, 419
 Ohio and Virginia, early petroleum industry in, XXII, 1095
 Ohio Black shale in eastern Kentucky, GAS, 917
 Ohio Brown shale in eastern Kentucky, GAS, 917
 Ohio developments in 1942, XXVII, 847
 Ohio Fuel Gas Company, XXII, 1183 (well 423), SBP, 349-379, 410
 Ohio-Indiana, cross section, XXII, 1542-1543
 Ohio Little Lime, XXV, 815
 Ohio maps and sections, list of, XXII, 468
 Ohio-Mexico Oil Corporation, GC, 588; XIX, 1357
 Ohio-Missouri, cross section, XXII, 1536-1537
 Ohio Oil Company, GAS, 191, 324, 813; XXI, 993, 996, 1011, 1069; XXII, 655, 680, 686, 706, 722; XXIII, 911, 937, 943; XXIV, 694; XXV, 1842; XXIX, 679
 Boyd and Cox 3 (well 238), SBP, 194-243, 407
 Easton 1 (well 203), SBP, 194-243, 406
 Fish 1 (well 44), SBP, 87-153, 403
 H. and C. 11 (Rock River field, Wyoming) (well 225), SBP, 194-243, 406
 Howland 1 (well 31), SBP, 87-153, 403
 Midway and McKittrick 1 (well 23), SBP, 130-153, 403
 Ora Sonners 6 (well 202), SBP, 194-

(Ohio)

- 243, 406
 Recreation 1, 2 (wells 32, 33), SBP, 86-153, 403
 Rock River field, Wyoming (well 225), SBP, 194-243, 406
 Smith 1 (well 20), SBP, 130-153, 403
 2 (Furnas County, Neb.) (well 199), SBP, 194-243, 406
 (well 44), SBP, 87-153, 403
 Ohio oil fields, Devonian limestones in, STR I, 141
 eastern, oil sands in, STR I, 130, 133, 135, 137, 142
 Parkersburg syncline in, STR I, 141
 Silurian limestones in, STR I, 141
 Ohio Petroleum Company, XXII, 1687
 prospectus of, XXII, 1687
 Ohio samples (wells 422, 423), SBP, 349-379, 410 (See also Appalachian samples)
 Ohio shale, XXII, 1447, XXIV, 676; XXVIII, 531
 eastward thickening of, XXII, 1541
 in Kentucky, GAS, 917, 929, 936
 Ohio shale and Boyle limestone, overlapping unconformable relationship of, XXII, 1448
 Ohio shale gas field, XXV, 1147
 Ohio shale group in Ohio, GAS, 905
 Ohio shales, STR I, 144
 Ohio Valley fuel oil price and rate of steel mill activity, XXIII, 774
 Oil. (See Petroleum)
 abnormally heavy, PROB, 153
 abnormally light, PROB, 154
 accounted for and presumptive oil formed, three possible explanations of divergence between, XXIX, 884
 accumulation of, PROB, 17; STRAT, 318, 618
 accumulation of, at Jennings dome, XXVII, 1121
 accumulation of, in Emba area, XXIII, 506
 Amarillo district, GAS, 397
 analysis. (See Analysis of oil)
 Angola, III, 360
 anticlinal occurrence of, XV, 598. (See Anticlinal occurrence of oil)
 associated with igneous rocks in Mexico, XVI, 799
 at Parsons Pond and St. Pauls in Newfoundland, FOP, 130, XXV, 1562
 at Tupungato field, occurrence and character of, XXVIII, 1478, 1480
 Athabaska oil sands, apparent example of local origin of, XIX, 153
 Australia, exploration for, VIII, 244
 available in California, estimate for 1943, 1944, and 1945, XXVII, 863
 Baku, VIII, 357
 bearing of water analyses on the problem of source, STR I, 382
 Belle Isle, Louisiana, IX, 792
 Bellevue pool, VI, 247
 Big Hill dome, Texas, IX, 725
 black, in Wyoming, occurrence of, X, 443
 Blue Ridge, analyses of, IX, 314
 Borneo, crudes of, review, V, 417
 British Columbia, VI, 126
 California, III, 357; VI, 313, 481
 California, observations relating to origin and accumulation of, X, 892
 California, were diatoms chief source of? X, 709
 Canada, V, 85
 carbon ratios of Cretaceous coals in

(Oil)

- New Mexico in their possible relation to, VIII, 519
 causes of loss of, in past, XXIX, 883
 character of, PROB, 97
 character of, at Barbers Hill, XIV, 738
 character of, at Spindletop, XXI, 488
 character of, in Appalachian province, PROB, 103
 character of, in Szechuan province, XXVIII, 1437
 chart of discoveries of, in California by years, XXII, 715
 coals, asphalt, and natural gas, origin of, XXIV, 1868
 Colombia, III, 359
 Oil, Colombia, original source of, X, 382
 discussion, X, 1175
 Oil, comparison of technical and non-technical methods of locating, XXVI, 1204
 consumption of, in far eastern area, XXV, 356
 cost of finding, XXI, 712
 Cretaceous, in Moreno formation in California, XXVII, 260
 crude. (See Crude oil)
 crude, at Spindletop, Jefferson County, Texas, variation and migration of, GC, 309; XIX, 618
 crude, Bellevue field, character of, XXII, 1679
 crude, Jennings field, distribution with depth, X, 92
 crude, price of, in perspective, XX, 810
 crude, transportation of, XXI, 172
 crude, Turner Valley field, GAS, 46
 Decatur area, further considerations of prospect for, review, IX, 359
 decrease in drilling for, in Pennsylvania, 1943, XXVIII, 729
 deep, percentage composition of, under theory of migration and evaporation, XXI, 936
 demand resulting from automobiles, PROB, 20
 development of, in southwestern Michigan during 1940, XXV, 1129
 discoveries of, resulting from deepening or recompleting wells in old fields, XXIII, 913
 discovery of, at Big Medicine Bow anticline, Carbon County, Wyoming, XIX, 1238
 discovery of, in Bodcaw sand, Cotton Valley field, Webster Parish, Louisiana, XXII, 1603
 discovery of, in Ellenburger formation, K. M. A. oil field, Wichita County, Texas, XXIV, 1494
 discovery of, in White Point gas field, San Patricio County, Texas, and history of field, XV, 205
 discovery of, near Wainwright, Alberta, in 1923, XXIX, 1607
 dispersion of, over long geological periods, XXIX, 884
 disseminated, in Pleistocene water sands of Corpus Christi area, Texas, XVI, 385
 distributed in shales, PROB, 453
 drift of, through fracture belt, MEX, 168
 Edgerly crude, analysis of, IX, 502
 effect of Los Bajos fault on migration of, XXIV, 2123
 effect of pressure on migration of, VIII, 527

(Oil)

- evolution of Gulf Coast crude, XXI, 914
 experimental study of invasion of, into water-wet sand, review, VII, 85
 exploration for, in Illinois, XXI, 782
 factors effecting transformation of, PROB, 141
 Falfurrias, IX, 580
 formation of, and pyrite, STRAT, 811
 found in Benoit sand in Illinois basin, XXI, 785
 Fox field, VI, 367
 from Cretaceous beds in Colorado, FOP, 60; XXV, 1492
 from Pennsylvanian in north-central Texas, XXI, 1019
 from Whitehorse group, XXIV, 26
 from Woodbine strata in Van field, Texas, XXI, 811
 gas, and bitumen in igneous and metamorphic rocks, nature and origin of occurrences of, XVI, 719
 gas, and bitumen, minor occurrences of, with igneous and metamorphic rocks, XVI, 837
 gas, and other mineral accumulations, geochemical exploration (soil analysis) with some speculation about the genesis of, XXIV, 859
 gas, and water, accumulation of, in Alberta syncline, XV, 504
 gas, and water, relationships between, PROB, 707
 gas distillate, and gas fields, south Arkansas and north Louisiana, map, XXVIII, 264
 generation of, by geologic distillation during mountain building, XI, 1139
 genesis of, by high radial axial pressure, XVI, 1029
 geology of, oil-shale, and coal, review, XI, 429
 geophysical methods in search for, XXI, 200
 geophysical prospecting for, XIV, 201; XXIV, 2186
 Goose Creek, Texas, IX, 294
 grades of, at High Island dome, GC, 956; XX, 607
 gravity of. (See Gravity of oil)
 Greasewood Flats, Weld County, Colorado, discovery of, XVI, 256
 Gulf Coast, II, 16
 heavy, from Santa Maria Valley field, XXVII, 1335
 heavy, in Cretaceous chalk at shallow depths at Munnill, XXIII, 508
 heavy, in Molino field, MEX, 223
 High Island dome, GC, 955; XX, 606
 hot—the problem of petroleum, review, XX, 1133
 Humble field, I, 68
 humic-acid theory of origin of, XXI, 1249
 hydrogenation of: suggested natural source of hydrogen, XXIV, 1475
 Illinois, IV, 45
 importance in war effort, XXVI, 1200
 in basalt vesicles, MEX, 156
 in Basin area of central Michigan, XXIX, 693
 in brine wells of Szechuan, XXVIII, 1436
 in California, discoveries of, by years, XXIII, 944
 in California, origin of, XXI, 270

(Oil)

- in Canada, origin of, XV, 600
- in cores, colorimetric method of determining percentage of, XXI, 1477
- in Cretaceous beds at Rangely and DeBeque fields in Uinta Basin, FOP, 66; XXV, 1498
- in crystalline rocks in Colorado, occurrence of, XVI, 769
- in earth, XXVI, 1294
- in foraminiferal cavities, MEX, 168
- in Gaspe peninsula, anticlinal occurrence of, XV, 605
- in Hunton limestone, FOP, 84; XXV, 1516
- in igneous rocks of Cuba, XVI, 809
- in international relations, XXV, 353
- in lensing sands at Saratoga field, SD, 515
- in Ohio, recent secondary recovery of, XXIV, 494
- in Pacific area, Japan largest user of, XXV, 357
- in place and estimated recovery, Schuler field, XXVIII, 219
- in Porter field, accumulation of, XXVIII, 191
- in Randazzo and Eagle Hill fields, XXI, 1427
- in Rocky Mountain region, quality of, XXVII, 473
- in Saginaw sand in Michigan basin, XXVII, 594
- in Sundance formation, theories of accumulation and distribution, XXI, 766
- in Tennessee, significant of structure in accumulation of, STR I, 243
- in Traverse formation, XXVIII, 184
- in Trinidad deeper source of, XXIV, 2124
- in Urals, XXI, 1461
- in Utah, XXVII, 464
- in western lowland of Newfoundland, in faulted Ordovician zone, FOP, 126; XXV, 1558
- Indiana, Ordovician, VI, 374
- Indiana, production of, IX, 317
- indigenous to limestone, MEX, 169
- inferences about origin of, as indicated by composition of organic constituents of sediments, XXIV, 506
- influence of fluctuating shore line of Twin Creek and Logan seas on distribution of, XXI, 769
- influence of speed of migration of, on water encroachment at Casmalia, California, XVII, 1133
- invasion of, into a water-wet sand, review, VII, 85
- Isthmus of Tehuantepec, XX, 1306
- Jennings field, Louisiana, X, 85, 86, 89
- Jurassic, in California, XXVII, 260
- Kansas, VI, 370
- Kansas, western, VI, 83
- Kentucky, III, 357; IV, 303; VI, 29, 32
- left in reservoir, PROB, 316
- light, occurrences in Northern fields, MEX, 201-203
- Limagne area, France, XVI, 825
- limestones as a source of, XII, 556
- liquid, from distillation of bituminous or oil shales, XXIX, 1471
- local structural aspects in search for, XXI, 206
- Louisiana, IV, 135, 136; VI, 185, 196

(Oil)

- Luling, Caldwell County, Texas, VII, 182
- Lytton Springs field, Texas, X, 968
- map of Alaska showing regions favorable for, FOP, 9; XXV, 1441
- Medicine Bow, Wyoming, gravity of, XXI, 994
- Mexico, III, 359
- Mexico, geologic history of Pánuco River Valley and its relation to the origin and accumulation of, X, 667
- Mexico, probable source of, X, 692
- Michigan, VI, 381
- migration of, STRAT, 310, 311
- migration of, from Arbuckle limestone into Chattanooga shale in Chetopa oil pool, Labette County, Kansas, XXV, 1934
- modes of occurrence, VII, 606
- Murefte, Turkey, search for, XX, 1372
- natural history of Gulf Coast, PROB, 109
- Near East, distribution of, XXV, 363
- New Mexico, IV, 57
- non-recoverable, XXV, 1318
- obtained from salt wells of West Virginia and Ohio, XXII, 428
- occluded in calcite, MEX, 166
- occurrence and accumulation of, in Laredo district, Texas, XXI, 1422
- occurrence in syndclines, PROB, 103
- occurrence of, PROB, 8, 79
- occurrence of, at Comodoro Rivadavia, Argentina, Patagonia, review, IX, 181
- occurrence of, in crystalline rocks in Colorado, XVI, 769
- occurrence of, in metamorphic rocks of San Gabriel Mountains, Los Angeles County, California, XVI, 777
- occurrence of, and stratigraphy in West Texas district, references on, SBP, 287
- of North Shensi, non-marine in origin, XXV, 2065
- Oklahoma, II, 57, 58
- Oklahoma, production statistics, for 1919, IV, 280
- Oklahoma City field, migration of, XIX, 699
- Oklahoma City pool, calculation of areal extent and volume of source bed required to supply, XXV, 1706
- on Agua Caliente anticline, Department of Loreto, Peru, XXIII, 688
- Oil or gas from Ordovician beds in Ontario, FOP, 112; XXV, 1544
- Oil or gas reservoir, definition, PROB, 434
- Oil, origin of, SBP, 1, 2; III, 286, 345; IV, 40, 105, 263; VII, 605; IX, 648; XXV, 2086
- origin of, in McMurray oil sands, XXII, 1139
- origin of research on, XI, 1221
- origin and accumulation of, PROB, 309
- paleontology, petroleum, and the search for, XXVIII, 902
- parallelism between distribution of, and distribution of growth *in situ* of marine vegetation, XXI, 1153
- partnership between geology and geophysics in prospecting for, XXIV, 1204
- percentage of, in core logs from wells in Bell zone at Santa Fe Springs, XXI, 1483

(Oil)

- Permian, indigenous to, VI, 88
- Peru, production of, XII, 37
- Peru, review, X, 98
- Pine Prairie dome, Louisiana, IX, 753-755
- Playa del Rey field, California, marine oil shale, source of, XIX, 172
- possible effect of radiations from uranium and thorium on origin and evolution of, XXIX, 2
- preservation of, during erosion of reservoir rocks, XVII, 827; discussion, XVII, 1271
- prices of crude, IX, 799
- problems of origin, migration, and accumulation of, PROB, 337
- produced in Illinois largely from lower part of Chester series below top of Cypress sandstone and from upper part of Ste. Genevieve formation, XXIV, 219
- produced in Ohio, four grades of, XXVII, 847
- produced through sand, graph showing effect of detergent chemical added to water on percentage of, XXIV, 2176
- production of, in Oklahoma during 1940, XXV, 1091
- production of, Picens field, Mississippi, 1940, XXV, 1019
- production of, Tinsley field, Mississippi, 1940, XXV, 1019
- production horizons, PROB, 698
- production methods, VI, 46
- properties of German crude, XII, 482
- Ranger, III, 196
- rate of discovery of, by wildcatting, XXVII, 727
- Rattlesnake field, XIII, 131
- regional structural aspects in search for, XXI, 205
- relation of quality of, to structure at El Dorado, Arkansas, VII, 350
- relation of, to carbon ratios of Pennsylvanian coals in north Texas, VII, 291
- review, VI, 385, 386, 388; VII, 454
- Roumania, IX, 152
- Santa Fe Springs field, California, proportion of organic matter converted into, XX, 245
- Saxet gas field, Nueces County, Texas, discovery of, XIV, 1351
- Scotland, VI, 376
- search for, in Murefte, Turkey, XX, 1372
- Section 28 salt dome, Louisiana, IX, 1290
- sections showing accumulation of, before and after faulting, XXVIII, 1309
- source of. (See Source of oil)
- source of, Archer County, Texas, X, 467
- source of, Darst Creek field, XVII, 33
- source of, Emba salt-dome region, XXIII, 509
- source of, Lytton Springs, Texas, X, 972
- source of, Onondaga limestone of eastern Kentucky, XVIII, 1128
- source of, Turner Valley field, XXIX, 1165
- source rocks of, and sedimentation in barred basins, XXI, 1101
- South Dakota, VII, 507-514
- south Texas domes, IX, 575
- Switzerland, IV, 87

(Oil)

- synclinal. (See Synclinal oil)
 Tennessee, V, 645
 Tertiary rocks, Colombia, X, 403
 Texas, III, 359
 Texas Panhandle, X, 733-740
 theory to account for occurrence of, in vesicular cavities of igneous intrusions, VII, 288
Thrall field, III, 85; V, 659
 time interval during or after sedimentation necessary for conversion of organic material to, XXIX, 876
 types of, in Rocky Mountain region, XXVII, 1307
 types of crude, at Spindletop, GC, 309, 311; XIX, 618, 620
 United States, export of, XXV, 354
 United States reserves, VI, 42
 Urschel pool, Kansas, VI, 432
 uses of, in European countries and Japan, XXV, 353
Utah, VI, 244
 value of, in United States, VII, 279
 variation with depth, XIV, 1393
 varying position of, with respect to sea level in Texas Panhandle, XXIII, 989
 Venezuela, III, 359
 Wasson field crude, Hempel fractional distillation analyses of, XXVII, 522
 Weeks Island, Louisiana, IX, 780
 western Dewey County, South Dakota, possibilities of, review, VII, 303
 western Ziebach County, South Dakota, possibility of, review, X, 638
 world distribution of, XXVIII, 1495
 world race for, review, VII, 303
 world's reserve, VII, 581
 Wyoming, III, 358
 Yates dome, character of, XIII, 1548
Oil and bituminous coals, rôle of carbohydrates in formation of, XXIV, 1865
Oil and coal fields of Japan, sedimentary natural gases from, with special reference to their geologic occurrence, XI, 187
Oil and gas, Alabama, review, XIII, 1487
 Amarillo district, Texas, VII, 237
 Apache pool, XXVI, 1065
 Bayou Bouillon dome, Louisiana, IX, 1289
 Blue Ridge dome, Texas, IX, 311
 cementing materials in sandstones and their probable influence on migration and accumulation of, XXV, 1839
 coalification theory of origin of, discussion, XVIII, 1547
 deep, at Snow Hill, Arkansas, XXI, 1072
 depth of drilling for, in Illinois, XXI, 787
 derivation of, from organic material, PROB, 51
 discovery of, in Mercedes field, Hidalgo County, Texas, XIX, 1226
 distributed throughout Red basin of Szechuan, XXVIII, 1438
 distribution of underground salt water and its relation to accumulation of, II, 170
 drill holes for, Oregon and Washington, XXIX, 1381
 effects of faults on migration and accumulation of, X, 125

(Oil)

- establishment of Department of, California, VIII, 75
 evidences of, FOP, 3; XXV, 1435
 exploration for, in western Kansas during 1943, XXVIII, 1759
 fields producing, from zones of different ages in Rocky Mountain region, XXVII, 476
 from sands, recoverable, estimation of, by volumetric methods, XXV, 1302
 geologic occurrence of, in Michigan, XXII, 393
 geology of Oregon and Washington and its relation to occurrence of, XXIX, 1377
 historical development of structural theory of accumulation of, PROB, 1
 Hockley dome, Texas, IX, 1052
 in commercial amounts in Caliente Range and environs, prospects for occurrence of, XXV, 261
 in Dakota, Cloverly, and Mowry, PROB, 168
 in Dakota basin, wells drilled for, XXVII, 1586
 in formations of Pennsylvanian age, PROB, 162
 in Frontier formation, PROB, 170
 in Kentucky, some geological problems in recovery of, IV, 303
 in Kentucky and Tennessee, PROB, 515
 in Lake County, Florida, XXII, 801
 in lower Glen Rose in Arkansas, Texas, and Louisiana, XXI, 1068
 in middle Tennessee, map, XXVIII, 278
 in Minnelusa sands in North and South Dakota, FOP, 77; XXV, 1509
 in Montana, geologic occurrence, PROB, 695
 in Montana, possibility of, IV, 313
 in Moose Mountain area, XXVII, 50
 in northwestern New Mexico, XXVII, 464
Oil and gas in Pennsylvania, outlook for, V, 357
 abstract, V, 100
 Oil and gas in Red basin, Szechuan province, XXVIII, 1436
 in Rocky Mountain states, structural conditions under which accumulated, XXVII, 466
 in St. Lawrence lowlands, GAS, 100
 in southwest Virginia, possibilities of, as inferred from isocarbs, VII, 421
 in Telfair County, Georgia, XXII, 801
 in Tennessee, importance of structure in accumulation of, STR I, 253
 in Tertiary and Upper Cretaceous, PROB, 171
 in Texas Panhandle, VII, 237
 Jamin action—what it is, and how it affects production of, XII, 659
 near Edna, Jackson County, Texas, X, 905
 new development for, in Oklahoma during the past year, and its geological significance, II, 53
 new interpretation of some laccolithic mountains and its possible bearing on structural traps for, XXVI, 197
 occurrence of, and stratigraphy in East Texas region, references on,

(Oil)

- SBP, 296
 origin of, in Robberson field, Oklahoma, VII, 641
 Oriskany as source of, in Pennsylvania and adjacent areas, XXII, 241
 possibilities for occurrence of, in Oregon and Washington, XXIX, 1411
 problem of determining time of accumulation, XXII, 834
 production of, from Mesozoic in Texas-Arkansas-Louisiana area, XXV, 1698
 Rawlins-Lost Soldier district, Wyoming, VII, 145
 recoverable, XXV, 1321
 related to unconformities, PROB, 768
 relations existing between carbon ratio of coals and occurrence of, XXIV, 877
 rocks of Coast Range from Klamath Mountains north to Vancouver Island, Puget Sound Basin, and Willamette Valley possible sources of, XXIX, 1413
 rôle of petroleum geologist in development of law of, XXII, 1080
 Saratoga field, Texas, IX, 276
 segregation of, from subterranean water, XVI, 924
 southwest Virginia, possibilities of, as inferred from isocarbs, VII, 421
 Spindletop dome, IX, 607
 stratigraphic occurrence of, XI, 692
 Stratton Ridge, Texas, IX, 30
 structurally downward warped provinces likely to produce, XXVIII, 324
 Sulphur dome, IX, 487; XIV, 1085
 Summerville, South Carolina, XXII, 801
 Texas, since 1543, XXIII, 1860
 Texas Panhandle, VII, 237
 time factor in accumulation of, V, 475
 Welsh oil field, Louisiana, IX, 474
 Western Canada, review, XVIII, 551
 Wyoming, VIII, 515
Oil and gas accumulation at Esperson dome, relation to structure, GC, 875; XVIII, 1650
 at Irma field, Arkansas, causes, STR I, 7
 at Midway dome, XXII, 821
 due to anticlinal or domal structures in northwestern Colorado, STR II, 114
 in domes, XXVIII, 1308
 in Laredo district, Texas, relation of faults to, STR I, 396
 in Rocky Mountain region, United States, structural conditions of, XXVII, 417
 relation to structure in Bradford field, Pennsylvania and New York, STR II, 420
 relationship of unconformities to, XXIV, 2022
 retreat and advance of connate water as theory of, XXI, 951
 seemingly not influenced by structure at Delaware Extension pool, Oklahoma, STR II, 362
 time of, XXIX, 1189
 vertical source in, XXIX, 1349
Oil and gas accumulations, basic types of, XXIX, 1752
 classification of, XXIX, 1741
 development of ideas on, XXIX, 1745
 genesis of, XXIV, 874
 geological terminology in classifica-

(Oil)

- tion of, XXIX, 1738
references on classification of, XXIX, 1754
- Oil and gas areas in Tennessee, description of, and conditions affecting new areas, V, 645**
abstract, V, 99
- Oil and gas areas in Tennessee, map showing, STR I, 244**
- Oil and gas-bearing formations, XXIX, 1742**
in Oklahoma City field, XIV, 1519
in Ramsey pool, XXIV, 2001
- Oil and gas bearing horizons of Ordovician system in Ohio, V, 609**
of Ordovician in Ohio, abstract, V, 104
of Rocky Mountains, PROB, 932
- Oil and gas development in Michigan, XXI, 124**
history of, XXIV, 1950
review, XIII, 695
- Oil and gas development in northern Louisiana, review of, II, 61**
in Rocky Mountain region, history of, XXVII, 419
in West Virginia for year 1920, V, 80
new, in Oklahoma, IV, 277
- Oil and gas developments in Michigan in 1940, XXV, 1125**
in Michigan in 1941, XXVI, 1097
in southwestern Indiana, XXIV, 968
in western Kentucky, XXIV, 969
recent, in West Virginia, IV, 27
- Oil and gas districts that produce from Permian in Mid-Continent, XXV, 1687**
- Oil and gas education, progress in, VII, 622**
- Oil and gas field in Lost Soldier-Ferris district, Wyoming, review, IX, 363**
in Sutton Township, Ohio, STR I, 130
- Oil and gas field development in United States, in 1939, XXIV, 1685**
in 1940, XXV, 1942
in 1941, XXVII, 555
in 1942, XXVIII, 127
in 1943, XXIX, 107
- Oil and gas field nomenclature map of central Kansas showing fields producing from Mississippi lime, XXII, 1590**
- Oil and gas fields, XXI, 772**
adjacent to Olympic pool, index map showing, XXII, 1580
along line of post-Vicksburg flexing, XXIII, 1627
- Clinton sand, relation to geology, XXVII, 891**
developed along monoclinical folds associated with normal faults, XIX, 518
- East Texas, and important exploratory tests drilled in 1938, index map of, XXIII, 890**
n Burbank and Bartlesville sands, Oklahoma and Kansas, XXI, 32
in Colorado, XXVII, 448, 464
in Colorado, surface types of, XXVII, 452
in Illinois, map showing old and new, XXIII, 808
in Michigan, XXII, 395
in Montana, XXVII, 455
in Montana, surface types of, XXVII, 438
in northern New Mexico, XXVII,

(Oil)

- 449
in northern New Mexico, surface types of, XXV I, 456
in Oklahoma, nomenclature maps of, XXIV, 1018
in Rocky Mountain region, XXI, 1248
in Rocky Mountain region, diagram showing rate of discovery of, since 1862, XXVII, 418
in Rocky Mountain system, map, XXVII, 420
in south Arkansas and north Louisiana, XXII, 720
in south Arkansas and north Louisiana discovered during 1940, XXV, 1031
in South Texas, map, XXIX, 778
in Utah, surface types of, XXVII, 457
in Wyoming, surface types of, XXVII, 440
influence of mineral cements on pressures in, XXV, 1876
major tectonic provinces of southern Oklahoma and their relation to, XXV, 1
map of Rocky Mountain region showing, and important developments during 1937, XXII, 678-679
of Appalachian region, XXII, 417
of California, geologic formations and economic development of, XXVII, 1393
of California, map, XXVI, 1138
of California, principal, XXVII, 866
of central California, map, XXVII, 868
of Colorado, XXVII, 459
- Oil and gas fields of East Texas, XXII, 729**
1939, XXIV, 1063
1940, XXV, 1082
1941, XXVI, 1051
1942, XXVII, 783
1943, XXVIII, 842
1944, map, XXIX, 767
- Oil and gas fields of Eastern Interior Coal basin, GAS, 826**
of Illinois, GAS, 826, 830
of Illinois, maps, XXI, 778; XXIV, 962
of Kentucky eastern coal field, relation of structure to production, STR I, 73
of Laredo district, Texas, XXI, 1424-1425
of Lost Soldier district, Wyoming, STR II, 636
of Mexia and Tehuacana fault zones, Texas, STR I, 304
of Michigan, map showing, XXIV, 1951
of Michigan, review, XVIII, 149
of Mid-Continent region, relation of Ouachita belt of Paleozoic rocks to, XVIII, 1059
of Montana, PROB, 705; XXVII, 461
of Montana, map, XXVI, 1320
of north-central Texas and southern Oklahoma, XXI, 1020
of northeast Texas, XXI, 1064
of northern New Mexico, XXVII, 461
of Oklahoma, XXIV, 1017
of parts of Rocky Mountain and High Plains regions, showing areas of important developments during 1938,

(Oil)

- XXIII, 904-905
of Pennsylvania, PROB, 464
of Poland, review, XIV, 331
of Rocky Mountain region, and important developments during 1937, map showing, XXII, 678-679
of San Antonio district, XXI, 1044; XXII, 752-753
of South Nemaha Mountains area, Kansas, map, STR I, 55
of south Texas, XXIV, 1070
of south Texas, map, XXIV, 1808
of southern Arkansas and northern Louisiana, XXIV, 1096-1097
of southern Arkansas and northern Louisiana, map. Structure contours on base of massive anhydrite of Glen Rose formation, XXIII, 900-901
of southern Oklahoma, relation of mountain folding to, V, 32
of southwestern Indiana, GAS, 828
of Texas Panhandle, X, 733, XXI, 1032
of Webb and Zapata counties, Texas, relation of Reynosa escarpment to, VII, 532
of West Texas and southeastern New Mexico, map, XXVIII, 810
of West Virginia, PROB, 491
of West Virginia, geologic column, XXII, 1156, 1157
of Western Kentucky, geology of, XVI, 231
of Wyoming, XXIV, 1216, XXVII, 459, 461
of Wyoming, Colorado, and northeastern New Mexico, PROB, 719
on small local anticlines, XIX, 518
Oriskany sand, XXVII, 890
principal, of southern California, map, XXV, 1160
principal tectonic features, and subsurface structure on base of New Albany shale, map of Eastern Interior basin showing, XXIV, 960
representative, Rocky Mountain region, columnar sections, XXVII, 468
South Texas, XXV, 1038; XXVI, 1002; XXVII, 740
unfaulted, in Montana, XXVII, 436
topographic map of part of Addington and Rush Springs quadrangles, Oklahoma, showing, XXV, 14
topographic map of part of Ardmore and Addington quadrangles, Oklahoma, showing, XXV, 12
- Oil and gas fields and main structural features of central and eastern Montana, XXIV, 1102; XXVII, 437**
of Colorado and northern New Mexico, XXIV, 1105; XXVII, 451
of eastern Utah and northern Arizona, XXIV, 1106; XXVII, 458
of Wyoming, XXIV, 1103; XXVII, 447
- Oil and gas formations in Eastern Interior basin, XXIV, 853**
- Oil and gas geology of Gulf Coastal Plain in Arkansas, review, XIX, 575**
- Oil and gas horizons at Cunningham field, Kansas, XXI, 509**
of West Virginia, XIX, 868
possible in Palestine and Sinaiuc Peninsula, XI, 142
pre-Pennsylvanian, in Kay County,

(Oil)

- Oklahoma, IV, 173
 Oil and gas industry of Colorado, XXVI, 1293
Oil and Gas Journal, XXV, 370
 table showing production, Eldorado field, Kansas, STR II, 167
 Oil and gas lands, valuation of, review, IX, 356
 Oil and gas map, Pennsylvania, for 1943, XXVIII, 727
 for 1944, XXIX, 673
 Oil and gas occurrence on anticlinal structure, PROB, 12, 310
 Oil and gas occurrences, European, and their relationship to structural conditions, XVIII, 736
 in Michigan, XXII, 401
 Oil and gas pools in Mexico and Tehuacana fault zones, Texas, summary of data on, STR I, 387
 in north Louisiana, review of, VI, 179
 symposium on reservoir conditions in, XVI, 861
 Oil and gas pools and producing formations, lower Wabash area, Illinois and Indiana, map, XXV, 1117
 Oil and gas possibilities at Early Grove, Scott County, Virginia, review, XI, 998
 in Atlantic Coastal Plain, bibliography of, XXII, 814
 in Atlantic Coastal Plain from New Jersey to Florida, XXII, 799
 in Mississippi, I, 152
 in St. George district, Utah, XXIII, 144
 of eastern Alberta, VII, 147, 156
 of France, XVI, 1092
 of Minnesota, X, 190
 of Sal del Rey and Sal Vieja, IX, 588
 of Virginia, XIX, 874
 structural and commercial, of central valley region, California, XVI, 361
 Oil and gas produced from Pennsylvanian reservoir rocks in Mid-Continent, XXV, 1676
 produced from sands at base of Pennsylvanian, stratigraphic relations of, PROB, 774
 produced in United States, amount of, XXIX, 857
 Oil and gas producing areas, discoveries of new, in Oklahoma during 1939, XXIV, 1029
 Oil and gas producing horizons of Pennsylvania, PROB, 453
 Oil and gas producing strata in Illinois, XXIII, 812
 Oil and gas production at Cinerville field, Oklahoma, STR I, 210
 columnar sections for Illinois and Michigan basins showing, XXI, 786
 from Ordovician beds in southern Oklahoma, possibilities of, XXV, 22
 from Paleozoic formation in Europe, possibility of, XX, 1476
 in Indiana in 1940, XXV, 1122
 in north-central Michigan, XXII, 402
 in Osage, statistical investigation of effects of structure on, III, 407
 in southern Michigan, XXII, 411
 relation of, to major uplifts in eastern coal field, Kentucky, STR I, 87
 Oil and gas productive area of Refugio

(Oil)

- field, XXII, 1186
 Oil and gas productive areas of White Point and East White Point fields, XXV, 1970
 Oil and gas prospecting and drilling in Indiana during 1940, XXV, 1122
 Oil and gas prospects in Australia, review of, XI, 55
 in Mississippi, present status of, V, 490
 in vicinity of Buttonwillow, Kern County, California, review, VI, 57
 of New Zealand, X, 1227
 Oil and gas prospects and Tertiary geology in Dakota basin of North Dakota, XXVII, 1567
 Oil and gas reserve, discovered, XXIX, 858
 undiscovered, XXIX, 858
 Oil and gas reservoirs. (See Reservoir rock)
 proposed classification, PROB, 433
 Oil and gas resources of California, conservation of, IV, 17
 of Kansas: Anderson County, review, XII, 217
 of New Mexico, XXVII, 1010
 review, XVII, 567
 Oil and gas resources of western Kansas, XXII, 1287
 Oil and gas sands, apparatus for determining absorption and permeability of, IX, 442
 found in eastern Ohio, western Pennsylvania, and Bradford district, Pennsylvania, chart showing, XXII, 420
 Muskogee County, Oklahoma, age and correlation of Pennsylvanian surface formations and, XIX, 503
 Pennsylvania, XIX, 858
 porosity of, VIII, 772
 Wyoming, porosity, VIII, 739
 Oil and gas securities, responsibility of geologists in sale of, under new Securities Act, XIX, 1038
 Oil and gas springs, PROB, 1, 4
 Oil and gas structures, classification of, STR II, 671; XI, 697
 Oil and gas synclinal occurrences, STR II, 703
 Oil and gas territory of eastern Kentucky, prospective, STR I, 89
 Oil and gas traps, XXI, 206
 Oil and gas wells, Arkansas, list of, XXII, 112
 developed by wildcat exploration in Oklahoma during 1936, XXI, 1007
 Oil and gas zones in Goldsmith field, XXIII, 1530
 in Rocky Mountain region, age of, XXVII, 465
 in Rocky Mountain region, character of, XXVII, 471
 in Wilmington oil field, XXII, 1063
 of Wyoming largely of marine origin, XXIV, 1220
 Oil and ground waters, chemical relation, IX, 935
 Oil and hydrocarbons, origin of, PROB, 42
 Oil and naphtha, Turner Valley field, GAS, 45
 Oil and natural gas in India, XVIII, 283
 regional geologic studies for, XXVII, 1387
 Oil and oil structures in Oklahoma-

(Oil)

- Kansas zinc-lead mining field, XVII, 1436
 Oil and prospecting areas of Canada, XXIX, 655
 Oil and retortable materials, review, XI, 1237
 Oil and salt, association of, XXI, 1154
 relation between, SD, 137; IX, 153
 Oil and salt-water contact, MEX, 208
 Oil and sulphur development in Texas and Louisiana Gulf Coast salt-dome region, review, XVI, 106
 Oil and water, apparatus used in studying radial flow of mixtures of, through oil-sand cores, XXIV, 2166, 2167
 in producing zones at Refugio, Texas, exceptional association of, GC, 669; XV, 953; XVIII, 524
 migration of, further discussion, VIII, 697
 occurrence of, in permeable sand, PROB, 467
 Oil and water contact, PROB, 145
 Oil and water content of oil sands, Grozny, Russia, XIII, 811
 Oil accumulation, IX, 1023
 controlled by porosity in eastern coal field, Kentucky, STR I, 89
 controlling factors in, STR I, 141
 effect of intrusions on, XVI, 805
 in relation to periods of folding, VII, 58
 in Rocky Mountain region, VII, 661
 in Rocky Mountain region, some ideas regarding, VII, 661
 in sands, experiments, review, V, 103
 in Texas Panhandle, section showing effect of unconformity on, XXIV, 2028
 phenomena influencing, STR II, 668
 relation to structure. (See Accumulation of oil)
 relation to structure in Petrolia field, Texas, STR II, 542
 relation to structure in Stephens County, Texas, STR II, 470, 477
 rôle of cap rock in, XVII, 713; discussion, XVIII, 1086
 salt domes of Permian and Pennsylvanian age in southeastern Utah and their influence on, XI, 373
 some effects of capillarity on, I, 140
 with reference to competence of rocks, MEX, 190, 194
 Oil accumulation and carrier beds, discussion, XVI, 260
 Oil accumulation and marine sedimentation on Gulf Coast. I. Progressive marine overlap, XXV, 2010
 Oil accumulation, and relative age of major and minor folding in Wyoming, V, 49
 Oil accumulation and structural development in Texas Permian, XIII, 1033
 Oil accumulation problems, brief outline of some, X, 1015
 Oil accumulation theories, V, 571
 Oil accumulations, down-faulted nature of Mesozoic and Tertiary rocks of coastal region of northeastern Brazil favorable for, XXIX, 549
 due to faulting and lenticularity in Peru and Ecuador, XXIX, 537
 formed by polymerization of hydrocarbon gases to form liquid hydrocarbons, 876

- (Oil)
on crests of anticlines, XXIX, 1739
Oil analyses, STRAT, 7, 8, 17, 40, 53, 75, 76, 117, 164, 206, 308, 312, 375, 376, 406, 407, 452-455, 471, 472, 491, 695, 740, 774, 856. (See Analyses of oil)
Oil areas in Alberta, XXIX, 658
Trenton, in western Ohio, map, STR I, 126
Oil availability, rate of, XXV, 1323
Oil-bearing algae an important source material of petroleum, XX, 289
Oil-bearing beds in Szechuan province, XXVIII, 1437
Oil-bearing deposits in Ponto-Caspian countries, paleogeography of, XVIII, 777
Oil-bearing folds, Baku type of, XVIII, 766
Oil-bearing formations in Texas, III, 82 of southwestern Arkansas, review, X, 1310
Oil-bearing horizon at Burkburnett, Texas, some paleontological evidence on age of, V, 154
destruction of, caused by recent faulting in central Texas, XX, 1369 of Wyoming, V, 186
Oil-bearing regions of Texas and eastern Mexico, geologic development of, XXVIII, 303
Oil-bearing rocks of Lower Mackenzie River valley, review, V, 524
Oil-bearing rocks and source rocks, earliest conceptions, XXIX, 1738
Oil-bearing sands, Texas Panhandle, X, 742
Oil-bearing series, XXIX, 1744
Oil business, this fascinating, XXIV, 883
Oil Canyon, CAL, 152
Oil City, California, CAL, 108; SC, 56, 66; XX, 1602, 1612
outcrop section J, SBP, 167-194, 410
Oil City field, PROB, 185
Oil City-Titusville area of Pennsylvania, XXV, 1137
Oil companies, application of paleontology by, XXVIII, 903
of Middle East, XXVIII, 921
Oil company, geological organization of an, VIII, 651
Oil concentration in Burbank field, Oklahoma, STR I, 225
Oil concessions in Middle East, XXVIII, 922
Oil-conservation movement, XVIII, 1459
Oil content in sediments, correlation of nitrogen-reduction ratios and, XXI, 1398
of Patton zone in Lisbon field, XXIII, 319
of well cuttings, acetone for determining, XXVIII, 124
Oil Creek fields, PROB, 2, 3
Oil Creek formation, XXI, 1008; XXII, 1563; XXV, 653, 658, 666; XXIX, 191, 197
Walnut Bend pool, STRAT, 790-791
Oil Creek ostracods, STRAT, 791
Oil deposits, Barbers Hill, Texas, IX, 968
California, VIII, 561
classification of, according to types of structure, VII, 581
Damon Mound, IX, 529
Ponto-Caspian and Mediterranean types of, XVIII, 760
- (Oil)
relation to sediments, XXVIII, 900
Oil development, early, in California, VIII, 61
in Colombia, South America, I, 156
Oil development and prospects in Tennessee, V, 168
abstract, V, 100
Oil development activities in California, 1942, XXVII, 862
Oil developments along Kentucky-Tennessee lines during 1923, VIII, 454
foreign, in 1938, XXIII, 949
in Illinois in 1922, VII, 78
in Michigan in 1941, XXVI, 1105
in Michigan in 1942, XXVII, 823
in Pennsylvania, XXVII, 842
in Pennsylvania in 1940, XXV, 1137
Oil discoveries, XXIX, 787
average annual, by successive five-year periods, in United States and in California, Oklahoma, and Texas, XXI, 698
in Basin district, Michigan, 1943, XXVIII, 760
in California, 1942, XXVII, 869
in California, 1944, XXIX, 648, 649
recent, in southeastern Illinois, XXII, 71
Oil discovery, new, declining rate of, XXVII, 912
New Zealand, X, 451
price incentive to, XXVII, 913
role of stratigraphy in, XXIX, 872
Oil discovery methods, XXVII, 932
Oil discovery problems, personnel for study of, XXVII, 927
Oil districts of north central Texas, subsurface geology of, III, 34
Oil domes, central Kansas, origin of, IV, 89
Oil economies, review, XVII, 99
Oil exploration, diamond drill in, VI, 98
in Great Britain, XXIX, 882
Oil exploration work in Papua and New Guinea, review, XV, 715
Oil field at Fort Norman in northwest Canada, XXVIII, 1509
Batson, Hardin County, Texas, IX, 1277
Big Lake, subsurface geology of, X, 365
Cotton Valley, Louisiana, IX, 875
Damon Mound, Texas, IX, 505
East Texas, XVII, 757
Edgerly, Louisiana, IX, 497
Goose Creek, Harris County, Texas, IX, 286
Huntington Beach, Orange County, California, VIII, 41
Kevin-Sunburst, Montana, X, 197
Lytton Springs, Caldwell County, Texas, X, 953
Mexico, SBP, 410
South Mountain, VIII, 810
Thomas, Kay County, Oklahoma, X, 643
Welsh, Louisiana, IX, 464
Wheeler Ridge, X, 495
Oil field and salt dome, Spindletop, Jefferson County, Texas, IX, 594
Oil-field and salt-dome names, Mississippi, XXVIII, 1046
Oil-field brines compared with sea water, PROB, 957
in San Joaquin Valley, PROB, 965
Oil-field clays, RMS, 464
Oil field conditions preventing the de-
- (Oil)
lineation of an undeveloped field, XXII, 567
Oil-field development in twentieth century, XIX, 491
principles of efficient, XVII, 981
Oil-field drilling in United States, rate of, XXII, 633
Oil field exploitation—petroleum production engineering, XXIII, 1859
Oil-field models of Shreveport Geological Society, XXV, 1587
Oil-field practice, California, notes on, VII, 114
Oil field region, main, of Trinidad, geological sketch map of, showing Los Bajos fault, XXIV, 2104
Oil-field structure in southern California, dynamics of, VIII, 576
topographic criteria of, VI, 37
Oil-field temperatures, MEX, 226
Oil-field waters, PROB, 833; STRAT, 319
anaerobic bacteria in, PROB, 836
annotated bibliography on, XXVI, 865
Appalachian region, PROB, 834
Appalachian region, composition of, PROB, 841
California, PROB, 839, 955; X, 1294
characteristics of Appalachian, PROB, 846
chemical changes in, XXIV, 1221
classification of, PROB, 954
identification of, PROB, 953
Illinois, X, 1290
in Rocky Mountain region exceptionally low in concentration, XXIV, 1317
in Rocky Mountain region, general character of, XXVI, 1318
north-central Texas, XVI, 409
of Gulf Coastal Plain, PROB, 891
of Montana Plains, XXVI, 1317
of Wyoming and their relation to geological formations, XXIV, 1214
origin of, PROB, 850
some, of Gulf Coast, III, 310
Venezuelan, XV, 895
Wyoming, analyses of, IX, 235
Oil fields, a comparative study of San Joaquin Valley, VIII, 29
anticlinal, in Trinidad, XX, 1450
Apscheron Peninsula, new major, U.S.S.R., XVII, 1136
Burma, geology of, XI, 557
calcium chloride waters from certain, IX, 1071
California, PROB, 180, 758
California, discovered in 1935, XX, 940
California, rôle of geologist in development of, VIII, 73
California, tabulation, X, 893
China, VIII, 169; IX, 1295
China, acknowledgments and correlations, X, 449
discovered by geophysical methods, XIV, 1109
discovered in United States by successive five-year periods, classified as to method of discovery, XXI, 700
discovered in United States and California, Oklahoma, and Texas, by five-year periods, XXI, 699
fourteen new, in California in 1943, as result of wildcat drilling, XXVIII, 743
generally found in marine sediments, XXIV, 874

(Oil)

geology of, in North (Russian) Sakhalin, X, 1150
 Germany, XII, 463
 grabens in, XXVIII, 541
 in broken anticlinal structure, PROB, 229
 in California, SBP, 403
 in Colorado, SBP, 407
 in Great Britain, geological results of search for, XXIX, 1353
 in igneous rocks in Coastal Plain of Texas, XVI, 741
 in Kansas, SBP, 407
 in Kentucky, SBP, 410
 in Los Angeles Basin, locations of, XXI, 978
 in Louisiana, SBP, 410
 in Michigan, XXVII, 830; XXVIII, 764; XXIX, 697
 in Montana, SBP, 406
 in Nebraska, SBP, 406
 in New Mexico, SBP, 408
 in New York, SBP, 410
 in North Louisiana, XXVI, 1560
 in Ohio, SBP, 410
 in Oklahoma, SBP, 407
 in Pennsylvania, SBP, 410
 in Pottsville sediments, map of West Virginia showing, XXIV, 492
 in San Joaquin Valley, XXI, 982
 in Santa Maria district and on Santa Barbara coast, map showing location of, XXIII, 46
 in sub-Andean belt of Bolivia and northern Argentina, XXIX, 510
 in Texas, SBP, 408
 Oil fields, in United States, PROB, 116
 review, XIV, 953
 tectonic classification of, XIII, 409
 Oil fields in Ventura County and Santa Barbara County, XXI, 980
 in West Virginia, SBP, 410
 in Wyoming, SBP, 406
 location by radiometric surveying, VII, 290
 map of Apsheron Peninsula showing location of, XXII, 762; XXIII, 954
 map of southern San Joaquin Valley showing, XXII, 703; XXIII, 936
 microlithology and micropaleontology of oil-bearing formations in Sunset-Midway and Kern River, X, 482
 minor, of Kern County, review, VIII, 832
 new, discovered in California in 1939, XXIV, 1112
 new, discovered in Rocky Mountain region in 1938, XXIII, 906
 new, of Los Angeles Basin, VI, 303
 new, of Western Hemisphere, northern South America's most promising hunting ground for, XXVI, 1211
 new development problems and their solution in southern California, VIII, 135
 New York state, IX, 798
 northern, Veracruz, section of Tamaulipas limestone in, XXVIII, 1130
 occurrence in unmetamorphosed or only slightly altered sedimentary rocks, XX, 1486
 of Bexar County, Texas, structural conditions in, III, 299
 of Celina and vicinity, Tennessee, STR I, 248
 of China, VIII, 169
 of Greenwood and adjacent counties in eastern Kansas, FOP, 84; XXV,

(Oil)

1516
 of Mexico in state of Vera Cruz, XXVIII, 315
 of Pennsylvania, classification of, PROB, 465
 of Poland, XXI, 1184
 of Poland, geological and statistical summary, XVII, 1084
 of Polish Carpathian Mountains, XVI, 1073; XXI, 1183
 of Polish Carpathian Mountains, geology of, XV, 1
 of Rawlins-Lost Soldier district, Wyoming, VII, 131
 of Rocky Mountain region, XXVII, 1327
 of Seminole uplift, XI, 1099
 of southern Trinidad in lower Miocene beds, XXIV, 2123
 of Sundance in Wyoming and Colorado where marine basin overlaps Entrada sandstone, XXI, 1261
 of Tampico-Tuxpan region, MEX, 144
 of United States of America and Argentina and oil prospects in Australia, report on tour of inspection of, review, XVI, 108
 of Ventura County, California, VIII, 789
 of West Texas, XXVI, 382
 of western Pennsylvania, drilling activity in 1944, XXIX, 674
 of Woodbine sand, Texas, PROB, 329
 of Wyoming, notes on, IV, 37
 of Wyoming, Sundance in, XXI, 765
 Persia, Egypt, and Mexico, reflected buried hills in, X, 422
 producing from pre-Mississippian strata, relation to regional geology, XIX, 965
 Rawlins-Lost Soldier district, Wyoming, VII, 131
 rejuvenated, review, VII, 304
 relation to unconformities, PROB, 317, 562
 Roumanian, SD, 129; IX, 145
 Russian, in 1937, XXII, 758
 South Arkansas, XXVI, 1251
 southern, of northern Veracruz, XXVIII, 1129
 southern Joaquin Valley showing, XXIV, 1114
 stratigraphic type, and proposed new classification of reservoir traps, discussion, XXVII, 539
 stratigraphic type, symposium of, XXIII, 1434
 three typical, of the Illinois region, STR II, 115
 two major requirements for, XX, 1477
 Ventura County, California, VIII, 789
 Wyoming, VII, 95
 Oil fields and coastal lowlands of north Peru and Ecuador, XXIX, 535
 Oil fields and geology of Archer County, Texas, X, 457
 Oil fields and important wildcats in southeastern New Mexico and West Texas, XXII, 697
 Oil fields and isocarbs, relation between, in Appalachian region, XXII, 426
 Oil fields and oil wells in Harris County, Texas, map, XXIII, 146
 Oil fields and pipe lines in Near East, 1940, XXV, 361
 Oil fields and prospects in Alberta, map,

(Oil)

XXVIII, 867
 in Russia, structural trends showing, map, XXIII, 952-953
 Oil fields and refineries of Middle East, map, XXVIII, 923
 Oil fields and salt domes, south Texas, descriptions of, GC, 620
 Oil fields and salt structures in Hanover area of north German basin similar to Emba domes in U.S.S.R., XXIII, 513
 Oil fields and structure of Sweetgrass arch, Montana, XIII, 779
 Oil finding by geophysical methods, review, X, 200
 discovery rates in, XXI, 697
 discussion, XXII, 109
 Oil finding, review, VI, 485
 two decades of progress in the art of, XVIII, 942
 Oil finding personnel needed, XXVII, 957
 Oil formation, chemical conditions and geological surroundings determining the possibility of, XXIX, 1744
 from methane by alpha radiation, XV, 616
 in limestone reservoirs, PROB, 372
 Oil-gas ratio at Sugarland field, GAS, 716
 Oil-gas ratios, XVIII, 354
 Oil generation, PROB, 98
 Oil geologist, files of, IX, 331
 public service opportunity of, IV, 5
 Oil geology, application in Mid-Continent fields, II, 124
 contributions of, federal and state surveys, VII, 620
 general, of Colombia, XI, 151
 National Research Council and, VII, 467
 of Coast Range, mapping of, by United States Geological Survey, XXVII, 255
 of Warren County, Kentucky, VI, 24
 practical, XXIII, 105
 problems in, and their advancement through cooperative research, VI, 509
 value of, in Mid-Continent field, II, 124
 Warren County, Kentucky, abstract, V, 100
 Oil geology and National Research Council, VII, 467
 Oil geology and science, VIII, 473
 Oil gravities. (See Gravities of oil)
 Mexia and Tehuacana fields, Texas, STR I, 368
 Mexia fault zone fields, Texas, STR I, 367
 Rocky Mountain states, PROB, 157
 Oil gravities and carbon ratios in Rocky Mountain region of United States, XIII, 1247
 Oil gravities and gas analyses, Refugio field, XXII, 1214
 Oil gravity. (See Oil analyses)
 at Rattlesnake field, XIII, 131
 at Table Mesa field, XIII, 136
 Oil horizons, Los Angeles Basin, California, X, 766
 of Kentucky, northeastern Mississippi, and Tennessee, VIII, 621
 possible, in western Canada, FOP, 20; XXV, 1452
 Urania field, Louisiana, STR I, 95
 Oil-impregnated flat-shaped limestone blocks in Joes River mud-flows,

(Oil)

- Barbados, XXIV, 1574
 Oil indications in Dead Sea area, XX, 900
 in Miocene in British Borneo, XXVIII, 1450
 in Trinidad, XX, 1452
 Oil industry, application of paleontology to, XXVII, 939
 California, in 1927, XII, 651
 cost of, in Oklahoma, VII, 279
 fifth dimension in, XXV, 1283
 future position of petroleum geology in, XXIV, 1389
 inadvisability of government regulation of, XXV, 1288
 its importance and some of its problems, VII, 277
Oil Investor's Journal, SD, 418, 545, 599, 642
 Oil Issues Co., SD, 611
 Oil land development and valuation, review, VI, 56
 Oil law, geological limitations to, XXII, 565
 Oil laws in North German oil province, XII, 488
 in Rhenish oil province, XII, 495
 Oil lease valuation, problems of, III, 389
 Oil-leasing act, VII, 617
 Oil migration, X, 1024; XXI, 270. (See Migration of oil)
 gas propulsion theory of, VII, 223
 in faults in East Texas, STR I, 383, 384
 in sedimentary rocks, II, 168; V, 62; VI, 343
 in vicinity of faults, natural gas as factor in, VII, 14
 through shales, sandstone dikes as conduits for, XIV, 411
 up faults in east Texas, STR I, 383, 384
 Oil migration and accumulation, further notes on hydraulic theory of, VII, 213
 by means of downward circulation of water, some experimental work testing the hydraulic theory of, IX, 1143
 in vicinity of faults, natural gas as factor in, VII, 14
 Oil migration and compaction, XIV, 25
 Oil mining, VI, 342; X, 405
 Oil mission, technical, to Middle East, preliminary report of, XXVIII, 919
 Oil movement and reservoir conditions, XXVII, 926
 Oil movements in Europe, XXV, 359
 in Pacific basin, 1938, XXV, 357
 Oil occurrence at Fairport field, Kansas, STR I, 39
 fundamental criteria for, XI, 683
 hydrostatic criteria for, XI, 699
 Oil occurrences, Red basin of Szechuan showing anticlinal axes, brine fields and, XXVIII, 1432
 Oil odor yielded by hard limestones when broken, XXIX, 1479
 Oil origin. (See Source beds)
 Oil pipe-line runs, Carterville field, XXII, 1500
 Sarepta field, XXII, 1499
 Shongaloo field, XXII, 1487
 Oil pool, an isolated unit, XVII, 556
 in Lebanon Township, Ohio, STR I, 131
 new, at Tidioute, and gas pools near

(Oil)

- Corry and Meadville, Pennsylvania, review, VII, 304
 Nigger Creek, Limestone County, Texas, X, 997
 of open reservoir type, XX, 780
 Oil pool map, Kansas, showing discoveries of 1939 and important dry holes completed in 1939, XXIV, 1000
 Kansas, showing discoveries of 1941, XXVI, 1078
 Oil pools, Archer County, Texas, X, 476
 basis for use of soil analysis in locating, XXIV, 1444
 commonly result of marine deposition, XXIX, 883
 effect of rhythm of diastrophism, erosion, and subsequent deposition on, XXIX, 881
 in central western Kansas, XXIII, 801
 in Kansas, distribution of, in relation to pre-Mississippian structure and areal geology, XVII, 793
 in portion of southern Oklahoma, relation of base of red beds to, V, 173
 in south central Kansas, XXIII, 800
 in western Kansas, XXIII, 802
 Los Angeles Basin, California, X, 767
 new, discovered in Eastern Interior basin in 1943, map, XXVIII, 752
 of stratigraphic type, important data in search for, XXI, 1243
 of Texas Panhandle, map, XXIII, 985
 predictions of future of, by early wells, X, 747
 shoestring, of eastern Kansas, further observations on, X, 568
 Tidioute, Pennsylvania, review, VII, 304
 Oil possibilities, Belgium and Belgian Congo, XVIII, 1160
 in Black Hills region, X, 800, discussion, X, 1177
 in Edna gas field, XXV, 117
 in Grand and San Juan counties, Utah, VII, 396
 in Indiana, IX, 324
 in Italian East Africa, XXI, 293
 in Magdalena trough, XXIX, 531
 in northeast Mexico, XV, 891
 in Paraná basin, XXIX, 555
 in South Dakota, VII, 507
 in southern Turkey, XXIII, 690
 in Sulphur domes, IX, 491
 in Turkey, XIV, 693, 696, 702
 in Venezuelan Andes, XIX, 791
 in western Dewey County, South Dakota, review, VII, 303
 negligible, of Wisconsin, VII, 653
 of Altiplano, XXIX, 512
 of area northeast of Petaluma, Sonoma County, California, XI, 425
 of Como Bluff anticline, XXVIII, 1214
 of Devonian and Carboniferous sections in Brazil, XXIX, 546
 of Jurassic formation in Cuba, XXVII, 1529
 of Jurassic formations in Mexico, XXVII, 1528
 of Jurassic formations in southern United States, XXVII, 1528
 of pre-Carboniferous rocks of Marathon uplift, XV, 1082
 of Quadrant formation, Montana, X, 995

(Oil)

- of South America in light of regional geology, XXIX, 495
 of South America, references on, XXIX, 561
 of sub-Andean belt and of plains on east, XXIX, 513
 of Sumatra geosyncline, XXVIII, 1445
 of western Kansas, VI, 69
 of Wilcox, XXIV, 1918
 Tertiary, of East Indies, XXVIII, 1440
 Oil preservation and stratigraphy, XXIX, 879
 Oil-producing area in Allegany, Cattaraugus, and Steuben counties, New York, XXIX, 670
 Oil-producing counties, important, in south Texas, XXIII, 860
 in Illinois, XXII, 73
 in Michigan, XXII, 659
 Oil-producing formations, tops of, shown by gamma-ray logs, XXV, 1776
 Oil-producing Granite wash, Panhandle type locality for, XXIII, 1000
 Oil-producing horizons, California oil fields, X, 893
 of Gulf Coast in Texas and Louisiana, GC, 1; XVIII, 500
 Oil-producing industry, contrast between cooperative methods in America, and efforts of separate groups of workers in foreign lands, XXIV, 1211
 permeated today by geological principles, XXIV, 1211
 Oil-producing locations in California, SBP, 403
 Oil-producing sands in La Rosa field, XXV, 309
 Oil-producing wells, relation to structure, Szechuan province, XXVIII, 1437
 Oil production, XXI, 150. (See Production)
 appraisal of, review, VI, 483
 associated with unconformities, FOP, 3; XXV, 1435
 Burmese India and Dutch East Indies, IX, 1097
 business of, review, VII, 453
 commercial, in Mississippi, XXIV, 1025
 erratic, in Traverse formation, PROB, 553
 from Darrett zone, Sugar Creek field, XXII, 1518
 from Middle Devonian in Ontario Peninsula, FOP, 118; XXV, 1550
 in barrels in Rocky Mountain region, 1942-1944, XXIX, 1593
 in Falls City pool, FOP, 84; XXV, 1516
 in Illinois, increase in, from March 1, 1938, to March 1, 1939, XXIII, 807
 in Illinois, some structural and stratigraphic features affecting relative amounts of, V, 311
 in Jesse pool, Oklahoma, XXII, 1573
 in Michigan in 1942, XXVII, 823
 in north and west-central Texas in barrels, XXV, 1079
 in North Shensi, XXV, 2061
 in north Texas (Wichita Falls) district, XXI, 1025
 in north-central Texas district, XXIII, 859
 in old gas fields in South Louisiana

(Oil)

- in 1944, XXIX, 796
- in Rocky Mountain district in 1938, 1939, and 1940, XXV, 1158
- in Rocky Mountain region, table of, XXIV, 1111
- in San Joaquin Valley, California, importance of unconformities to, PROB, 785
- in south-central Michigan, XXII, 408
- in Texas Panhandle, XXI, 1033
- in west-central Texas district, XXI, 1025; XXIII, 859
- Jamin effect in, XVII, 1521
- Japanese archipelago, IX, 1099
- new conception of, XXII, 1086
- Persia-Mesopotamia, IX, 1095
- relation of buried granite in Kansas to, IV, 235
- Rocky Mountain region, XXVII, 861
- Roumania-Caucasia-Transcaspiia, IX, 1089
- to 1936 from geologic systems in Illinois, XXI, 788
- Trinidad, IX, 1003
- water analyses in, and some analyses from Poison Spider, Wyoming, IX, 927
- world, in 1939, XXV, 354
- world records in, XII, 549
- Oil production and development in Illinois, history of, XXIV, 959
- Oil production and number of producing wells in Centralia, Beecher City-Louden, Lake Centralia-Salem, and Central City fields, Illinois, chart showing, XXIII, 809
- Oil production and reserves, California, VIII, 212
- Oil Production Company, SD, 612
- Oil production curve, Carterville oil area, XXII, 1498
- Sarepta oil area, XXII, 1499
- Shongaloo oil area, XXII, 1498
- Oil productive area of 3,700-foot sand in Refugio field, map showing, XXII, 1190
- of 5,000-foot sand in Refugio field, map showing, XXII, 1190
- Oil properties, essential factors in valuation of, III, 367
- Oil property taxation, application of depletion allowances to, V, 484
- Oil property valuation, XXVI, 1779
- Oil prospecting, Michigan, review, VI, 381
- on Sakhalin Island by Japan in 1919-1925, X, 1163
- resistivity and potential-drop-ratio methods in, XVI, 1260
- Oil prospects in Michigan, STR I, 109
- in northeastern China, X, 1073
- in Northwest Basin of Western Australia, X, 1136
- in Shansi, China, X, 1083
- in Shensi, China, X, 1089
- of Alagoas formation, XXI, 308
- of Desert Basin of Western Australia, X, 1118
- undeveloped, in Oklahoma, XXV, 21
- Oil prospects and stratigraphy of Alberta, Canada, XI, 237
- Oil province, undiscovered, criteria of, FOP, 3; XXV, 1435
- Oil provinces, future, references on problems affecting search for, FOP, 7; XXV, 1439
- possible future, chart showing map and cross-section symbols used in

(Oil)

- inventory of, FOP, 5; XXV, 1437
- possible future, in Alaska, FOP, 8 XXV, 1440
- possible future, in eastern Canada, FOP, 107; XXV, 1539, 2194
- possible future, in eastern United States, FOP, 131; XXV, 1563
- possible future, in northern Mid-Continent states, FOP, 76; XXV, 1508
- possible future, in Pacific Coast states, FOP, 25; XXV, 1457
- possible future, in Rocky Mountain region, FOP, 37; XXV, 1469
- possible future, in southeastern United States, FOP, 143; XXV, 1575
- possible future, in United States and Canada, FOP, 1; XXV, 1433
- possible future, in West Texas, FOP, 95; XXV, 1527
- possible future, in western Canada, FOP, 15; XXV, 1447
- principles bearing on occurrence of, XXVII, 895
- Oil recoveries in West Columbia field, XXVI, 1437
- Oil recovery, automatic bailer, review, VII, 84
- in Ohio, water flooding for, XXIV, 494
- per unit area in Northern fields, MEX, 174, 176, 191
- per unit area in Southern fields, MEX, 208
- relationships of, to physical properties of sandstone, XXVIII, 106
- Oil reserve for Oklahoma City pool, XXV, 1710
- Oil reserves, XXIV, 1074
- classification of, XXVIII, 1218
- developments and status of, in south Texas, 1939, XXIV, 1069
- estimation of, VII, 609
- estimation of underground, by oil-well production curves, review, IX, 361
- for each state, VI, 44
- geophysics as a factor in search for, XXI, 197
- in California, VIII, 233; XXII, 714
- in California, additions to, XXII, 716
- in California, additions to, during 1938, XXIII, 932
- in California, discoveries and additions to, during 1937, XXII, 701
- in northeast Texas found in 1936, XXI, 1063
- in sand fields, estimation of, XVIII, 343
- in Teapot dome, Wyoming, VIII, 101
- map of United States showing status as to statistics on, XXIX, 1582
- of United States mainly in seventeen states, XXIX, 1583
- probable-area method of estimating, XXV, 165
- proved, and wildcat drilling in area of eleven states, statistics on, XXVII, 728
- proved, at highest level in history of American oil industry, XXVII, 955
- proved-area method of estimating, XXV, 165
- recoverable, in sand fields, factors governing estimation of, discussion, XVIII, 1078
- standardization in compiling and re-

(Oil)

- porting data on, XXVIII, 1217
- stratigraphic, XXI, 163
- temperature gradient in Pechebrom oil-bearing region, Lower Alsace: its determination and relation to, XIII, 1257
- this matter of estimating, XXV, 164
- Oil reservoirs, behavior of fluids in, XXII, 1237
- Oil reservoirs, classification of, XXVI, 1291
- discussion, XXVII, 224
- Oil reservoirs, composed of sands, laboratory and field observations of effect of acidizing XXV, 850
- genetic relationship of, to shore-line deposits, XII, 597
- nature of, XXII, 1240
- Oil residue, VI, 293
- natural coal tar mistaken for, VI, 293
- Oil resources in tropical America, XXVI, 1212
- probable, geology of New Mexico an index to, IV, 95
- Oil resources and geology of Bradford field, Pennsylvania and New York, XXI, 1354
- of California, references on, SBP, 92
- of Trinidad, British West Indies, IX, 1000
- Oil-salt-water level at Amelia field, XXIII, 1654
- Oil sand, block diagram illustrating unit volume of, XXV, 1321
- in Permian redbeds of Coke County, West Texas an outcrop of, IX, 1215
- Oil-sand core in which water has been treated with chemical to reduce interfacial tension, vertical cross section of, XXIV, 2177
- vertical section of, through which mixtures of oil and water have been flowing intermittently, showing formation of water sheath, XXIV, 2165
- Oil sand section of Monterey formation productive in Santa Maria field, XXIII, 66
- Oil-sand volume, XXV, 1303
- Oil sands, analysis of, XIV, 1337
- Appalachian distribution of, by age, XXII, 418
- Archer County fields, Texas, STR I, 425-428, 431, 433, 434
- Artesia field, New Mexico, STR I, 119
- Bone Camp field, Tennessee, STR I, 245, 252
- Burbank field, Oklahoma, STR I, 221, 229
- Cabin Creek field, West Virginia, STR I, 468, 469, opp. 470, 472, 473
- Celina and vicinity, Tennessee, STR I, 246, 248
- Coffeyville field, Kansas, STR I, 50
- common tests for, XXVII, 64
- Copley pool, West Virginia, STR I, 450, 451, 455
- Crinerville field, Oklahoma, STR I, 206
- eastern coal field, Kentucky, STR I, 74, 79, 88, 89
- eastern Ohio fields, STR I, 130, 133, 135, 137, 142
- evaluation of, by refractive-index method, XXI, 1475
- evaluation of petroleum in, by its in-

(Oil)

- dex of refraction, XXI, 1464
 Fairport field, Kansas, STR I, 37, 39, 41
 Garber field, Oklahoma, STR I, 178, 187
 Glenn pool, Oklahoma, STR I, 233, 235, 238, 239, 241
 Grozny, Russia, oil and water content of, XIII, 811
 Irma field, Arkansas, STR I, 11
 Kay County oil fields, Oklahoma, STR I, 161-165, 167, 172, 174, 175
 Laredo district, Texas, STR I, 392, 393, 398, 400, 401, 403, 405-407
 lateral shifting, V, 339
 Luling field, Texas, STR I, 270, 274
 McKitterick field, California, STR I, 19
 Mexia and Tehuacana fault zones, Texas, STR I, 309, 312, 315, 318, 332, 336, 338-343, 345-351, 354, 362, 365, 369
 Morrison field, Oklahoma, STR I, 152, 156
 Nemaha Mountains region, Kansas, STR I, 68
 Nigger Creek field, Texas, STR I, 412, 413, 416
 porosity of. (See Porosity)
 possibility of fusing, when shot, XII, 87
 Rainbow Bend field, Kansas, STR I, 54, 56, 58
 recovery of content, VI, 343
 references on technique of testing large cores, XXVII, 83
 Saginaw field, Michigan, STR I, 106, 110, 111
 Spring Creek field, Tennessee, STR I, 245, 252
 Spurr-Riverton fields, Tennessee, STR I, 245, 250
 Sumner County field, Tennessee, STR I, 245, 251
 Szechuan province, XXV, 2063
 technique of testing large cores of, XXVII, 64
 texture of, with relation to production of oil, VIII, 716
 Tinsleys Bottom field, Tennessee, STR I, 245, 246
 Tri-County field, Indiana, STR I, 26, 33
 Turkey Mountain pools, Oklahoma, STR I, 219
 Urania field, Louisiana, STR I, 99
 Westbrook field, Texas, STR I, 286-288
 Wilbarger County, Texas, STR I, 295, 299
 with relation to production of oil, texture of, VIII, 716
 Oil sands and production relations, review, XII, 680
 Oil sands and their relationship to zones of sedimentation, XXIX, 1324
 Oil saturation, degrees of, PROB, 467, 477
 in certain sandstones, peculiar phases of, VII, 473
 Oil seep in folded Appalachians, XI, 757
 in north-central Nevada, XI, 1117
 Oil seepage at Tampalache, MEX, 177, Fig. 22 (in pocket)
 at Tememáz, MEX, 156
 in Cerro Viejo, Potrero del Llano

(Oil)

- field, MEX, 218
 Oil seepages, PROB, 333; MEX, 146, 156, Figs. 22, 32 (in pocket)
 associated with igneous intrusions, MEX, 151, 153
 Canada, V, 86
 in Belt series of Rocky Mountains near International Boundary, XVI, 786
 in Cashiboya River, Peru, XXI, 99
 not associated with intrusions, MEX, 153
 Oil seepages and oil production associated with volcanic plugs in Mendoza Province, Argentina, XVI, 819
 Oil settling, method of, XXV, 2176
 Oil shale, IV, 70, 145
 an historical, technical, and economic study, review, VIII, 529
 Australian, X, 868
 Brazil, review, VI, 388
 British Isles, III, 361; IV, 60
 Colorado, III, 361; IV, 62, review, VI, 385
 effect of rock flowage on kerogen of, IX, 158
 flowage experiments on, IX, 1130
 fossil debris in, X, 861
 historical, technical, and economic study, review, VIII, 529
 in Estonia, XXIV, 392
 in Minnelusa formation of Black Hills, XXI, 1247
 in Powder Wash field, XXII, 1033
 in Santa Barbara County, California, VIII, 459
 Indiana, V, 108
 Kentucky, V, 100, 522
 nodular, CAL, 199
 Parachute Creek, Colorado, X, 873
 relation of, to petroleum, IX, 1127
 résumé of distillation methods, IV, 59
 reviews, VI, 264, 386, 387; X, 452
 Rocky Mountain region, review, VII, 454
 Santa Barbara County, California, VIII, 459
 soluble material in, IX, 1025
 southern Russia, XI, 495
 United States, IV, 61
 Utah, III, 361; IV, 61
 Wyoming, IV, 195
 Oil shale and cannel coal, XXIV, 388
 Oil shale and origin of Green River formation, IX, 247
 Oil-shale areas in Russia, XVIII, 758
 Oil-shale deposits in United States, VIII, 302
 Oil-shale industry in Fushun (Manchukuo), XXIV, 392
 résumé of, with outline of methods of distillation, IV, 59
 Oil-shale investigations of United States Bureau of Mines, VII, 77
 Oil-shale localities in Rocky Mountain region, XXI, 1248
 Oil-shale member of Green River formation, Wyoming and Colorado, IX, 251
 Oil shales, PROB, 53, 236, 269, 271, 290, 449, 728
 Australia, XI, 83; XXIV, 392
 composition of, VII, 296
 conditions favoring formation of, XXI, 1123
 effects of heat on, -generation of oil in rocks by shearing pressures,

(Oil)

- XVII, 1229
 extraction curves for, with different solvents, XIII, 319
 extraction of, XIII, 317
 generally most radioactive sediments, XXIX, 1492
 Indiana, review, V, 108
 Kentucky, abstract, V, 100
 Kentucky, preliminary report on, review, V, 522
 Lothians, review, XI, 1337
 maritime provinces, Canada, review, VII, 302
 of Iratý formation (Permian), XXI, 120
 of southwestern Wyoming, notes on, IV, 195
 organic content of, XIII, 303
 Scotland, XXIV, 389
 Sweden, XXIV, 392
 types of, VIII, 306
 yield of gasoline from, PROB, 425
 Oil shales and oil-bearing rocks, effect of shearing pressures on, XIII, 329
 Oil shales and other carbonaceous rocks, microthermal observations of some, X, 860
 Oil showings and structures in redbeds of Coke County, Texas, notes on, III, 117
 Oil shows, effect of texture on relation of nitrogen-reduction ratio to, in Dominguez field, California, SBP, 160
 Oil springs, PROB, 2
 in New York oil fields, STR II, 272
 Oil Springs anticline, Carbon County, Wyoming, XXIII, 919
 structural contour map of, XXIII, 918
 Oil Springs oil and gas field, GAS, 64, 76
 Oil strikes in Hanna Basin and Red Desert, Wyoming, VII, 575
 Oil structure, electrical prospecting for, XIV, 1145
 Oil structure investigation, diamond drills and diamond-drill equipment for, X, 656
 Oil supply of major European powers, problems of, XXV, 365
 of United States, VI, 42
 present, and recent discoveries, in California, XX, 939
 Oil temperatures, MEX, 226-229
 in Northern fields, MEX, 226, 229
 in Southern fields, MEX, 226
 of San Pedro group, MEX, 227
 Oil territory in Turkey, prospective, discussion, XIV, 1088
 Oil test at Salisbury, Wicomico County, Maryland, XXIX, 903
 Oil test wells drilled in Coastal Plain of Georgia, XXIX, 926
 Oil tests at Millville, Jackson Mills, and Dunhams Corners, New Jersey, XXIX, 899
 drilled by Chinese Government in Szechuan province, XXVIII, 1437
 Oil trade, relation of western world to, XXV, 370
 Oil-water contact, PROB, 247, 284, 467; XXVIII, 228
 Oil-water contact line in Texas Panhandle field, XXIII, 992
 Oil-water levels in Conroe reservoir, GC, 807; XX, 754
 Oil-water ratio, PROB, 466
 Oil-water ratios, effect of detergent chemicals on, XXIV, 2175

- Oil Weekly*, SD, 418, 496
- Oil well, discovery, for Carterville area, XXII, 1489
- in Australia, XIV, 945
- in southern France, IX, 346
- Oil well completion and operation, review, XVI, 105
- Oil-well geology of coast region, revision of Texas Tertiary section with special reference to, VIII, 424
- Oil-well production curves, estimation of underground oil reserves by, review, IX, 361
- Oil-well spacing, problem, IX, 193
- Oil-Well Water Locating Company method, PROB, 955
- Oil-well waters, Allendale field, Illinois, XIV, 157
- causative agents of sulphate reduction in, XIV, 139
- of a Wyoming field, PROB, 911
- of Lawrenceville region, Illinois, XIV, 155
- Oil wells, economic spacing of, XIX, 876
- experimental, water cones and water sheaths in, XXIV, 2163
- experiments on back pressure on, VII, 37
- gas wells, and dry holes drilled as exploratory tests in 1943, number of, XXVIII, 715
- gas wells, and dry holes drilled as wildcats in 1937, XXII, 1232
- gas wells, and dry holes, drilled as wildcats in 1938 in United States, number of, XXIII, 792
- gas wells, and dry holes, drilled as wildcats in 1940 in United States, XXV, 1000
- gas wells, and dry holes drilled as wildcats in 1941, XXVI, 972
- gas wells, and dry holes drilled as wildcats in 1942, number of, XXVII, 720
- gas wells, condensate wells, and dry holes drilled as exploratory tests in 1944, number of, XXIX, 637
- graphical methods for appraising, VI, 533
- high water ratios in, XXIV, 2164
- in California, regularity of decline of, V, 178
- in Shensi, China, X, 1105
- in Sulphur Bluff field, Hopkins County, Texas, and faults in Paluxy formation, map showing location of, XXI, 112
- Oil zone, Amelia field, XXIII, 1653
- Oil zones, Appalachian, SBP, 351, 357
- California, SBP, 90-92, 99, 100, 156
- Dominguez field, California, SBP, 156
- deep, in California fields, XX, 941
- East Texas, SBP, 294-297
- Greenwich pool, XXIII, 652
- Gulf Coast, SBP, 336-339
- Los Angeles Basin, SBP, 99, 100
- Mid-Continent, SBP, 261-262
- new, in known fields in California, discovered in 1937, XXII, 709
- relation of all samples to, SBP, 382
- relation of properties of samples from Los Angeles Basin to, SBP, 149
- relation to organic content in Santa Fe Springs field, California, SBP, 165-167
- relation to properties of sediments, SBP, 394-397
- relation to properties of sediments, Appalachian, SBP, 374-379
- (Oil)
- relation to properties of sediments, California, SBP, 144-167
- relation to properties of sediments, California outcrop samples, SBP, 191-194
- relation to properties of sediments, Dominguez field, SBP, 160-165
- relation to properties of sediments, East Texas, SBP, 326-335
- relation to properties of sediments, general discussion, SBP, 381-382
- relation to properties of sediments, Gulf Coast, SBP, 345-349
- relation to properties of sediments, Mid-Continent, SBP, 278-285
- relation to properties of sediments, Rocky Mountains, SBP, 236-243
- relation to properties of sediments, Rocky Mountains outcrop samples, SBP, 253-255
- relation to properties of sediments, West Texas, SBP, 288-292
- relation to source beds, SBP, 83-87, 381-392
- Rocky Mountains, SBP, 197-200
- Santa Maria Valley oil field, XXIII, 68
- variation of nitrogen-reduction ratio of California samples with respect to distance from, SBP, 152
- Ventura pool, PROB, 210
- West Texas, SBP, 286
- Oil zones and stratigraphy of Mid-Continent area, references on, SBP, 257
- Oilfields Service Company method, PROB, 955
- Oils, SBP, 39
- classification according to preponderating hydrocarbons, XV, 460
- conditions of formation of, XXIV, 1885
- correlation of crude, with special reference to crude oil of Gulf Coast, XXV, 561
- Cretaceous, XXVII, 1317
- crude, from Burbank sand and from Bartlesville sand, curves showing similarity of, XXV, 1806
- crude, and stratigraphy, relationship of, in parts of Oklahoma and Kansas, XXV, 1801
- from contemporaneous source beds, probable similarity of, XXV, 566
- in Appalachian province, gravity of, PROB, 101
- in Lake sediments, XXV, 846
- in Mexico field, Texas, relation of gravity to structure, STR I, 369
- in organic substances in sediments, RMS, 443
- in Rocky Mountain region, six types, XXVII, 1323
- Jurassic, XXVII, 1318
- occurrence of types of, XXVII, 1315
- Permian crude, microscopic examination of, XXIV, 2181
- pre-Jurassic, XXVII, 1319
- rule of density of, XVI, 1038
- sulphur in, XXVII, 1313
- Tertiary, XXVII, 1316
- Ojai District, California, SC, 21; XX, 1567
- Ojai field, California, PROB, 506
- Ojai Valley, California, CAL, 288, 312; MSC, 152; SC, 98; XX, 1644
- outcrop section N, SBP, 167-194, 411
- Ojai Valley and Red Mountain, Sespe strata in and around, XIII, 495
- Ojinaga, coal beds near, XXVIII, 1184
- Cretaceous section near, XXVIII, 1184
- Ojinaga basin, XXVIII, 313
- Ojo Bonito intrusive, XXIV, 180
- Ojo de Agua, transition between Tammasopo limestone and Méndez, MEX, 73, 250
- Ojo de Agua de Ponce shales overlying El Abra (Albian) limestone unconformably, MEX, 62, 161, 250
- Ojo Frio (San Luis Potosí), Niobrara, Benton, and Pierre at, MEX, 61
- Ojos de chapote, MEX, 151
- Okaloosa County, Florida, micropaleontology and stratigraphy of a deep well at Niceville, XXV, 263
- Okanogan Highlands, XXIX, 1411
- largely composed of Paleozoic and Mesozoic metamorphic rocks unfavorable for oil and gas, XXIX, 1378
- Okanogan Valley, XXIX, 1391
- Oka-Tsna uplift, XXIV, 243, 248
- Okaw limestone, XXIV, 833
- Okema field, VI, 396
- Okesa limestone, XXIV, 729
- Okesa sandstone, fossils of, in Oklahoma, XXIV, 730
- Okfuskee and Hughes counties, Oklahoma, Olympic pool, STRAT, 456; XXII, 1579
- Oklahoma, GAS, 533, 535; PROB, 72, 110, 147, 153, 239, 275, 278, 292-294, 298, 301, 314, 319, 323, 325, 326, 340, 356, 401, 438-441, 574, 584, 588, 597, 612, 762, 764, 815, - 991, 992; RMS, 174
- accumulation of oil and gas seemingly not influenced by structure at Delaware Extension pool, STR II, 362
- age of boulders in, XVIII, 996
- age and correlation of Pennsylvanian surface formations, and of oil and gas sands of Muskogee County, XIX, 503
- analyses of Hunton and "Wilcox" waters in, PROB, 860
- anhydrite-gypsum problem of Blaine formation, XVIII, 1297
- Apache oil pool, Caddo County, XXV, 2194; XXIX, 100
- apparent recent crustal movement at western end of Ouachita Mountains, XIX, 1219
- areal geologic map of Cimer Hills, STR I, 194
- areal geology of Cimarron County, XI, 753
- areal geology of part of southwestern, VIII, 312
- areas of thickest sedimentation in, during Mississippian and Pennsylvanian periods, XXIV, 2008
- Arkansas novaculite in Black Knob Ridge, XXI, 10
- average annual oil discoveries by successive five-year periods in, XXI, 698
- Bartlesville sand, VIII, 764
- Berwyn conglomerate in, IX, 987
- bibliography on developments in 1943, XXVIII, 788
- Bigfork chert in Black Knob Ridge, XXI, 6
- Billings pool, STRAT, 877
- Blackwell field, STR I, 158, 167
- Bowlegs field, STR II, 316-318
- Broken Arrow coal and associated

(Oklahoma)

- strata, western Rogers, Wagoner, and southeastern Tulsa counties, XXVIII, 1036
- Bruner pool, STR I, 213-217
- Burbank field, Osage County, STR I, 220; VIII, 584; XI, 1045
- Burbank field, production-porosity curve, VIII, 768
- Burbank oil field, STRAT, 877; XXI, 31
- buried hills near Mannsville, X, 138
- Byars oil Chism pool, McClain County, XXIV, 1022
- Cambro-Ordovician in, STR I, 178
- Carbonaceous in, XXIII, 326
- Carbonaceous and asphaltic material in lower Arbuckle limestones of Wichita Mountains, XXIII, 1093
- Cement field, Caddo County, XXIV, 1030
- central, Pennsylvanian in, XXV, 1669
- central, Permian in, XXV, 1682
- central, Simpson of, XIV, 1507
- central, stratigraphic sections in, XX, 1457
- central, stratigraphy, XXV, 1669
- central, uplift, XXV, 1662
- central and west-central, Permian and Pennsylvanian sediments exposed in, XX, 1454
- certain relations between production and structure in northern Osage County, VI, 464
- Chickasha formation, X, 798
- comparisons of Ordovician to Permian crudes of, XXV, 572, 573
- comparisons of Pennsylvanian and Permian crudes of, XXV, 574
- concentration of Ordovician waters in, PROB, 277
- conodonts from novaculite in Black Knob Ridge, XXI, 11
- contact of Honey Creek and Reagan formations with igneous rocks in Arbuckle and Wichita mountains in, XXIII, 1094
- convergence in east-central, XI, 659
- correction in geologic map of, XXI, 1551
- correlation of Bluejacket sandstone, XX, 312
- correlation of rock facies in Ouachita and Arbuckle mountains, XXI, 15
- correlation of "Wilcox" sand in Okmulgee district with Osage, V, 399
- costs of oil industry in, VII, 279
- counties in, prominent for completions during 1940, XXV, 1091
- counties productive in, XXVI, 1059
- counties productive in 1941, XXVI, 1060
- Creek County, STRAT, 451
- Cretaceous in, STRAT, 85; XXV, 10
- Crinerville oil field, Carter County, STRAT, 877; STR I, 192; XI, 1067
- Cromwell field, STR II, 300
- Cushing oil and gas field, STR II, 396
- Davenport field, Lincoln County, STRAT, 386
- deep well near Marlow, Stephens County, XXII, 1106
- deep-well temperatures in, XII, 765
- deepest well in Mid-Continent region, Washita County, XXIV, 735
- Delaware Extension pool, STRAT, 877; STR II, 362
- Depew area, STR II, 365

(Oklahoma)

- determination of geothermal gradients in, XIV, 535
- Oklahoma, developments in 1917, II, 53
- in 1919, IV, 277
- in 1936, XXI, 1006
- in 1938, XXIII, 823
- in 1939, XXIV, 1011
- in 1940, XXV, 1090
- in 1941, XXVI, 1058
- in 1942, XXVII, 790
- in 1943, XXVIII, 774
- in 1944, XXIX, 708
- Oklahoma, Devonian in, STRAT, 389; XXIII, 326, XXIV, 2009; XXVIII, 781; XXIX, 714
- diagrammatic section from Ada to Oklahoma-Arkansas line, XX, 1109
- discoveries in 1938, XXIII, 826, 827
- discoveries in 1941, XXVI, 1062
- discoveries of new oil and gas producing areas in 1939, XXIV, 1029
- discussion of Quartermaster unconformity of Weatherford area, XXI, 1529
- discussions at Permian Conference, Norman, May 8, 1937, XXI, 1559
- distribution of pre-Mississippian rocks in, PROB, 321
- distribution and correlation of Mississippian of, XI, 1307
- Dora oil pool, Seminole County, STRAT, 408, 877; XXIII, 692
- drilling operations in 1939, XXIV, 1012
- dry holes drilled in 1941, XXVI, 1069
- Duncan sandstones, X, 797
- Earleboro field, STR II, 316-318
- early Paleozoic stratigraphy of Wichita Mountain uplift, XIV, 623
- East Tuskegee pool, Creek County, STRAT, 436
- eastern, natural gas in Arkansas basin of, GAS, 511
- en échelon faults in, XVIII, 243
- en échelon faults of, compared with faults of Balcones system, XIII, 638
- engineering report on Oklahoma City oil field, XXI, 815
- exploratory test wells in 1939, XXIV, 1014
- exploratory test wells in 1940, for ten leading counties in, XXV, 1093
- exploratory work in 1941, XXVI, 1062
- evidences of slumping previous to consolidation in Pennsylvanian of, VIII, 505
- faulting in Thomas field, Kay County, discussion, XII, 769
- fracturing of rock at Cromwell field, STR II, 305
- fossils, Permian, X, 148
- Frederick area, Tillman County, XXIV, 1023
- Garber field, STR I, 176
- Garber sandstones, X, 794
- geologic map of, VIII, 240
- geologic map of Washington County and parts of Nowata and Osage counties, XXIV, 717
- geological surveys, historical, progress of, I, 28
- geology of Black Knob Ridge, XXI, 1
- geology of Garvin County and Robertson field, discussion, XI, 889
- geology of Glenn pool, STR I, 230;

(Oklahoma)

- XI, 1055; discussion, XII, 213
- geology and development of Keokuk pool, Seminole and Pottawatomie counties, XXIII, 220
- geology and development of Oklahoma City field, Oklahoma County, XVI, 957
- geology and ground water resources of Cimarron County, XXVIII, 877
- geology and mineral resources of Washington County, XXIV, 2185
- geophysical operations in 1939, XXIV, 1013
- geophysical operations in 1940, XXV, 1092
- Glenn formation, X, 143
- Glenn formation with consideration of new paleontologic evidence, VII, 331
- Glenn pool, STRAT, 877
- Graham field, VIII, 593
- granite in, V, 421
- granite and limestone velocity determinations in Arbuckle Mountains, XVIII, 106
- graph showing production by months, 1940 to 1942, XXVII, 791
- graptolites from well core, Carter County, XXIX, 454
- graptolites on well cuttings, Carter County, XXIX, 1043
- Greater Seminole district, STR II, 315
- Hart limestone in, IX, 984
- Heldston field, III, 121, 257, 444; IV, 47, 121; V, 32, 48, 173, 326, 344, 469, 627; VI, 23, 476
- heavy Dutch oil in Bristow district, XV, 211
- helium in Osage County, GAS, 1056
- Hennessey shale, X, 795
- Henrvetta district, VII, 50-56
- Hewitt field, STR II, 290
- Hickman sand, Burbank field, VIII, 766
- Hobart pool, Kiowa County, XXIV, 1022
- Hogshooter gas field, STRAT, 878
- Hugoton gas field, Texas County, and Grant, Haskell, Morton, Stevens, and Seward counties, Kansas, STRAT, 78
- Hunton formation, X, 141
- Hunton limestone production in, review, VI, 161
- hypothesis of restricted migration in southern, GAS, 598
- important dry holes drilled in 1939, XXIV, 1021
- important dry holes drilled in 1940, XXV, 1101
- Incho pool, STR I, 216-218; XI, 938
- interrelations of folds of Osage County, IV, 151
- Jesse pool, Pontotoc and Coal counties, XXII, 1560
- Kansas, and northern Texas, correlation of Permian of, X, 144
- Kansas, and Texas, bibliography of Permian of, XXI, 1573
- Kay County fields, STR I, 158
- Kirk gas sand in Graham District, IX, 1024
- Layton sand in Morrison field, XI, 1091
- Little River field, STR II, 316-318
- Lower Cretaceous in, XXI, 12
- lower Permian correlations in Cleveland, McClain, and Garvin coun-

- (Oklahoma)
 ties, XVI, 119
 Madill field, STRAT, 878
 magnetic vectors in, XVI, 1191
 map, Pontotoc series, IX, 985
 map showing initial daily yields of wells in Burbank and south Burbank oil fields, Osage and Kay counties, XXV, 1176
 map showing location of Nemaha granite ridge folds and area of thickest sedimentation from Cambrian time through Devonian, XXIV, 2008
 map showing location and classification of new discoveries during 1940, XXV, 1096
 map showing new pools and wildcats discovered during 1938, XXIII, 828-829
 map showing new pools, extensions, new producing formations, and important dry holes drilled in 1944, XXIX, 718
 Marlow member in, XXI, 1544
 Memorial shale of Pennsylvanian age in, XXV, 1591
 Mervine field, STR I, 162
 methods of exploration in, 1941, XXVI, 1062
 microscopic examination of well samples in, XV, 733
 migration of oil. (See Migration)
 Misener sand in, PROB, 767; STR II, 327
 Mission field, STR II, 316, 317
 Mississippian in, STRAT, 389, 445; STR I, 179, 233; STR II, 316, 323, 324, 326, 367, 381, 401; XXIII, 227, 325; XXIV, 1997; XXVII, 798
 Mississippian in Adair County, XXIV, 412
 Mississippian in Arbuckle Mountains, XXV, 1650
 Mississippian in Glenn pool, XI, 1056
 Mississippian in Jesse pool, XXII, 1566
 Mississippian-Devonian in, XXIII, 228
 Oklahoma, Missouri, and Arkansas, Osage formations of southern Ozark region, XVIII, 1132
 Missouri Mountain shale in Black Knob Ridge, XXI, 9
 Morrison field, Pawnee County, STR I, 148; XI, 1087
 Morrow group of Adair County, XXIV, 409
 natural gas pools of southern, GAS, 575
 nature of uplifts in north-central, XIII, 23
 new classification of Permian red-beds of southwestern, VIII, 322
 new development for oil and gas in, during the past year, and its geological significance, II, 53
 new evidence concerning age of Spavinaw granite, XXVII, 1626
 new oil and gas development in, IV, 277
 new pools, extensions, and new zones discovered in 1939, XXIV, 1015, 1016
 in 1940, XXV, 1094
 in 1941, XXVI, 1063
 in 1944, XXIX, 711
 Oklahoma, nitrogen in Pennsylvanian in Osage, Kay, Noble, Pawnee, and Payne counties, GAS, 1056
 nomenclature maps of oil and gas fields in, XXIV, 1018
 north-central, geologic history, STR I, 159
 north-central, observations on post-Permian deposits in, I, 136
 northeastern, Red Fork shoestring sand pool, Pawnee, Creek and Tulsa counties, STRAT, 473
 northeastern, stratigraphic position of formations in, XXIII, 326
 northeastern, stratigraphic sections of Osage subseries of, XXIII, 329-337
 northeastern, stratigraphy of Osage subseries of, XXIII, 325
 northeastern, water encroachment in Bartlesville sand pools of, and its bearing on East Texas recovery problem, XVI, 881, 1038
 northeastern, and southeastern Kansas, correlation of producing sands in, V, 293
 northeastern, and southeastern Kansas, Pennsylvanian outcrop sections, XXVII, 634
 northeastern, and southeastern Kansas, physical characteristics of Bartlesville and Burbank sands in, XXI, 246
 northeastern and southeastern Kansas, upper Devonian and lower Missourian rocks in, XXVII, 632
 northern, bibliography, STRAT, 878
 northern, Permian in, XXV, 1684
 northern, and southern Kansas, areal geologic map showing distribution of subdivisions of redbeds, XXIII, 1760-1761
 north-south correlation of Pennsylvanian of, I, 134
 northwestern, stratigraphy of Permian beds of, XV, 405
 northwestern, and adjacent areas, Permian structure and stratigraphy of, XIV, 161
 notes on Glen formation of, with consideration of new paleontologic evidence, VII, 331
 notes on Simpson formation, VII, 558
 oil and gas in Ordovician system in, PROB, 763
 oil and gas fields of, XXIV, 1017
 oil field in Osage County, STR II, 378
 oil fields discovered in, by five-year periods, XXI, 699
 oil producing counties, XXI, 1006, 1010, 1011, 1013
 oil reserves, V, 411; VI, 44
 Oklahoma City oil field, XIV, 1515
 Oklahoma City pool, XIII, 1387
 old oil wells, review, VI, 391
 Olympic pool, Hughes and Okfuskee counties, STRAT, 456; XXII, 1579
 Olympic pool, Osage County, STRAT, 878
 Ordovician in, STRAT, 389, 448; STR I, 169, 173, 182, 187, 196, 201, 203, 205, 210, 212, 237; STR II, 316, 325, 331, 337, 381, 401, 403, 404; XXIII, 231, 326, 825; XXIV, 1029, 1998; XXV, 1666, 1708; XXVIII, 781, 782
 Ordovician in Arbuckle and Wichita mountains, XXV, 1635
 Ordovician in Jesse pool, XXII, 1563
- (Oklahoma)
 Ordovician in Turkey Mountain pools, XI, 934
 Ordovician to Mississippian crudes of, XXV, 571
 Ordovician correlations in, XI, 967
 Ordovician structures in, XXVII, 800
 origin of domes in northern, IV, 89
 origin of en échelon faults in north-central, XIII, 31
 origin of faults in Creek and Osage counties, X, 293
 origin of folding in, XI, 199, discussion, XI, 639
 origin of folds of Osage County, XII, 501; discussion, XII, 1026
 Osage County, STRAT, 878
 Oswego lime in Bruner pool, XI, 935
 Ouachita uplift, X, 295
 overthrusting in Arbuckle Mountains, XXVIII, 567
 overturned beds in Arbuckle Mountains, XVII, 865
 Ozark uplift, X, 295
 paleogeography, V, 541
 Pearson Switch field, STR II, 316-318
 Pennsylvanian in, STRAT, 389, 410, 441, 458, 475; STR I, 152, 179, 192, 194, 197, 206-208, 221, 231, STR II, 292, 293, 321, 323-325, 335, 336, 378, 398; VIII, 405; X, 143, 645; XXII, 1582; XXIII, 824, 1697; XXIV, 736, 1997; XXV, 8, 1708; XXVII, 798, XXVIII, 782; XXIX, 714
 Pennsylvanian in Adair County, XXIV, 418
 Pennsylvanian in Billings field, XXIV, 2011
 Pennsylvanian in Glenn pool, XI, 1056
 Pennsylvanian in Jesse pool, XXII, 1567
 Pennsylvanian in Keokuk pool, XXIII, 223
 Pennsylvanian in Morrison field, XI, 1091
 Pennsylvanian in Tonkawa field, X, 885
 Pennsylvanian outcrops in, XXVII, 637
 Pennsylvanian sands productive of oil in Doyle area, XXIV, 1029
 Permian in, STR I, 148, 179; VIII, 322-338; X, 645, 786; XXIII, 825, 1697; XXIV, 736, 1997, XXV, 10; XXVIII, 785
 Permian in Billings field, XXIV, 2011
 Permian in Hewitt field, STR II, 292, 293
 Permian of Logan and Lincoln counties, XVII, 241; discussion, XVII, 562
 Permian and Pennsylvanian in, XXVI, 1069
 petroleum engineering in the Deaneer oil field, Okfuskee County, review, V, 687
 petroleum geology in, review, XI, 311
 Polk Creek shale in Black Knob Ridge, XXI, 8
 Ponca City field, STR I, 158, 163
 Poor Farm pool, STR II, 365
 porosity of oil sands of, VIII, 738, 762
 porosity of oil sands of, VIII, 738,

(Oklahoma)

- 762
porosity of sand at Burbank, STR I, 225
position of Cambrian-Ordovician boundary in section of Arbuckle limestone exposed on highway 77, Murray County, discussion, XX, 980
pre-Cambrian zeolite-opal sediments in Wichita Mountains, XXV, 287
pre-Cretaceous in, XV, 806
preliminary report on Fitts pool, Pontotoc County, XX, 951
preliminary report on Tonkawa oil field, review, VII, 197
pre-Pennsylvanian formations of Arbuckle mountain region, XXI, 16
pre-Pennsylvanian oil and gas horizons in Kay County, IV, 173
pre-Pennsylvanian sequence of Ouachita Mountains, XXI, 15
problems of new production in, XX, 27
production associated with anticlines or domes in Kay County oil fields, STR I, 161
production in Burbank field, STR I, 222, 228
production in Chickasha field, Grady County, XXIV, 1030
production in Glenn pool, STR I, 237
production in 1941, XXVI, 1058
production of oil in 1939, XXIV, 1012
production of oil in 1940, XXV, 1091
production of six leading counties in 1944, XXIX, 709
production, Tonkawa field, X, 891
production curve for Crinerville field, STR I, 209
proration at Oklahoma City, XVI, 1021
Quartermaster unconformity of Weatherford area, XXII, 110
Quaternary in, STRAT, 80
Quaternary in Seminole district, STR II, 324
radioactivity logs of wells in Creek, Pottawatomie, Carter and Marshall counties, illustrating correlation of logs across long distances, XXV, 1787
radiolaria in novaculite from Black Knob Ridge, XXI, 11
Ramsey oil pool, Payne County, XXIV, 1995
relation between compaction and depth in north-central, PROB, 817
relation of mountain folding to oil fields, V, 32
results of recent field studies in Osage, Washington, and Nowata counties, XXIV, 716
review on structure and accumulation, VI, 262
Robberson field, Garvin County, GAS, 587; STRAT, 879; VII, 625
rock distortions on local structures in oil fields of, VI, 228
rocks of Arbuckle Mountains, XXI, 17
St. Louis field, STR II, 316-318
sandstones in upper part of Arbuckle limestone, XIII, 1477
Sayre field, Beckham County, VIII, 347
Seaight field, STR II, 316-318
sections of Pennsylvanian rocks ex-

(Oklahoma)

- posed in Washington and parts of adjacent counties, XXIV, 718
Seminole district, STR II, 315
Seminole uplift, XI, 1097, 1236
Sheetz pool, STR II, 365
significance of initial daily production of wells in Burbank and South Burbank oil fields, XXV, 1175
Silurian in, STRAT, 389; XXIII, 326
Silurian in Seminole district, STR II, 324
Siluro-Devonian in, XXIII, 230, 825; XXIV, 1997
Siluro-Devonian in Jesse pool, XXII, 1566
Simpson formation, VII, 558
Simpson group of Arbuckle and Wichita mountains, XIV, 1493, XXV, 650
some suggestions in regard to Pennsylvanian paleogeography in Henryetta district, VII, 50
source beds in, PROB, 59
sources of oil. (See Source beds)
South Blackwell field, STR I, 158, 171
South Burbank field, STRAT, 879
South Burbank pool, Osage County, XXI, 560
southeastern, divided into three segments by two faults, XXIV, 2146
Oklahoma, southeastern, southwestern Arkansas, and northern Texas, study of Trinity group in, XII, 1069
southeastern, structural interpretation of recent gravity observations in, XXIV, 2143
southeastern-northwestern Kansas, FOP, 90; XXV, 1522
southeastern, and parts of adjoining states, gravity anomalies and major structural features in, map showing relationship between, XXIV, 2144
southeastern, and southwestern Arkansas, Lower Cretaceous (Comanche) rocks of, XI, 443
southern, major tectonic provinces of, and their relation to oil and gas fields, XXV, 1
southern, map showing tectonic provinces of, XXV, 2
southern, provinces, comparison of, with California provinces, XXV, 6
southern, relation of base of redbeds to oil pools in portion of, V, 173
southern, relation of mountain folding to oil and gas fields of, V, 32
southern, and north-central Texas, oil and gas fields of, XXI, 1020
southern, and north-central Texas, sections in, XXI, 1018
southern and southwestern Arkansas, depth of base of Trinity sandstone and present attitude of the Jurassic peneplain in, XII, 1005
southwestern, areal geology of part of, VIII, 312
southwestern, new classification of Permian redbeds of, VIII, 322
southwestern, structure and stratigraphy of, XIV, 37
southwestern, Verden sandstone of, IX, 626
Stanley shale in Black Knob Ridge, XXI, 11
Stillwater formation, X, 792
Stratford formation, IX, 988
stratigraphic distribution of new dis-

(Oklahoma)

- coveries in 1941, XXVI, 1065
stratigraphy of Hoxbar formation, discussion, XVIII, 1083
stratigraphy of Permian beds of northwestern, XV, 405
stratigraphy of Weatherford area, XII, 705; discussion, XII, 1024
structural history of Billings field, Noble County, interpreted in terms of isostasy, XXIV, 2006
structure in Creek County, STRAT, 451
structures, VI, 228
sub-Carpathian zone, IX, 1240
sub-division of Enid formation, X, 786
subsurface cross section of Permian from Texas to, XXIII, 1704
subsurface Pennsylvanian stratigraphy, V, 117
suggestions in regard to Pennsylvanian paleogeography in Henryetta district, VII, 50
surface formation of Depew area, STR II, 366
Sycamore limestone, X, 138
Tahmina chert section at Atoka, XIX, 1231
Tatums pool, Carter County, STRAT, 879, XIX, 401
temperature of deepest well, VIII, 525
Tertiary in, STRAT, 81
Oklahoma, Texas, and New Mexico, ammonoid distribution at critical localities, XXIX, 1774
Oklahoma, Thomas oil field, X, 643
three more graptolites from Simpson of, XXVII, 1388
thrust faulting in Arbuckle Mountains, XXIX, 187
Tonkawa field, preliminary report on, review, VII, 197
Tonkawa field, Wilcox sand production, X, 885
Tonkawa oil and gas field, VIII, 269, 284
Turkey Mountain lime pools, STR I, 211, XI, 933
Ulrich's correlations for, XIX, 1122
unconformities in, V, 33, 34, 406, 471, 579; VI, 12, 15, 55, 70; VII, 577, 628, 631, 641; X, 140
unconformities in, and their importance in petroleum geology, III, 253
unconformity at base of Whitehorse formation, XXI, 1534; XXII, 698
undeveloped oil prospects in, XXV, 21
United States Geological Survey topographic map of part of Addington and Rush Springs quadrangles, showing oil and gas fields, XXV, 14
United States Geological Survey topographic map of part of Ardmore and Addington quadrangles, showing oil and gas fields, XXV, 12
use of insoluble residues for correlation in, XX, 1086
Verden sandstone of—an exposed shoestring sand of Permian age, XXIII, 559
vertical variation of properties of sediments in Seminole area, SBP, 284
Viola graptolites from well-core east

- (Oklahoma)
 of Norman, XXVIII, 873
 Viola limestone, X, 142
 Viola limestone, primarily of Arbuckle and Wichita mountain regions, XVII, 1405
 volcanic ash in North Canadian Valley, VII, 576
 volcanic tuffs in central, IX, 344
 Weatherford area, XII, 706
 well logs, VIII, opp. 276
 Wellington formation, X, 793
 wells drilled in 1941, XXVI, 1061
 wells drilling at end of 1940, XXV, 1102
 wells drilling or completed in, during early 1940, XXIV, 1021
 western, cross section of Upper Permian of, XXI, 1553
 Oklahoma, western, eastern New Mexico, Texas Panhandle, and southwestern Kansas, correlation table for, GAS, 391
 Oklahoma, western, Permian in, XII, 705
 Wichita Mountains—geology, VI, 413
 Woodford chert, X, 139
 Oklahoma and adjacent areas, Chattanooga shale in Osage County, XX, 91
 Oklahoma and Arkansas, age of Jackfork and Stanley formations of Ouachita geosyncline, as indicated by plants, XVIII, 1010
 correlations of Mississippian formations of, XXV, 1654
 geologic map of Ouachita Mountains of, XVIII, 976; XX, 480
 Mississippian in Ouachita Mountains, XXV, 1651
 Mississippian in southwestern Ozarks, XXV, 1651
 some tentative correlations on the basis of graptolites of, XX, 301
 Oklahoma and Arkansas coal fields, correlations of Pennsylvanian strata in, XVIII, 1050
 Oklahoma and Kansas, Bartlesville and Burbank sands in, XXI, 31, 247, 249, 359
 oil and gas fields in Burbank and Bartlesville sands, XXI, 32
 origin and distribution of Bartlesville and Burbank shoestring oil sands in parts of, XXI, 30
 regional investigations, XIX, 948
 relationship of crude oils and stratigraphy in parts of, XXV, 1801; XXVI, 284
 Silurian and Devonian in subsurface in, XXV, 1645
 source and date of accumulation of oil in Granite Ridge pools of, XV, 1431
 stratigraphy of Permian in, XXI, 1513
 studies of source beds in, XXI, 1377
 subsurface distribution of pre-Mississippian rocks of, XIV, 1535
 subsurface water characteristics in, PROB, 855
 Oklahoma and north Texas, correlation of Pennsylvanian and top of Mississippian in, XI, 658
 Oklahoma and southern Kansas, major divisions of Permian in, XXI, 1515
 Oklahoma and Texas, correlation of back-reef formations of Pecos Valley with those of, XXI, 879
- (Oklahoma)
 correlation of Pennsylvanian formations of, XIII, 883
 Oklahoma-Arkansas coal field, isocarb map of, XIX, 938
 Oklahoma-Arkansas region, references on oil prospects in, FOP, 94; XXV, 1526
 Oklahoma City, Oklahoma, proration at, XVI, 1021
 Simpson *versus* "Detrital" at, XIV, 228
 Oklahoma City anticline, tectonics of, XVIII, 251
 Oklahoma City area, Oklahoma, circulation of water in, PROB, 278
 Oklahoma City field, Oklahoma County, Oklahoma, PROB, 294, 319, 341, 355, 356, 359, 411, 431, 583, 584, 770, 771; SBP, 255-285, 408; XV, 1436; XXI, 1011, 1012; XXV, 21; XXIX, 709, 1566
 columnar section, XVIII, 252
 effect of temperature, pressure, and compressibility on capacity of trap to hold gas in, XXIX, 1191
 engineering report on, XXI, 815
 flank production in, XX, 526
 geology and development of, XVI, 957
 magnetic resurvey of, XVI, 1171
 migration of oil in, XIX, 699
 section, XXIX, 1193
 (wells 287-291), SBP, 255-285, 408
 Wilcox unit recoveries, XXVIII, 240, 242, 244
 Oklahoma City Geological Society, memorial of David White, XIX, 931
 field trip, May 30, 31, June 1, 1941, XXV, 996
 Oklahoma City oil field, Oklahoma, XIV, 1515
 Oklahoma City oil pool, exercise on amount of source bed required to furnish, XXV, 1706
 Oklahoma City pool, XIII, 1387; XXIV, 1012; XXV, 1091
 calculation of areal extent and volume of source bed required to supply oil of, XXV, 1706
 hypothesis based on assumption that Cherokee shale is sole source of oil in, XXV, 1707
 oil reserve for, XXV, 1710
 problem of time of accumulation of oil and gas at, XXIX, 1192
 production during 1938, XXIII, 824
 sketch map of, showing distribution of formations prior to deposition of Cherokee shale, XXV, 1707
 Oklahoma City recovery curves, comparison of, with those of fault-line fields, XXVIII, 246
 Oklahoma City structure, PROB, 583, 616
 Oklahoma coal field, marine beds in, XXI, 1403
 Oklahoma core data, XXV, 867
 Oklahoma County, Oklahoma (wells 286-291), SBP, 255-285, 408
 Oklahoma discoveries, stratigraphic distribution of, in 1939, XXIV, 1021
 stratigraphic distribution of, in 1940, XXV, 1098
 Oklahoma examples of accumulation due to lenticularity of producing formation, STR II, 699
 Oklahoma faults, PROB, 616
- Oklahoma fields, exploratory methods used in, 1943, largely seismograph surveys, XXVIII, 787
 faulting important in, STR II, 688
 fine quality of crude oil in, XXV, 1102
 pipe-line outlets from, XXV, 1102
 temperature tests, XIV, 552
 Oklahoma geological map, IX, 920; XI, 433
 Oklahoma Geological Survey, seventh field conference, 1926, X, 1306
 eighth field conference, 1926, XI, 90
 publications, review, IX, 708, X, 1311
 Sylvan shale in John's Valley, XIX, 1694, 1847
 Oklahoma geology, Permian, VIII, 312-321; X, 144
 Stonewall quadrangle, IX, 355
 Oklahoma-Kansas district, PROB, 575
 Oklahoma-Kansas section, Pennsylvanian in, XXV, 1661
 Oklahoma-Kansas zinc-lead mining field, oil and oil structures in, XVII, 1436
 Oklahoma Natural Gas Company, GAS, 522, 576
 Oklahoma Natural Gas Corporation, GAS, 527
 Oklahoma oil fields, Bureau of Mines reports on, review, V, 426
 Oklahoma oil geology, bibliography on, XXIX, 719
 Oklahoma Panhandle, GAS, 385, XXV, 1687
 Cretaceous in, XXV, 1694
 exploration in, during 1940, XXV, 1092
 Oklahoma pools, geologic history, GAS, 576
 Oklahoma production, graph showing relation to national production, XXVII, 793
 graph showing relation to national production, 1930-1943, XXVIII, 775
 graph showing relation to national production, 1930-1944, XXIX, 709
 in 1943, decrease in, XXVIII, 774
 relation to national production from 1930-1941, XXVI, 1061
 Oklahoma salient of Ouachita Mountains, stratigraphy of Bendian of, XXII, 852
 Oklahoma samples (wells 263-301), SBP, 255-285, 407, 408. (See also Mid-Continent samples)
 Oklahoma sediments, density increase with depth, PROB, 280
 Oklahoma shales, base-replacement studies of—critique of Taylor hypothesis, XVII, 66
 Oklahoma wells (See also Mid-Continent samples), SBP, 255-285, 407, 408
 Oklahoma wildcat drilling, XXV, 1002
 Okmulgee district, III, 273; V, opp. 144, 282, 399, 561
 notes on geology of, V, 282
 Oks, M., and Rey, P., XXIX, 514
 Oktibbeha tongue of Selma chalk in Alabama, XXI, 807
 Öland Island, in Baltic, RMS, 319
 Olcese bed, XXIX, 650
 Olcese sand, Edison field, STRAT, 3
 Kern Front field, STRAT, 1
 Olcese sandstone, MSC, 115, 153
 Olcott, David Perry, XXVIII, 1011
 report of business committee for 1942, XXVII, 687

Olcott, Perry, STRAT, 565; XVII, 1294; XXI, 700; XXVIII, 982, 983, 1360
 Olcott, Perry, and Burford, S. O., XVII, 1294; XXVIII, 1365
 Old Field of Huntington Beach field, GAS, 188
 Old Field of Quinton field, GAS, 522
 Old Francisville pool, XXVI, 1095
 Old Ocean shale, XXIII, 1634
 Old Red sandstone, III, 291; XXIV, 285; XXIX, 130
 Old Red series in Venezuela, XIII, 620
 Old Woman anticline, XXIII, 927; XXVI, 1567
 Older rocks of Van Horn region, Texas, XXIV, 143
 Oldham, Albert E., XIII, 1347; XVII, 656; XIX, 1162
 Oldham, Albert E., Denison, A. R., and Kislung, J. W., Jr., PROB, 332
 structure and stratigraphy of Kelsey anticline, Upshur County, Texas, XVII, 656, 1015
 Oldham, R. D., XVIII, 291, XXI, 351; XXIX, 1739
 on behavior of seismic waves, CD, 16
 Oldham, Thomas, XI, 573; XIV, 611; XVIII, 323
 Oldham formation, XXIX, 1626
 Olds, Thomas Hartman, memorial of, XVI, 435
 Oldsmar limestone, XXVIII, 1681
 Oldsmar limestone and clastic beds of Wilcox age, XXVIII, 1698
 Olean conglomerate in Bradford field, Pennsylvania and New York, STR II, 410
 in New York oil fields, STR II, 273
 in Rock City, New York, photograph showing joint plane, STR II, 276
 Olean pool, PROB, 767
 Olentangy shale, XXV, 808, 821
 Oles, L. M., GAS, 385; XXIII, 1053
 Oles, L. M., and Ruedemann, Paul, GAS, 1072; PROB, 778
 helium—its probable origin and concentration in Amarillo fold, Texas, XIII, 799
Ölgeologie, Fortschritte der, review, XX, 837
 Oligiste (hematite) in shale, RMS, 509
 Oligocene, CAL, 6, 7, 8, 10, 20, 38, 45, 46, 52, 106, 120, 123, 130, 131, 134, 135, 139, 147-162, 166, 169, 177, 180, 184, 245, 254, 283, 285, 287, 294, 296, 299, 303, 304; GAS, 230, 999; MEX, 114, 116-118, 120, 131, 132, 137, 140, 184, Fig. 12 (in pocket); MSC, 9, 72, 79, 101-103, 152, 154, 164, 174, 175, 178, 181, 211, 293, 306, Fig. 14 (in pocket); PROB, 57, 123, 183, 189, 387, 754, 790; SC, 58, 68, 70, 108, 134; XX, 1604, 1614, 1616, 1654, 1680
 Amelia field, Texas, XXIII, 1643
 Antillean-Caribbean region, XXIV, 1578
 Australia, XXI, 1124
 Barbers Hill, XIV, 723
 Buckeye field, GC, 745; XIX, 389
 Caliente Range, XXV, 214
 California, VI, 305, 307; XXV, 195; XXVI, 1613; XXVIII, 745, 954
 California, what is the Vaqueros formation of, and is it [Oligocene]? XIX, 521
 Catahoula Parish, Louisiana, XIV, 437
 Chapapote pool, GAS, 1001

(Oligocene)
 Chico Martinez Creek, XXVII, 1365
 Clay Creek salt dome, XV, 46
 Coast Range of Oregon and Washington, XXIX, 1408
 Colombia, X, 398; XXVI, 819
 Cuba, II, 144
 Dakota basin, XXVI, 1559
 Damon Mound, Texas, IX, 527
 East Hackberry salt dome, XV, 253
 eastern Gulf, formations and members of, XXVIII, 1316
 Oligocene, Eocene, and Cretaceous fossils of Florida, plates, XXVIII, bet 1688 and 1689
 Oligocene, Esperson dome, GC, 876; XXVIII, 1651
 Europe, VI, 526
 Florida and southern Georgia, XXVIII, 1681
 French fields, XVI, 1137
 geology at end of, SC, 33; XX, 1578
 Georgia, VI, 398
 Greta field, GC, 654, 656; XIX, 552
 Gulf Coast, XXII, 989; XXIII, 1408
 Gulf coastal domes, GAS, 694
 High Island dome, GC, 940; XX, 591
 Hitchcock field, STRAT, 643
 Hockley dome, Texas, IX, 1049
 Hoffman field, XXIV, 2129
 Iran, XXIII, 960
 Jennings field, GAS, 718
 Kern Front field, STRAT, 12
 Lance Creek field, Wyoming, STR II, 605
 Laredo district, Texas, STR I, 391; XXI, 1423
 late, evidence of erosion of salt stock in Gulf Coast salt plug in, XXIII, 604, 1576; XXVIII, 85
 late, and lower Miocene, geosynclines of East Indies most extensive in, XXVIII, 1440
 Lockport field, GAS, 732
 Louisiana, GC, 402; VI, 180; XVII, 632; XXII, 1422, XXIV, 1088; XXV, 1371; XXVIII, 1104
 Lower, MSC, 85, 97, 177, 211, 217, 241, 294, 296, 355
 Lower, at Raccoon Bend field, GC, 682; XVII, 1465
 Lower, of South and Central America, correlation of, with that of southern Mexico, MSC, 110, 177, 179
 marine, formation, XXV, 2012
 marine, in Caliente trough, XXV, 215
 marine, in Texas, XXIII, 1605
 Mexican fields, GAS, 997
 middle, at Boiling field, GAS, 702
 middle, at Jennings dome, GC, 977, 981; XIX, 1324, 1328
 middle, at Spindletop field, XXI, 480
 middle, at Sugarland, GAS, 713-715; XVII, 1366, 1367
 Middle, heaving-shale zone, XXIII, 216
 middle, marine zone of, in Saxet field, Texas, XXIV, 1815
 middle, sands at Barbers Hill, GAS, 707
 middle, sands at Lost Lake, GAS, 717
 middle, sands productive at South Elton, Louisiana, XXII, 743
 middle, structural uplift on top of, on Gulf Coastal salt domes, GAS, 693
 middle, Texas, XXVIII, 1355
 middle, uplift on Southwest Texas coastal structures on, GAS, 693
 middle Magdalena Valley, XXIX,

(Oligocene)
 1099
 Mississippi, GC, 360; XIX, 1164; XXVIII, 59
 Mykawa field, GAS, 727
 of Beyrich, MSC, 175
 of Germany, foraminifera from, MSC, 176
 of North Sea, RMS, 332
 of Oregon, MSC, 102
 of Texas, coral reefs in, XXVIII, 1357
 orogenic disturbances during, SC, 30; XX, 1576
 Panama and Costa Rica, III, 364
 Pechelbronn, X, 409
 Peru, XII, 23
 Pierce Junction, GAS, 700
 Pledger field, GAS, 726
 Poland, XXI, 1184
 Refugio field, Texas, XV, 955; XXII, 1194
 Rio Buenavista locality, MEX, 115
 Rocky Mountain region, XXVII, 425
 Rocky Mountains, XXIII, 1151
 Roumania, SD, 93, 138, 180; IX, 154, 1171
 Roumania and Poland, XVIII, 739
 Saratoga field, Texas, IX, 267
 south Texas, XXIII, 860; XXVI, 1005
 Southern fields, MEX, 107, 108, 212
 southwestern part of Blue Mountains, XXIX, 1386
 Sugarland field, GC, 710, 715; XVII, 1363
 Sulphur dome, XIV, 1085
 Switzerland, IV, 88
 Tampico district, Mexico, IX, 144
 Tampico Embayment, MEX, 124
 Tejon Quadrangle, XXI, 214
 Temblor Range, California, XXV, 1329
 Texas, STRAT, 728; V, 224, 326; IX, 23, 100; XXI, 1086; XXVII, 732
 Texas, coral reefs in, X, 976
 Texas coast region, VIII, 440
 Texas Gulf Coast, XXIII, 1616
 Trinidad, XI, 205; XXIV, 2103
 Oligocene, upper, and lower Miocene in South Texas, XXVII, 745
 Oligocene, upper, and lower Miocene trend, South Texas, XXVIII, 863
 Oligocene, upper Magdalena Valley, XXIX, 1103
 Valentine dome, GC, 1040; XVIII, 543
 Vaqueros formation of California, what is the, and is it [Oligocene]? XIX, 521
 Venezuela, XXVIII, 26
 Ventura Basin, SC, 98; XX, 1644
 Ventura-Santa Barbara district, GAS, 160
 Vinton salt dome, Louisiana, XII, 392
 Washington, FOP, 29; XXV, 1461
 West Columbia field, Texas, STR II, 459, 461, 466
 West Ranch field, Texas, XXVIII, 203
 Wind River Mountains, Wyoming, XXV, 142
 Wyoming, V, 53, 207
 Oligocene and Eocene, Borneo, XXVIII, 1449
 Oligocene and Jackson formations in Texas, section, GC, 505; XVII, 1329
 Oligocene and Miocene, boundary be-

- (Oligocene)
 tween, XXIII, 1560
 in Great Basin district, XVI, 14
 North Dakota, XXVII, 1568
 Oligocene age of Latin American microfaunas, MSC, 180
 of upper beds of Catahoula formation in Texas, GC, 537; XVII, 535
 Oligocene basins and deposits, SC, 28; XX, 1574
 Oligocene beds in Barcodón, MEX, 235 in Florida and parts of Georgia and Alabama, map, XXVIII, 1682
 Oligocene columnar sections, SC, 29; XX, 1575
 Oligocene deposits of Mississippi, Alabama, and Florida, correlation of, XXVIII, 1315
 Oligocene diastrophism in Coast Ranges, SC, 32; XX, 1578
 Oligocene fault, XXVI, 1447
 Oligocene faulting at Clay Creek dome, GC, 774, XX, 85
 Oligocene diatoms from Kreyenhagen shale, CAL, 154
 Oligocene discoveries in Coastal Louisiana, XXVII, 736
 Oligocene fauna, XXVI, 1651
 Vicksburg, exposures of, in western Louisiana, XXIII, 246
 Oligocene faunas, CAL, 155; MSC, 84
 Oligocene flora, central California, XXVIII, 969
 Oligocene foraminifera, Mexico, MSC, 177
 Texas, X, 977
 Oligocene fossils first found in well at West Columbia in Brazoria County, Texas, in 1923, XXIII, 1604
 from Bombo shales in Sinú Valley, XXIX, 1093
 in Buckeye field, GC, 746-748; XIX, 390-392
 in Costa Rica, XXVI, 1650
 in Gulf Coast, XXVI, 1188
 in Gulf Coast salt-dome area, GAS, 689
 in Hockley dome, SD, 589
 in Jennings field, GC, 966; XIX, 1313
 in Saratoga oil field, SD, 510
 Oligocene gas from Sugarland field, GAS, 716
 Oligocene Gulf Coast crude oil, PROB, 121, 125
 variation of, with depth, PROB, 120, 121
 Oligocene *Heterostegina* wedge, XXIX, 1324
 Oligocene *Lithothamnium* reef in Trinidad, XX, 1444
 Oligocene microfossils, XXVI, 1615
 Oligocene manatee from Chickasawhay limestone in Alabama, XXVIII, 1345
 Oligocene marine shale wedge in Texas Gulf Coast, XXIII, 1617
 Oligocene-Miocene boundary, XXVIII, 1314, 1345
 Oligocene-Miocene boundary horizon, MSC, 181
 Oligocene-Miocene production in Texas and Louisiana, deep coastal zone of, XXI, 1056
 Oligocene-Miocene Santa Inés formation, Venezuela, XXIX, 526
 Oligocene nomenclature, XXV, 2005
 Oligocene oil in Choctaw dome, Louisiana, XXIII, 886
 in Venezuela fields, XIII, 1189
- Oligocene oils, PROB, 98, 111, 122, 137, 141, 142, 152, 153
 Oligocene organic shales, PROB, 185
 Oligocene paleogeography, SC, 31; XX, 1577
 Gulf Coast fields, GC, 11, XVIII, 510
 Orange field, GC, 886
 Thompsons field, GAS, 726
 Oligocene redbeds, SC, 77, 90, 118; XX, 1623, 1636, 1664
 Oligocene regressions and transgressions of sea, MEX, 140
 Oligocene rocks, radioactivity studies on, XXIV, 1538
 Oligocene salt cores, SD, 168
 Oligocene sand, Batson, GAS, 708
 Damon Mound, GAS, 708
 Goose Creek, GAS, 729
 Hankamer dome, GAS, 729
 Iowa field, GAS, 732
 Manvel dome, GAS, 729
 Saratoga dome, GAS, 706
 Oligocene sand wedge, map of part of Gulf Coast of Texas between Colorado and Nueces rivers showing location of post-Vicksburg flexure and upper limit of, XXIII, 1628
 Oligocene sands in Hungary, XVIII, 939
 oil production in Tanhujio from, MEX, 226
 production from, West Columbia field, XXVI, 1443
 Oligocene section on Richland Creek, XXVIII, 1333
 Oligocene sediments, California, SBP, 97
 carbon content of, SBP, 27-31
 carbon-nitrogen ratio of, SBP, 34, 35
Discorbis zone (Td), SBP, 335-349
 Frio clay (Ti), SBP, 335-349
Heterostegina zone (Th), SBP, 335-349
 in Texas, thickening toward Gulf, XXI, 1087
 Kreyenhagen shale (Tk), SBP, 95, 167-194
Margulinina zone (Tmg), SBP, 335-349
 middle part (*Discorbis*, *Heterostegina*, and *Margulinina* zones), (Tom), SBP, 336, 338, 339-349
 Oligocene series, MSC, 180
 in Gulf Coastal Plain, XXIII, 165
 Oligocene shale section in Orange field, GC, 890; XX, 541
 Oligocene shales in Alazán region, MEX, 123
 Oligocene strata of East White Point field, geologic correlation chart of, XXV, 2004
 subdivision of, in East White Point field, XXV, 2005
 Oligocene stratigraphic column, East White Point field, Texas, XXV, 1975
 Oligocene stratigraphy of East White Point field, San Patricio and Nueces counties, Texas, XXV, 1967
 of southeastern United States, XXVIII, 1313
 southern Louisiana, XXIV, 436
 Oligocene structure at Esperson dome, GC, 875
 Oligocene trend, XXVII, 730
 Oligocene Tumey formation of California, MSC, 78, 101; XIX, 1192
 Oligocene type of crude oil at Spindie-
- (Oligocene)
 top, GC, 311, 319; XIX, 620, 628
 Oligocene zones in Rocky Mountain fields, XXVII, 472
 Oligotrophic lakes, XXV, 834
 Olinda field, PROB, 215, 229, 751, GAS, 212; VI, 303
 Olive Hill formation, XXV, 670, 676
 Oliveira, Avelino Ignacio, de, XXIX, 544, 548
 Oliveira, Avelino Ignacio, de, and Leonardos, Othon Henry, XXIX, 518, 540
 Oliveira, E. P., XIX, 1738, 1743, 1748, 1750, 1754; XX, 1208, 1219, 1222, XXI, 301, 303
 Oliver, Earl, IX, 298; X, 582, 667; XXII, 566
 Oliver, Gaydon, memorial of Curtis Hall Montgomery, XXVIII, 690
 Oliver, Herbert, STRAT, 601
 Oliver, L., and Etard, A., X, 1272
 Oliver County, North Dakota, Williston basin wildcat test, XXVII, 1618
 Oliver sand, Hardin field, STRAT, 568
 Olivine, MEX, 145, 147; RMS, 212, 290, 602
 Olla field, La Salle Parish, Louisiana, XXV, 747, 1033; XXVI, 1271
 electrical log of, XXV, 749
 Wilcox producing sands, XXVI, 1272
 Olmos coal beds, Tullillo brackish-water beds related to, XXVIII, 1180
 Olmos sand, GC, 493; XVII, 1316
 Olmstead, L. B., RMS, 540
 Olney, Warren, Jr., XXIII, 1459
 Olney district, Texas, subsurface structure map, STR I, opp 430
 Olsen pool, XXV, 1080
 Olson, E. A., GAS, 511
 Olson, E. C., and Whitmarsh, Agnes, foreign maps, review, XXVIII, 1545
 Olson, J. C., XII, 88
 Olson, Louis V., abstract, XXII, 1706
 Olson, Walter S., seismic velocity variations in San Joaquin Valley, California, XXV, 1343
 Olson Brothers Drilling Company, XXI, 1027
 Olson field, gravity of oil at, XXV, 1049
 Olson Oil Company, GAS, 481
 Olsson, Axel A., III, 363; XII, 671; XIV, 283; XXV, 1794; XXVI, 1647, 1650; XXIX, 536, 537, 1074, 1076, 1091, 1093, 1098, 1133
 Olsson Axel A., and Caster, Kenneth E., occurrence of *Baculites onalusi* zone of upper Alberta shales in southeastern British Columbia, XXI, 295, 703
 Olsson, Axel A., and Iddings, Arthur, XXIV, 1588; XXIX, 536
 geology of northwest Peru, XII, 1
 Olsson, Axel A., and Pillsbury, Henry A., XXVI, 819; XXIX, 1099
 Olsson, Axel A., and Terry, R. A., XXVI, 1649
 Olvido formation, XXVII, 1417, 1486, 1492
 gypsiferous, XXVII, 1488
 origin of, XXVII, 1495
 Olympic Mountains, Washington, XXIX, 1398
 rocks of, XXIX, 1400
 Olympic Mountains section, GAS, 222
 Olympic Oil Company, XXII, 1579
 Olympic Peninsula, Washington, geology and petroleum possibilities of,

- (Olympic)
 XI, 1321
 Olympic pool, Hughes and Okfuskee counties, Oklahoma, STRAT, 456, 459, 463, 466; XXI, 1009; XXII, 1579
 analyses of oil, STRAT, 471, 472
 cross section showing correlations of shallow Pennsylvanian formations in vicinity of, XXII, 1582
 cross sections through, showing Olympic sand, XXII, 1586
 index map showing oil and gas fields adjacent to, XXII, 1580
 migration of oil, STRAT, 463
 production from, XXII, 1579, 1585
 structure of, XXII, 1580
 structure of, contoured on top of Henryetta coal, XXII, 1583
 structure of, contoured on top of Olympic sand, XXII, 1584
 Olympic sand, a lenticular member of Senora formation, XXII, 1581
 Olympia well, volcanic ash in, MEX, 76
 Omaha pool, XXVI, 1089
 Oman, Gulf of, RMS, 365
 Omeishan basalt, XXVIII, 1431
 Omeliansky, V. L., XVII, 57, 58, 62
 Omeliansky, W. L., PROB, 38
 Omeliansky's solution, XVII, 57
 Omori, F., XIV, 233
Omphalotrochus and *Cora* zones of Timan Plateau, Carboniferous in age, XXIV, 275
Omphalotrochus beds, XXIV, 258
 of the U.S.S.R.; are they Permian? discussion, XXIV, 1128
Omphalotrochus horizon, XXIV, 249, 251
 Oneida and Burning Springs gas field, GAS, 945
 Oneida County, New York, Trenton in, XXII, 89
 Oneida field, Kentucky, XXIX, 683
 Ongley, M., X, 1250
 Ongley, M., and Henderson, J., X, 1238
 Onondaga in western New York and central Pennsylvania, XXI, 313
 Onondaga and Hamilton, southern Indiana, XXV, 684
 Onondaga (Carboniferous) limestone in Kentucky, GAS, 857
 Onondaga County, New York, Trenton in, XXII, 89
 Onondaga formation, GAS, 75, IV, 45, 305; VI, 25; XXIV, 1989; XXV, 1140
 Menifee field, eastern Kentucky, GAS, 941
 Onondaga fossils, XXIV, 1990
 Onondaga-Hunterville beds, XXV, 809
 Onondaga limestone, XXII, 1530
 Artemus-Himyar gas field, GAS, 945 (Do) (Devonian), SBP, 351-379, 414
 eastern Kentucky, source of oil in, XVIII, 1128
 Isonville field, GAS, 945
 Janet gas field, GAS, 946
 Knox County, GAS, 932
 Morgan County gas field, GAS, 944
 Oneida and Burning Springs gas field, GAS, 945
 Paint Creek uplift, GAS, 927
 Turkey Knob gas field, GAS, 944
 Onondaga oil and gas field, GAS, 70
 Onondagan, XXV, 680
 Illinois, XXV, 679
 Kentucky, XXV, 686
 Missouri, XXV, 682
 Tennessee, XXV, 678
 Onondagan coral fauna, XXV, 678
 Onondagan equivalent in New Mexico, XXVII, 222
 Onslow Bay, on Carolina Coast, RMS, 240
 Ontario, FOP, 109, PROB, 2, 5, 6, 366; XXV, 1541
 central, Gloucester shale productive of gas in, FOP, 114; XXV, 1546
 central, map, FOP, 113; XXV, 1545
 central, Trenton limestone productive of gas in, FOP, 114, XXV, 1546
 gas from Collingwood-Gloucester and Black River-Trenton beds in, FPO, 112; XXV, 1544
 geologic map of eastern part, FOP, 110; XXV, 1542
 natural gas in Brantford area, XXV, 1950
 natural gas fields of, GAS, 59
 nitrogen in, GAS, 1060
 oil or gas from Ordovician beds in, FOP, 112; XXV, 1544
 references on oil prospects in, FOP, 118; XXV, 1550
 structure section and geologic column, FOP, 111; XXV, 1543
 unconformity between Beekmantown and Chazy sediments in, FOP, 109; XXV, 1541
 unconformity between Cyazy and Black River-Trenton sediments in, FOP, 109; XXV, 1541
 unconformity between pre-Cambrian and basal Paleozoic in, FOP, 109; XXV, 1541
 western, PROB, 545
 Ontario and adjacent states, correlation table of formations in, GAS, 61
 Ontario and Ohio, section, FOP, 141; XXV, 1573
 Ontario and Quebec, geologic index map of, GAS, 90
 Ontario County, New York, site of famous gas or burning spring, XXII, 87
 (well 410), SBP, 349-379, 409
 Ontario Department of Mines, GAS, 1053
 Ontario peninsula, FOP, 114; XXV, 1546
 Devonian in, FOP, 115; XXV, 1547
 gas-producing formations in Silurian in, FOP, 118; XXV, 1550
 geologic column, FOP, 115; XXV, 1547
 map, FOP, 116; XXV, 1548
 oil production from Middle Devonian in, FOP, 118; XXV, 1550
 Ordovician in, FOP, 115; XXV, 1547
 Silurian in, FOP, 115; XXV, 1547
 structure section, FOP, 117; XXV, 1549
 Oolite in central Tennessee, XX, 1076
 Oolites, RMS, 212, 221, 234, 235, 287, 289, 290-292, 526; XXIII, 1500
 concentric, origin of, XXII, 1371
 derivation of, from faecal pellets, RMS, 519, 523
 from Saratoga field, SD, 513
 in Dillon sand in Pine Island field, Louisiana, STR II, 175
 in Great Salt Lake, XXII, 1359-1387
 in Great Salt Lake, carbonate content of, XXII, 1370
 in Great Salt Lake, chemical analysis of, XXII, 1370
 in Great Salt Lake, origin of radiating structure of, XXII, 1380
 (Oolites)
 in Great Salt Lake, theory for origin of, XXII, 1384
 in Great Salt Lake clays, chemical properties of, XXII, 1368
 Oolitic and coquina-type limestones from Patton zone, Lisbon field, Louisiana, photomicrographs of sections of cores of, XXIII, 306-313
 Patton zone primarily made up of, XXIII, 304
 Oolitic bed productive in Cunningham field, Kansas, XXI, 509
 Oolitic beds in Phosphoria formation, XXIII, 88
 in Powder Wash area, XXII, 1033
 in Ste Genevieve limestone, XXIII, 1844
 Oolitic dolomite, XXIII, 1026
 Oolitic limestone, PROB, 357, MEX, 15, 16; I, 135, V, 376, 383; VI, 464; XXII, 75
 Oolitic limestone bed in Pine Island member, XXII, 722
 Oolitic member of Marble Falls sand, XXIII, 854
 Oolitic zone, Mississippian, along border of Kent and Ottawa counties, Michigan, XXV, 719
 Oolitic zones, GAS, 395
 in Greenbrier formation, XXV, 801
 in White Crystalline dolomite in Goldsmith field, XXIII, 1530
 Oozes, deep sea, PROB, 30; RMS, 149, 285, 286, 350, 376, 379, 396-404, 407, 412, 449 (See also Globigerina ooze)
 Opacity of muds, RMS, 419
 Opal in zeolite-opal rock, XXV, 292
 Opaline silica, MEX, 34
 white, surface sands in Vernon Parish, Louisiana, cemented with, XXIX, 1176
 Opdalite, CD, 10
 Opeche formation, V, 190; XXVI, 1563
 Opelika dome, Henderson County, Texas, XXII, 730; XXIII, 894
 Opelika field, Henderson County, Texas, XXIV, 1066; XXV, 1086; XXVI, 1054; XXVII, 787; XXVIII, 848
 Open bays, effect of, on delta sediments, RMS, 171
 Open flow, GAS, 1113
 Medicine Hat field, GAS, 36
 Viking field, GAS, 57
 Open-flow capacity, decline in, use in estimating reserves, GAS, 1026
 of commercial gas wells in United States, GAS, vii
 Open flow gauge and working capacity of gas wells, IX, 217
 Open flow lines, isometric initial, Oriskany gas, XXII, 1163
 Open flow volume in relation to structure in Oriskany gas wells, XXII, 1162
 Open flow wells in Hugoton field, XXIII, 1056
 Open reservoir, definition, PROB, 434
 Open reservoir type, oil pool of, XX, 780
 Open reservoirs, XXIX, 1745
 Open-space replacements, volume relations in, XXI, 1486
 Operating conditions in Peru and Ecuador, XXIX, 538
 Operating expenses, GAS, 1014
 in Texas, GAS, 1112

- Operating methods at Oklahoma City field, XIV, 1531
- Operations, Rocky Mountain region, to end of 1936, XXI, 999
- to end of 1937, XXII, 693
- Operators and wells in Miocene of southern Louisiana, XXIV, 443
- Operculina mariannensis* zone in Gulf Coast, XXII, 1002
- Operculina vaughani* zone, XXIII, 1394
- Operculinella-Camerina* zone, XIX, 693
- Operculinoides* zone, diagnostic species of, XXIV, 441
- in Louisiana, XXIV, 441
- Ophiurans, XXVI, 1189
- Oplin area, Texas, production in, XXIII, 857
- Opolski, Z., XV, 2
- Opp pools, Schleicher County, Texas, XXIV, 1038
- Oppel, Albert, MSC, 10, 90, 92; XXVIII, 376; XXIII, 1580; XXVII, 269
- Oppel's stages and zones, MSC, 99
- Oppel's Zones, MSC, 96
- Oppenheim, Victor, XX, 984; XXI, 294, 1347, 1348, 1350; XXV, 1791; XXIX, 524, 540, 552, 556, 1074, 1075, 1084, 1085, 1130, 1131, 1132
- area in Brazil and Peru covered by reconnaissance work of, XXI, 100
- Fossils do Devoniano do Paraná*, review, XX, 987
- geological exploration between upper Jurua River, Brazil, and middle Ucayali River, Peru, XXI, 97
- geology of coast of state of Alagoas, Brazil, XXI, 299
- geology of Devonian areas of Parana Basin in Brazil, Uruguay, and Paraguay, XX, 1208
- Jurassic-Cretaceous (Giron) beds in Colombia and Venezuela, XXIV, 1611
- petroleum geology of central sedimentary basin of Uruguay, XIX, 1205
- petroleum geology of Gondwana rocks of Southern Brazil, XIX, 1725; discussion, XX, 819
- Oppenheim, Victor, review, XX, 987; XXV, 1811
- Rochas Gondwanicas e Geologia do Petroleo do Brasil Meridional*, review, XIX, 1701
- sobre a *Bacia Sedimentaria, Gondwanica na Republica do Uruguai*, review, XIX, 126
- Optic properties of clay minerals, RMS, 470
- of glauconite, RMS, 515
- of glauconite, effect of base exchange upon, RMS, 505
- of minerals, RMS, 603-604
- Optical anomalies, RMS, 608
- Optimum producing rates for Arbuckle limestone wells, XXIX, 1783
- Oquirrh formation, Permian *Pseudoschwagerina* in, XXIV, 627
- Oquirrh Mountains, XXII, 1309
- Orange, XXII, 741
- Orange County, California, CAL, 21, MSC, 13, 109, 114; PROB, 215
- (wells 93-95), SBP, 87-153, 404
- Orange County, Texas, GC, 880
- new development in Orange field, XXIII, 602
- Orange dome, Texas, GAS, 729; PROB, 115, 116, 146-148, 418
- geophysical investigation of, XX, 539
- section, GC, 895
- Orange Hill field, XXVII, 733
- Orange Island, XXVIII, 1681
- Orange oil field, Texas, GAS, 729; GC, 880; XX, 531
- new development in, XXIII, 602
- companies operating in, GC, 886; XX, 537
- map showing location of oil wells, GC, 887; XX, 538
- Miocene production at, GC, 8; XXVIII, 507
- production, GC, 886; XX, 537
- wells in, GC, 901; XX, 552
- Orange-peel bucket, dwarf, RMS, 661
- Orbitoidal limestone, MEX, 133
- Orbitoididae, MSC, 356
- Orbitoidinae, XXI, 237
- Orbitolina*-bearing rocks in Borneo and Serawak, XXII, 22
- Orbitolina* limestone, XXII, 28, 531
- Orbitolina* zones in Little Hatcher Mountains, XXII, 539
- Orbulininae, MSC, 346
- Orchard, Texas, GAS, 710
- Orchard salt dome, Fort Bend County, Texas, XVII, 1517
- electrical survey of, XIV, 1159
- galena and sphalerite in Fayette at, XIII, 384
- salt overhang at, GC, 166; XVII, 1517
- Orcutt, William Warren, VII, 614; VIII, 73
- memorial of, XXVI, 1306
- oil development in California, VIII, 61
- Orcutt field, XXVII, 1354, 1349
- Orcutt sand, XXVII, 1359
- terrace deposits, XXVII, 1342
- Ord Bend gas field, XXVIII, 743
- Order, MSC, 184
- Ordóñez, Ezequiel, MEX, 151, 152, 154, 155, 193; XI, 1200
- distinguished lecture tour, 1943; XXVIII, 171
- el Petroleo en Mexico*, review, XVI, 617, 707
- elected honorary member, XX, 234
- principal physiographic provinces of Mexico, XX, 1277
- Ordovician, CAL, 62; PROB, 103, 110, 275, 298, 318, 353, 355, 410, 411, 438, 576, 725, 762, 917; RMS, 366-368; STRAT, 177
- Appalachian region, PROB, 101, 105
- Arbuckle and Wichita mountains, Oklahoma, XXV, 1635
- Arbuckle Mountains, XXIX, 188
- Australia, XXI, 1124
- Big Sinking field, Kentucky, STRAT, 173, 175, 177, 178
- Blackwell field, Oklahoma, STR I, 169
- Central basin of Appalachian geosyncline, XXV, 817
- central Oklahoma, XIV, 1507
- Chanute pool, STRAT, 62, 63
- China, XXVIII, 1421
- Cincinnati arch, XXIII, 1847
- Colorado, XXVI, 1377
- Crieville field, Oklahoma, STR I, 196, 201, 203, 205, 206, 210
- Cunningham field, Kansas, XXI, 508
- Cushing field, Oklahoma, STR II, 401, 403, 404
- Dakota basin, XXVI, 1566; XXVII, 1592
- Davenport field, Oklahoma, STRAT, 389
- East Tuskegee pool, STRAT, 448
- (Ordovician)
- east-central United States, XXII, 1534, 1547
- eastern coal field, Kentucky, STR I, 74, 75
- Eastern Interior coal basin province, XXII, 420
- eastern Tennessee, XXVII, 1051
- eastern United States, FOP, 134; XXV, 1566
- Eldorado field, Kansas, STR II, 162, 163
- Fitts pool, XX, 953
- Florence field, Colorado, STR II, 78
- Franklin Mountains, Texas, XXIV, 162
- Garber field, Oklahoma, STR I, 182, 186, 187
- Gaspé Peninsula, bituminous shales in, FOP, 124; XXV, 1556
- Glenn, pool, Oklahoma, STR I, 233
- Grass Creek field, Wyoming, STR II, 627
- Greenwich pool, Kansas, XXIII, 648, 649
- Huntsville field, Alabama, GAS, 873
- Illinois, XXIII, 812; XXV, 1116; XXVII, 818; XXVIII, 751
- in subsurface in Mid-Continent of great economic importance, XXV, 1640
- Indiana, IX, 322
- Indiana fields, GAS, 844, 850, 852
- interior of United States, III, 293
- Iowa, XXIV, 1497
- Jesse pool, Oklahoma, XXII, 1563
- Kansas, GAS, 480; STRAT, 63, 109, 125, 147; II, 105, 109; V, 330, 509, VI, 374, 429; X, 634
- Kentucky, GAS, 857, 877, 941; STRAT, 173; II, 40, 304, VI, 25
- Kentucky and Tennessee, VIII, 621
- Kentucky eastern coal field, XI, 479
- Lower, GAS, 94, 109
- Lower, beds, terminology of, XXIV, 1645
- Lower (Ellenburger) in Sand Hills area, Texas, XXIV, 119
- Lower, formations, some, of Ozark uplift, stratigraphy of, XXIX, 296
- Lower, sandy zones ("St. Peter") in middle Tennessee, XXIV, 1641
- Lower, tests, GAS, 109
- Lower, and Upper Cambrian rocks, subsurface subdivisions of, section, XXIX, 421
- Lower, and Upper Cambrian subsurface subdivisions in north-central Texas, XXIX, 413
- Manitoba, XXVI, 343
- Marathon basin, XV, 1066
- Mexico, XXVIII, 305
- Michigan, GAS, 791; XXIV, 1953; XXVI, 1103
- Mid-Continent, XXV, 1635
- Mid-Continent, references on, XXV, 1700
- Mid-Continent, standard section for, XXV, 1639
- Middle, GAS, 94, 108
- Middle (Simpson), in Sand Hills area, Texas, XXIV, 122
- Middle (Simpson), in Sand Hills area, Texas, section of, XXIV, 124
- Middle and Upper, in Texas, XXI, 1019
- Minnesota, X, 194
- Nebraska, XXII, 1617
- Nemaha Mountains region, Kansas, STR I, 63, 70; XI, 926

(Ordovician)

- New Mexico, IV, 104
 New York, XXII, 94
 New York and Pennsylvania, GAS, 965, 986
 New York oil fields, STR II, 275
 Nikkel pool, STRAT, 109
 North and South Dakota, FOP, 77; XXV, 1509
 North Dakota, XXVI, 343, 1422
 northeast Iowa, XXV, 1639
 northern Pecos and Crane counties, XXIX, 1341
 Ohio, GAS, 909; V, 609; XX, 798
 Ohio, oil- and gas-bearing horizons of, abstract, V, 104
 Oklahoma, GAS, 524, STRAT, 389, 448; III, 255, 264, IV, 174; V, 34, 128, 175, 344, 406, 471; VI, 6, 278, 413, 476; VII, 558, X, 648; XXIII, 231, 326, 825; XXIV, 1029, 1998, XXV, 1666, 1708; XXVIII, 781, 782
 Oklahoma, oil and gas in, PROB, 763
 Ontario, GAS, 61, 1060
 Ontario Peninsula, FOP, 115; XXV, 1547
 Osage County field, Oklahoma, STR II, 381
 Ouachita-Amarillo province, XIII, 425
 Ouachita Mountains, Oklahoma and Arkansas, XXV, 1638
 Ozark area, Missouri, Arkansas and Oklahoma, XXV, 1639
 Pennsylvania, XXV, 1142
 Petrolia field, Texas, STR II, 546
 Rocky Mountains, XXIII, 1137; XXVII, 422, 465
 Seminole district, Oklahoma, STR II, 316, 325, 331, 337
 Silurian, Devonian, and early Carboniferous sedimentary rocks of Interior Highlands in Arkansas, GAS, 540
 South Blackwell field, Oklahoma, STR I, 173
 south Texas, XXIII, 860
 Tennessee, FOP, 154; GAS, 857, 861, 863, 867-869; STR I, 245; V, 646; XXV, 1586
 Texas, STRAT, 541, 790; III, 92, 129, 132; IV, 121; VI, 151; XXI, 1027; XXIV, 20, 1031; XXVI, 205, 212; XXVII, 763, 776
 Texas Panhandle, XXIII, 997
 Thomas field, Oklahoma, X, 648
 Ordovician to Mississippian crudes of Oklahoma, XXV, 571
 Ordovician to Permian crudes of Oklahoma, comparisons of, XXV, 572, 573
 Ordovician, Turkey Mountain pools, Oklahoma, STR I, 212; XI, 934
 unconformable beneath Pennsylvanian in Oklahoma and Kansas, PROB, 769
 Upper, GAS, 94, 108
 Upper, in Sand Hills area, Texas, XXIV, 125
 Upper, in Virgil pool, Kansas, STR II, 145
 Ural Mountains, XXI, 1442
 Utah, VI, 207
 Walnut Bend pool, 790
 West Texas, XXV, 1055, 1056, 1057; XXVII, 751
 West Texas and New Mexico, GAS, 439-446; XXII, 696

(Ordovician)

- West Virginia, XXIX, 683
 Western Interior coal basin, XIII, 424
 Wherry pool, STRAT, 125
 Wind River Canyon area, XXIII, 1449
 Wind River Mountains, XXV, 128
 Wyoming, XXIII, 481, 927, 1447; XXV, 1733
 Zenith pool, STRAT, 147
 Ordovician and Silurian formations in Michigan, XXII, 399
 Ordovician age in Llano uplift, Texas, XXV, 1635
 of producing horizon, Big Lake field, Reagan County, Texas, XIV, 616
 Ordovician beds in Ontario, oil or gas from, FOP, 112; XXV, 1544
 in southern Oklahoma, possibilities of oil and gas production from, XXV, 22
 Ordovician black shales, RMS, 366-368
 Ordovician brachiopods and trilobites in Cascade Mountains, XXIX, 1391
 Ordovician bryozoa, XXV, 1226
 Ordovician cherts, eastern New York, XXI, 27
 Ordovician conglomerate of Morrow series, XXII, 861
 Ordovician correlation in east-central United States, XXII, 1524
 Ordovician correlations in Oklahoma, XI, 967
 Ordovician development, Apco structure, Pecos County, Texas, XXIV, 478
 in north and west-central Texas in 1944, XXIX, 764
 in Sand Hills area, Texas, XXIV, 129
 in Sand Hills structure, Crane County, Texas, XXI, 1575
 Ordovician formations, correlations of American and European, XIV, 1496
 in Pulaski field, XXII, 94
 Ordovician fossil coral reefs in Baldwinville field, New York, GAS, 986
 Ordovician fossils from upper part of type section of Deadwood formation, South Dakota, XX, 1329
 in Wind River Mountains, XXV, 129
 Ordovician gas well in Cunningham field, Kansas, XXI, 503
 Ordovician gas zone, productive at Cunningham field, Kansas, XXI, 521
 Ordovician graptolites, references on, XXVI, 1775
 Ordovician limestone, Crinerville field, Oklahoma, STR I, 196
 of Baltic, RMS, 317
 Rainbow Bend field, Kansas, STR I, 53, 54, 56
 Ordovician limestones, PROB, 282, 532
 Ordovician oil, Big Lake field, PROB, 60
 Glenn pool, Oklahoma, STR I, 237
 Ordovician oil accumulation on old Simpson land surface, XXV, 1706
 Ordovician oils, PROB, 140, 153
 Ordovician-Permian unconformity in Sand Hills area, Texas, XXIV, 131
 Ordovician pools in West Texas, XXIV, 1037
 Ordovician pre-Redbeds, XXIII, 1040

- Ordovician producing horizon, PROB, 319
 Nemaha Mountains region, Kansas, STR I, 65
 Ordovician production in Cooke County, Texas, XXIV, 1052
 Ordovician productive horizons in Tennessee, XI, 907
 Ordovician reservoir rock in Oklahoma, XI, 1108
 Ordovician reservoirs, PROB, 59, 293, 301
 Ordovician rocks in Marathon Mountains, XXIX, 1341
 in Mid-Continent, distribution of, XXV, 1636
 radioactivity studies on, XXIV, 1538
 subdivisions, nomenclature, and correlations of, XXV, 1637
 Ordovician section in Kentucky below top of Tyrone, sample log typical of, XXIII, 1842
 Ordovician sediments, Arbuckle limestone (Oa), SBP, 194-285
 carbon content of, SBP, 27-31
 carbon-nitrogen ratio of, SBP, 34, 35
 Ellenburger limestone (Oe), SBP, 285-292
 Martinsburg shale (Om), SBP, 349-379
 Queenston shale (Oq), SBP, 349-379
 Simpson group (Os), SBP, 255-292
 Sylvan shale (Osy), SBP, 255-285
 Trenton group (Ot), SBP, 349-379
 Viola limestone (Ov), SBP, 194-285
 West Texas, possibilities for oil in, XX, 528
 Ordovician-Silurian in Urals, XXI, 1443
 Ordovician strata in deep wells of western central Kansas, XI, 49
 Ordovician structure, Cunningham field, Kansas, XXI, 513
 Ordovician structures, Oklahoma, XXVII, 800
 Ordovician system, oil and gas bearing of, in Ohio, V, 609
 Ordovician test, outstanding, in West Texas, XXIII, 843
 Ordovician tests in Sand Hills area, XXIV, 129
 in West Texas and New Mexico, XXII, 696
 Ordovician thin shales and limestones, XXV, 817
 Ordovician time, geography of Marathon region in, XXIX, 1337
 Ordovician unconformity in Crinerville field, Oklahoma, STR I, 201
 iso-con map for, XIV, 1215
 Ordovician waters, in Iowa, Missouri, Arkansas, Nebraska, Kansas, and Oklahoma, PROB, 277, 856, 857
 Ordovician well-core graptolites, Crane County, Texas, XXVI, 1771
 Oread limestone, V, 71; XXII, 831
 Oregon, MSC, 69, 99, 102, 103, 133, 153-155, 161, 163, 171, 196, 202, 204, 213, 214, 220, 222, 226, 228, 230, 232, 240, 241, 244, 248, 251, 254, 258, 261, 264, 276, 291, 293, 299, 302, 305, 329, 333, 336, 343, 344, 346, 348, 353, 354
 Astoria, CAL, 179
 Blue Mountains in, CAL, 117
 Bridge Creek flora of, CAL, 154, 299
 carbon ratios in, PROB, 88
 central, Jurassic in, XXIX, 1387
 check list of foraminifera near New-

- (Oregon)
 port and Astoria, MSC, 70
 Cretaceous in, CAL, 99, 100, 111
 Crooked River Basin of, CAL, 154
 eastern, Washington, Idaho, and northern Utah, natural gas in, GAS, 221
 faunules from near Newport, MSC, Fig. 14 (in pocket)
 Jurassic and Triassic discordant in, CAL, 76
 Knoxville in, CAL, 109
 lava plain in, CAL, 1, 26
 Lower Chico in, CAL, 111
 lowest Oligocene horizon of, absent in California, CAL, 156
 Mascall fauna of, CAL, 182, 221
 Mascall flora of, CAL, 299
 massive mountains of, in Triassic, CAL, 70
 native asphalts in, XI, 395
 northern California, and Washington, MSC, Fig. 14 (in pocket)
 oil reserves, VI, 44
 Oligocene climate similar to that of California, CAL, 154
 Rattlesnake formation of, CAL, 221
 Tertiary in, XXIX, 1383
 Oregon, western, and western Washington, geologic column in, FOP, 28; XXV, 1460
 map, FOP, 27; XXV, 1459
 Oregon and Idaho, nitrogen in, GAS, 1059
 Oregon and Washington, Eocene embayment in, XXIX, 1406
 geology of, and its relation to occurrence of oil and gas, XXIX, 1377
 map showing locations of drill holes for oil and gas, XXIX, 1380
 possibilities for occurrence of oil and gas in, XXIX, 1411
 Oregon basin, Embarras water in, XXIV, 1286
 Frontier water in, XXIV, 1239
 Oregon Basin field, Wyoming, GAS, 292, 295; XXVIII, 798
 (well 202), SBP, 194-243, 406
 Oregon formation, Big Sinking field, STRAT, 175
 Oregon Oligocene, MSC, 102
 Oregon Tertiary, foraminiferal faunas from, MSC, 78
 foraminiferal faunules from, MSC, 99
 Orenburg region, thick, detrital section of Carboniferous and Permian in, XXIV, 264
 Orestimba Creek, MSC, 127
 Orestimba group, XXIX, 963
 Organ Mountains, XXIV, 161
 Organic acids, RMS, 413, 443, 511
 action of, upon limestone, XIII, 1467; XX, 1392; XXI, 619
 effect of, on glauconite, RMS, 510-512
 graphic representation of decrease of surface tension by, according to Traube's rule, XXV, opp. 2175
 in soils, RMS, 485
 Organic carbon content, RMS, 184
 areal distribution of, RMS, 192
 of Baltic sediments, RMS, 306
 of Barataria Bay sediments, RMS, 191, 192
 of Barataria Bay sediments, analysis of, XXIII, 589
 of Barataria Bay sediments, Louisiana, areal variation of, XXIII, 582
- (Organic)
 of sediments in basins, RMS, 99
 Organic catalysts on sea bottom, RMS, 420
 Organic colloids, destruction of, RMS, 539
 Organic content, RMS, 187; SBP, 18-21, 33, 44, 45, 399-400
 Appalachian, SBP, 358-363
 areal variation of, in Mid-Continent region, SBP, 265
 as means of correlation, SBP, 360
 California, SBP, 104-112, 133-137
 California chert, SBP, 189, 190
 California outcrop samples, SBP, 185-189
 central California samples, SBP, 133-137
 conversion and loss due to migration, XXV, 1708
 East Texas, SBP, 297-303
 effect of depth of burial upon, RMS, 392
 formula and graph for determination of, by using texture, SBP, 72
 Gulf Coast, SBP, 339-344
 in a sediment, measurement of, XXV, 1923
 Los Angeles Basin, SBP, 104-112
 loss by weathering, SBP, 187-189
 loss of, with burial in sediments, RMS, 264
 means of determination, SBP, 18-21, 72, 399
 Mid-Continent, SBP, 263-266
 of calcareous deposits, RMS, 450
 of deep water in sea, RMS, 439-440
 of Eagle Ford shale and Woodbine sand in East Texas Basin, areal variation of, SBP, 302
 of oil shales, XIII, 303
 of recent marine sediments, RMS, 428
 references on, RMS, 451
 Organic content of rocks, some characteristics of, XVIII, 1103
 Organic content of sediments, RMS, 3, 26, 178, 261-266, 423
 average for world, RMS, 261
 in Atlantic, RMS, 379-381
 in Atlantic, in relation to depth of water, RMS, 380
 in Atlantic, relation of, to lime content, RMS, 380
 in Baltic, RMS, 300, 309, 314
 in basins, RMS, 96, 266, 280
 in deep sea, RMS, 380, 381, 445
 in fiords, RMS, 361
 in inland seas, RMS, 447
 in lagoons, RMS, 450
 in Lake Pontchartrain, XXIII, 17
 in near-shore sediments, RMS, 445, 446
 in Sacramento Valley, XVIII, 1356
 in tidal-flat sediments, RMS, 197, 199
 in tidal muds, RMS, 200
 on continental platform, RMS, 446
 on deltas, RMS, 450
 ratio of, to organic matter in water above, RMS, 441
 Organic content of subsurface layers of sediments, RMS, 305
 of Taylor marl and Austin chalk in East Texas Basin, areal variation of, SBP, 300
 Organic content, radioactivity, and sedimentation, relation of, XXIX, 1470
 Organic content, ratio to carbon con-
- (Organic)
 tent, RMS, 263, 380; SBP, 18-20
 relation to bottom topography of Lake Pontchartrain, XXIII, 17
 relation to depth of water, RMS, 381
 relation to ignition loss, RMS, 433
 relation to nitrogen-reduction ratio, SBP, 390, 391
 relation to oil zones in Santa Fe Springs field, California, SBP, 165-167
 relation to reduction number, SBP, 45, 46
 relation to source beds, SBP, 381-384
 relation to texture, SBP, 70, 71
 relation to volatility, SBP, 63, 64
 relation to well and outcrop samples, SBP, 185-189, 251
 Rocky Mountains, SBP, 208, 211-217
 Rocky Mountains outcrop samples, SBP, 246
 use of, in regional studies, SBP, 81
 West Texas, SBP, 287, 288
 Organic content and radioactivity, determinations of, XXIX, 1472-1478
 and radioactivity of some Paleozoic shales, XXIX, 1
 Organic contents, effect of various, on radioactivities of sand-free, black and grayish black shale, XXIX, 1479
 Organic constituents, methods of determining nature of, RMS, 434
 of sediments, inferences about origin of oil as indicated by composition of, XXIV, 506
 Organic débris, bacterial decomposition of, XXVIII, 1512
 Organic detritus from surface waters, RMS, 357
 in Baltic, RMS, 319
 Organic environment indicated by Blaine and Dog Creek floras and faunas, XXVIII, 1023
 Organic iron salts, RMS, 511
 Organic layer, radioactivity concentrated in, XXVIII, 944
 Organic limestones, PROB, 358
 Organic material in source rocks, effects of metamorphism on, XV, 163
 of carbonaceous shales, VI, 333
 original, in source beds, PROB, 53
 within a sandstone, effect of decomposition, XXV, 1873
 Organic matter, RMS, 61, 94, 95, 150, 151, 183, 197, 199, 266, 365, 391, 392, 428-453, 466, 526, 529; SBP, 18
 amount needed to generate oil, SBP, 5, 165-167
 chemical nature of, RMS, 441-445
 conditions required for transformation of, into bitumens, XXIX, 1743
 content of metals in, RMS, 435, 436
 decomposition of, RMS, 95, 200, 421-423, 437, 438
 distribution of, factors affecting, RMS, 264
 effect of, on absorption of light, RMS, 83
 effect of quantity of, on carbon determinations, SBP, 25
 enrichment of, in sediments of fiords, RMS, 100
 in ancient sediments, RMS, 418

(Organic)

- in Atlantic sediments, RMS, 379-381
- in Baltic sediments, RMS, 303-307
- in Barataria sediments, RMS, 183
- in basins, RMS, 101
- in black shales, XXIII, 1178
- in bottom sediments of Lake Pontchartrain, XXIII, 15
- in Cherokee sea, accumulation of, XXV, 1708
- in East Indies sediments, RMS, 350
- in ocean, XXI, 1107
- in oil shale of Playa del Rey field, XIX, 190
- in oil shales, effect of shearing on, XIII, 341
- in recent sediments, XXVIII, 926
- in recent sediments, deposition of, PROB, 27
- in sediments, areal distribution of, RMS, 445
- in sediments, chemical composition of, SBP, 19, 20
- in sediments, nature and origin of, PROB, 28-31, 53, 235, 291
- in solution in sea, RMS, 437
- lateral variation of, in Barataria Bay, RMS, 192
- nature of, RMS, 429, 430, 435-440
- nitrogen and oxygen content of, RMS, 4, 431, 445
- of plankton, composition of, RMS, 443, 445
- oxygen content of, SBP, 19
- proportion of, converted into oil in Santa Fe Springs field, California, XX, 245
- rate of production of, in ocean, RMS, 439
- ratio to carbon content, RMS, 430, 445
- relation to color of sedimentary rocks, XXV, 1921
- relation to glauconitization, RMS, 510
- source of, in sediments, RMS, 436-438
- the source of oil, PROB, 25, 51, 54, 181, 183, 310
- variation in richness, PROB, 311
- variation of, with depth of sediment in Baltic, RMS, 321
- Organic minerals, XX, 281
- Organic mud, RMS, 361
- Organic nature of some modern sediments, results of distillation and other studies of, XI, 1221
- Organic origin of oil of Pacific Coast, X, 697
- of sands, RMS, 240
- Organic products of decomposition, PROB, 38
- Organic sediments, distillation of oil from, by heat and other processes of igneous intrusions, XII, 995
- Organic sediments and derived oils, metamorphism of, XIX, 589
- Organic shales, MSC, 158; PROB, 216, 219, 223
- in Buena Vista field, PROB, 201
- in southern end of San Joaquin Valley, California, IX, 228
- Miocene, PROB, 224
- Santa Maria field, PROB, 207
- Organic source material for formation of oil, XXIX, 13, 1743
- Organic structures, XXVI, 1734
- Organic sulphur, RMS, 443
- Organic theory of origin of petroleum, PROB, 25, 261

- Organisms, calcareous, distribution of, in sea water, RMS, 377
- decay of, RMS, 146
- effect of, on sediments, RMS, 6
- growth of, due to upwelling, RMS, 126
- Important sources of lake sediments, XXV, 836
- in basins, RMS, 96
- in lakes, XXV, 833
- in sea, as affected by pressure differences, RMS, 64
- in sea, conditions of growth of, RMS, 145
- in sea, effect of, on chemical composition of sea water, RMS, 147
- mud-eating, RMS, 261
- reef-forming, PROB, 553
- role of, in formation of tidal muds, RMS, 201
- utilization of oxygen by, RMS, 420
- Organization, geological, of an oil company, VIII, 651
- of study groups, suggestions for, XXIII, 1715
- Oriana gypsum, XXI, 465
- Orient, MSC, 120, 170
- Orient and America, comparison of Permian of, with Permian of Russia, XXIV, 265
- Oriental affinities in California, CAL, 135, 145, 155, 158, 162, 301, 302
- Oriental fusulines, XXIV, 272
- Orientation from surface, accuracy of bore-hole surveying by, XIV, 579
- laboratory, of well cores by their magnetic polarity, XXI, 580, 599
- of cores, XIV, 559
- Oriented drill-stem methods of surveying bore holes, XIII, 1148; XIV, 598
- Orienting cores, camera used in, XIV, 566
- Origin, indigenous, of oil in McMurray sands, XXII, 1140
- Origin, migration, and accumulation of oil, problems of, PROB, 337
- Origin, non-marine, of petroleum in North Shensi, and Cretaceous of Szechuan, China, XXV, 2058
- of Bartlesville shoestring sands, Greenwood and Butler counties, Kansas, XVIII, 1313; XXI, 35
- of black shales, environments of, XXIII, 1178
- of Bradford sand in Bradford field, Pennsylvania and New York, STR II, 429
- of Burbank sand, two theories, XXI, 35
- of calcium carbonate in marine deposits, RMS, 377
- of calcium carbonate in Verden sandstone, XXIII, 579
- of cap rock, PROB, 648; IX, 566
- of cap rock, chemical reactions involved in, IX, 76
- of carbon dioxide in natural gases, theories of, XXI, 1256
- of central depression at Clay Creek dome, GC, 763
- of central Kansas oil domes, IV, 89
- of clay minerals, RMS, 484-487
- of coals, oil, asphalt, and natural gas, XXIV, 1868
- of Colombian petroleum, XXIX, 1134
- of continental shelf sediments, RMS, 243

(Origin)

- of continents and oceans, review, IX, 916
- of domes, relation to productivity, STR II, 680
- of folds, PROB, 749
- of folds in Osage County field, Oklahoma, STR II, 388; discussion, XII, 1026
- of gas in Hiawatha and West Hiawatha gas fields, GAS, 357
- of gas in Oriskany, GAS, 982
- of gas in Rattlesnake Hills, GAS, 229
- of gas in southern Oklahoma, recent GAS, 598
- of gas sands, STRAT, 238
- of geosynclinal depression of Gulf Coastal Plain, XXIII, 198
- of German Alps, XXII, 1112
- of German salt domes, IX, 561
- of glauconite, RMS, 506-512
- of Great Salt Lake clays, XXII, 1350
- of Great Salt Lake oolites, theory of, XXII, 1384
- of Green River formation, VIII, 662
- of Green River formation and its oil shale, IX, 247
- of Gulf Border salt deposits, climatology of Brown's hypothesis on, discussion, XX, 821
- of Gulf Coast oil deposits, evidence against three common theories of, XXI, 931
- of helium in natural gas, relation of radioactivity to, XXIX, 1490
- of Hiawatha gas, Tertiary, GAS, 361
- of light oils in Rocky Mountain region, VII, 488
- of McMurray oil sands, Alberta, XXII, 1133, 1145
- of Monterey shale in Santa Maria district, California, STR II, 21
- of name Wilcox, GC, 388; XVII, 618
- of North American salt domes, SD, 1; IX, 831; discussion, IX, 872
- Origin of oil, PROB, 32, 35, 42, 43, 53, 227, 235, 260, 307, 338; SBP, 1, 2; VII, 605; XXV, 2086. (See Source beds)
- as indicated by composition of organic constituents of sediments, inferences about, XXIV, 506
- Athabaska oil sands, apparent example of local, XIX, 153
- bibliography, SBP, 2
- humic-acid theory of, XXI, 1249
- in California, XXI, 270
- in Canada, XV, 600
- in central and southern Montana fields, PROB, 718
- in Kentucky, notes on, XVIII, 1126
- in limestone reservoirs, PROB, 361
- in McMurray oil sands, XXII, 1139, 1146
- in McMurray sands, residual theory of, XXII, 1141
- in Mexico, PROB, 390
- in Northern fields of Mexico, PROB, 397
- in northern Mid-Continent, review, VII, 454
- in Southern fields of Mexico, PROB, 396
- kerogen and its relation to, VIII, 301
- local, PROB, 247, 249, 461, 495, 566
- problem of source rocks bound up with problem of, XXIX, 874
- relation of radioactivity to, XXIX, 1490
- research on, XI, 1221

(Origin)

- Wheat pool, XX, 792
- Origin of oil and gas, coalification theory of, discussion, XVIII, 1547
- in Pennsylvania fields, PROB, 461
- Origin of oil and gas reservoirs of eastern interior coal basin in relation to accumulation of oil and gas, PROB, 557
- of oil and its reservoir in Yates pool, Pecos County, Texas, XIV, 705
- of Permian basin, XXI, 888
- Origin of petroleum, PROB, 25; RMS, 192, 200
- a method of approach, XXIX, 285
- chemical considerations regarding, XV, 611
- in limestone reservoirs in western United States and Canada, PROB, 347
- marine kerogen shales from oil fields of Japan, a contribution to the study of, review, VII, 83
- note on, VIII, 669
- some factors of Central American geology that may have a bearing on, IV, 263
- some physical principals of, III, 345
- suggested research on, XVII, 743
- Origin of petroleum and natural gas in Pennsylvania, PROB, 447
- of radiolarites, and fracturing of fractured shale in Santa Maria basin, California, XXVII, 1622
- of Red Sea and Dead Sea as distinct structural depressions, XXII, 1218
- of Red Sea depression, XXII, 1217
- of salt deposits, PROB, 636
- of salt domes, SD, 13, 15, 16, 17, 18, 19, 24, 25, 26, 27, 30, 43, IX, 561, 846, 850, 855
- of salt structures, PROB, 648
- of sand bodies, STRAT, 819, 820
- of sediments under anaerobic conditions, RMS, 359
- of shoestring sands of Greenwood and Butler counties, Kansas, XXI, 35; XXII, 1458
- of siliceous Dockum conglomerates, XXVII, 622
- Origin of the Carolina Bays, XXVII, 654, 874; discussion, XXVII, 1008
- Origin of tidal deposits in Jade Bay, RMS, 200
- of water in ocean, RMS, 54
- possible, and character of producing rocks in Hilbig oil field, Bastrop County, Texas, XIX, 206
- Origin and accumulation of gas in Eastern Interior Coal-Basin province, GAS, 835
- of gas in southern Oklahoma, dates of, GAS, 597
- o il, PROB, 309
- o il, in California, observations relating to, X, 892
- of oil and gas in Amarillo district, GAS, 397
- of petroleum, theory of, XXVIII, 1510
- Origin and distribution of Bartlesville and Burbank shoestring oil sands in parts of Oklahoma and Kansas, XXI, 30
- Origin and environment of source sediments of petroleum deposits, XIV, 1465
- Origin and evolution of oil, possible effect of radiations from uranium

(Origin)

- and thorium on, XXIX, 2
- Origin and evolution of petroleum, PROB, 25
- Origin and hydrogenation of oil, PROB, 235
- Origin and migration of gas in Hugoton area, XXIII, 1065
- of petroleum in sediments of Barataria Bay, relation of size and carbon content to, XXIII, 593
- Origin and significance of epi-anticlinal faults as revealed by experiments, XI, 853
- Original field, eastern half, of Santa Maria Valley field, XXIII, 75
- Original organic material in source beds, PROB, 53
- Original source of oil in Colombia, X, 382
- Origins of petroleum: chemical and geochemical aspects, XX, 280
- Orinda, MSC, 133
- Orinda formation, CAL, 233, 303, 312; MSC, 167
- invertebrate fossils from, MSC, 157, 167
- Orinoco River, RMS, 225
- Oriskanian, correlations in Tennessee, Missouri, and Illinois, XXV, 677
- Illinois, XXV, 674
- Missouri, XXV, 675
- Tennessee, XXV, 672
- Oriskanian beds, XXII, 1530
- Oriskanian fossils, XXV, 672, 674, 676
- Oriskany as a source of gas and oil in Pennsylvania and adjacent areas, XXII, 241
- in New York and Pennsylvania, GAS, 952, 975-985
- in northwestern Pennsylvania, XXII, 265
- in Ohio, GAS, 907
- in West Virginia, XXII, 175, 176
- possible reserves in, in north-central Pennsylvania and south-central New York, XXII, 264
- source of hydrocarbons found in, XXI, 1589
- Oriskany area in Steuben, Allegany, Chemung, Schuyler, and Wyoming counties, New York, XXIX, 666
- Oriskany crude oils, comparison of, XXI, 1590
- Oriskany distillate, fractional analyses of, Kanawha County, West Virginia, XXII, 187
- Oriskany explorations in Pennsylvania and New York, XXI, 1582
- Oriskany fields, heating values for, XXII, 1175
- in Kanawha County, West Virginia, XXII, 181
- in New York, XXVI, 1112; XXVII, 836; XXVIII, 724; XXIX, 668
- map showing Thv for, in Appalachian oil and gas region, XXII, 1177
- Oriskany formation, central New York and northern Pennsylvania, natural gas from, XV, 671
- Ohio pools, STRAT, 383
- Oriskany fossils, XXIV, 1988
- Oriskany gas, composition—Thv diagram for, XXII, 1164
- in Ohio, XXIX, 679
- inert free, Elk-Poca field, iso-THV lines, XXVI, 22
- inert free, isometric butane lines for,

(Oriskany)

- XXII, 1169
- inert free, isometric ethane lines for, XXII, 1167
- inert free, isometric heptane lines for, XXII, 1172
- inert free, isometric hexane lines for, XXII, 1171
- inert free, isometric methane lines for, XXII, 1166
- inert free, isometric octane and higher lines for, XXII, 1173
- inert free, isometric pentane lines for, XXII, 1170
- inert free, isometric propane lines for, XXII, 1168
- inert free, iso-Thv lines for, XXII, 1165
- isometric carbon dioxide lines for, XXII, 1176
- isometric initial open flow lines, XXII, 1163
- Oriskany gas, isometric nitrogen lines for, XXII, 1174
- per cent by volume, Elk-Poca field, iso-Thv nitrogen lines, XXVI, 22
- variation in hydrocarbon content of, XXII, 1162
- Oriskany gas analyses, Kanawha County, West Virginia, XXII, 186
- Oriskany gas developments in Pennsylvania confined to Tioga and Potter counties, XXV, 1143
- Oriskany gas field, West Virginia, XXV, 784
- Oriskany gas fields, Kanawha and Jackson counties, West Virginia, XXII, 177; XXVI, 1126
- north-central Pennsylvania, XXVI, 1120; XXVII, 846; XXVIII, 732
- Pennsylvania and New York, XV, 837
- West Virginia, data, XXVI, 1128
- Oriskany gas reserves, XXIX, 666
- Oriskany gas wells, open-flow volume in relation to structure in, XXII, 1162
- Oriskany horizon at Allen anticline, New York, crude oil in, XXI, 1584
- in northern half of Appalachian province, XXII, 1159
- Oriskany production, New York, XXVI, 1111
- New York state, 1943, XXVIII, 724
- New York state, 1944, XXIX, 668
- Oriskany-Romney contact, XXII, 549
- Oriskany sand, PROB, 457, 490, 505, 506; SBP, 351-379, 414; XXV, 1146; XXVII, 837; XXVIII, 723; XXIX, 666, 681
- areal extent of, XXII, 179
- derived from pre-existing sedimentary rocks, XXII, 564
- (Dor) (Devonian), SBP, 351-379, 414
- physical characteristics of, XXII, 250
- Ridgeley sandstone main producing member of, in West Virginia, XXII, 175
- structure, character, and thickness of, in West Virginia fields, XXII, 1160
- Tioga County gas field, XV, 927, 930
- Oriskany sand area of eastern Ohio, wildcat tests drilled in 1939, XXIV, 972
- of southern New York, XXV, 1137
- of southern New York, wells completed in 1939, XXIV, 970
- of West Virginia, wildcat prospecting in 1939, XXIV, 972

- Oriskany sand development, map of Appalachian area showing, XXIV, 971
- Oriskany sand fields, XXVII, 851
- Oriskany sand gas and oil fields, XXVII, 890
- Oriskany sand gas-producing areas of Kanawha and Jackson counties, West Virginia, XXIX, 682
- Oriskany sand gas wells, XXVIII, 738
- Oriskany sand pools, north-central Pennsylvania and south-central New York, description of, XXII, 253
- Oriskany sand possibilities of south-western Pennsylvania, XXII, 265
- Oriskany sand symposium, XXII, 222
- Oriskany sand wells completed and drilling in north-central Pennsylvania in 1941, XXVI, 1121
- completed and drilling in north-central Pennsylvania in 1942, XXVII, 844
- completed in north-central Pennsylvania in 1940, XXV, 1145
- completed in north-central Pennsylvania in 1943, XXVIII, 731
- Oriskany sandstone, FOP, 135; II, 131; III, 156; IV, 29; V, 366, 418; XXV, 811, 1140, 1567; XXIX, 678
- analyses of, XXII, 252
- analyses of connate waters from, XXII, 262
- areal distribution and thickness, XXII, 245
- black sand nodules in, XXII, 546
- central New York, XV, 675
- composition of hydrocarbon gases from, XXII, 264
- conditions of sedimentation and sources of, as indicated by petrology, XXII, 541, discussion, XXII, 1108
- Oriskany sandstone, description, XXII, 180
- generalized outcrop of, from Genesee County, New York, to Giles County, Virginia, XXII, 544
- Hebron field, XX, 1020
- petrography of, from western New York to southern West Virginia, XXII, 541
- porosity of, XXI, 1585
- porosity and permeability of, XXII, 253
- Tyrone field, XVI, 688
- use of name in Virginia, West Virginia, Maryland, Pennsylvania, and New York, XXII, 543
- West Virginia, map showing structure, XXV, 784
- Oriskany sandstone and Upper Devonian oil sands, composition of connate water from, XXII, 263
- Oriskany sections and conditions of sedimentation, XXII, 546
- Orizaba-Jalapa-Cordoba area of central Veracruz, Aptian to Turonian in, XXVIII, 1127
- Orkney Islands, RMS, 322, 334
- Orlando anticline, PROB, 494
- Orlova, S. I., RMS, 424
- Orocopia Range, CAL, 190
- Orocú formation, XXIX, 1097
- Orogen, CAL, 35
- Orogenesis, XXI, 1596
- at Cretaceous-Eocene boundary known as Laramide phase responsible for a mountain chain in Lesser Antilles (Orogenesis)
- fused with axis of Greater Antilles, and with Curaçao Ridge, XXIV, 1599
- between deposition of Scotland and Oceanic formations initiated sedimentary volcanism in Barbados, XXIV, 1576
- Orogenic and epeirogenic disturbance in Rocky Mountain region, FOP, 37; XXV, 1469
- Orogenic deformations during Carboniferous, XIII, 588
- Orogenic disturbances during Oligocene, SC, 30; XX, 1576
- in California, MSC, 91
- length of time required for, SC, 51, 145; XX, 1597, 1691
- of the past, XX, 852
- Orogenic folding, MSC, 158
- Orogenic forces which initiated mud-volcano activity in Barbados also responsible for volcanic eruptions on arc of Lesser Antilles, XXIV, 1597
- Orogenic movements in Europe, late Paleozoic, XIX, 1257
- in Northern Range of Trinidad, XXIV, 1564
- in Rocky Mountain district, PROB, 686
- in Sierra Madre after Upper Midway, MEX, 140
- in Wind River Basin, dating of, XXIII, 1476
- Orogenic phases, Miocene, SC, 43; XX, 1589
- Orogenic Pyrenean phase in Lesser Antilles, XXIV, 1597
- Orogenic time-law, SC, 142; XX, 1688
- Orogenic type of diastrophism and sedimentation, XXVI, 1752
- Orogenies, individualism of, suggested by experimental data, XV, 385
- Orogenie*, review, XVIII, 824
- Orogeny, SC, 141; XX, 1687
- Diablan, XXVIII, 457
- difficulties of explanation by contraction theory, CD, 6
- Orogeny of the Urals, XXI, 1439
- references, XXI, 1461
- Orogeny, pre-Cretaceous, SC, 7; XX, 1553
- Orographic elements in Antillean-Caribbean region during Upper Cretaceous and Eocene epochs, development of, XXIV, 1598
- O'Rourke, E. V., lensing sands of Ohio, STRAT, 382
- Recent secondary recovery of oil in Ohio, XXIV, 494
- Oroville, CAL, 111
- Orow skiba, XVIII, 897
- Orr, Everett, XIV, 1505; XVII, 1406
- Orr, Mark L., XXIV, 1807
- Orr, Raymond, GAS, 511
- Ortego or Fourth *Marginulina* sand at Tepetate field, cross section of, XXII, 304
- Ortego sand, XXII, 301
- Orthoceratites, XXVI, 7, 16
- Orthoclase, XXVIII, 76
- Ortgalito Creek section, XXIX, 990
- Ortiz formation in central Venezuela, problems of stratigraphy of, XXII, 1227
- Ortiz sandstone in Venezuela, XXIII, 701
- Ortiz sandstone and Guarumen sandstone group of north-central (Ortiz)
- Venezuela, XXVI, 126
- Ortmeyer, A. F., XXIX, 25
- Orton, Edward, GAS, 897; PROB, 16, 17, 18, 234, 521; III, 290; V, 614; VII, 605, 606, 611, 620; XII, 359, 360, 361, XXII, 1098
- Orton, Edward and White, I. C., VII, 607
- Orton, James, XI, 1254, 1267, 1273
- Orynski, Leonard W., and Edwards, E. C., GAS, 1055
- Westbrook field, Mitchell County, Texas, STR I, 282; XI, 467
- Osage, Oklahoma, correlation of "Wilcox", sand in Okmulgee district with, V, 399
- statistical investigation of effects of structure on oil and gas production in, III, 407
- Osage, Washington, and Nowata counties, Oklahoma, results of recent field studies in, XXIV, 716
- Osage and Creek counties, Oklahoma, origin of faults in, discussion, X, 727
- Osage and Kay counties, Oklahoma, map showing initial daily yields of wells in Burbank and South Burbank oil fields, XXV, 1176
- Osage beds, fossils in, XXI, 1160
- in Missouri, XXI, 1159
- lithologic character of, XXI, 1159
- Osage County, Oklahoma, Bartlesville sand in, XXI, 564
- Burbank field, V, 502
- Burbank sand in, XXI, 564
- burned hills, STR II, 389
- eastern, contribution to the geology of, II, 118
- geology, II, 118
- helium in, GAS, 1056
- interrelations of folds of, IV, 151
- oil fields in, STR II, 378; IV, 279
- origin of folds of, XII, 501; discussion, XII, 1026
- production, III, 407
- South Burbank pool, XXI, 560
- structure, III, 407; IV, 151
- (wells 265-284), SBP, 255-285, 407, 408
- Wilcox sand in, V, 399
- Osage County, Oklahoma, and adjacent areas, Chattanooga shale in, XX, 91
- Osage faunas, XXIII, 327; XXV, 2112
- Osage field, Weston County, Wyoming, PROB, 435, 691, 729; STRAT, 849; XXIII, 921
- stratigraphic trap at, XXI, 1245
- Osage formations, faunas of, XXIV, 806
- of southern Ozark region, Missouri, Arkansas, and Oklahoma, XVIII, 1132
- Osage group, XXV, 1655
- in central Tennessee, XX, 1073
- in east-central United States, XXII, 1528
- in eastern Kentucky, GAS, 917
- in Illinois basin, XXIV, 232
- in southern Cincinnati Arch region, GAS, 856
- of Mississippian in Eastern Interior basin, XXIV, 793
- Osage limestone, XXVII, 819
- Osage-Meramec relations, XXIV, 808
- Osage oil field, Weston County, Wyoming, STRAT, 847
- accumulation of oil, STRAT, 849-

- (Osage)
850, 856
analyses of oil and gas, STRAT, 856-857
analyses of water, STRAT, 855
Fall River, Lakota, and Greenhorn waters in, XXIV, 1268
map, XXVII, 462
Osage paleontology, XXIV, 806
Osage sedimentation, transformation from cherty limestones in Mississippi valley to shales and sandstones in southwestern Indiana and Kentucky, XXIV, 805
Osage series, XXIX, 135, 137
Osage structures, XIII, 632
Osage subseries, correlation of sections of, from Wyandotte southward to Marble City, Oklahoma, XXIII, 337
of northeastern Oklahoma, stratigraphic sections of, XXIII, 329-337
of northeastern Oklahoma, stratigraphy of, XXIII, 325
Osage type of folds, occurrence of, discussion, XII, 675
Osagian group in Oklahoma, XI, 1314
Osanik, Alec, XXIX, 51
Osann, A., XII, 993; XXVII, 137
Osborn, VIII, 664; XIV, 1295
Osborn, Campbell, oil economies, review, XVII, 99
Osborn, E. F., XXIV, 665
Osborn, Henry Fairfield, CAL, 304; XXIII, 1228; XXVIII, 1004, 1196, 1215
Osborn, W. M., XXIV, 13
Osborne, Clarence B., XVI, 776
memorial of Arthur Eaton, VII, 461
memorial of Ewart Gladstone Sinclair, XI, 1348
memorial of Ira Abraham Williams, XVIII, 967
theory to account for occurrence of oil in vesicular cavities of igneous intrusions, VII, 288
Osborne, G. D., X, 1230, 1239
Osborne, Harry, and Thompson, W. O., XXI, 133
Oscar Howard Company (well 159), SBP, 87-165, 405
Oscillations between Cierbo and Neroly substages of Monterey, XXV, 195
between Temblor and Monterey stages, XXV, 195
during Paleozoic and Mesozoic in St. George district, Utah, XXIII, 124
in sea-level, RMS, 156
Oscillating shore-line conditions in Amarillo district GAS, 393
Oscillatory movements of sea, PROB, 303
of shore line, PROB, 459
of structural growth, PROB, 303
Oscillatory tilting movement, XXVI, 787
Oscura Mountains, XXIV, 161
correlation of sediments between northern end of, and southern end of Franklin Mountains, XXIV, 163
Oseen, C. W., RMS, 544
Osgood, Wilfred H., XXI, 294
Osgood in Tennessee and Missouri, fossils in, XXVI, 7
Osgood facies of Missouri-Illinois Bainbridge formation, XXVI, 7
Osgood-Laurel horizons in Missouri and Illinois, XXVI, 6
Osgood member, Bainbridge formation, Moccasin Springs, Missouri, XXV, 8
Oshoro, MSC, 169
Oslo, Norway, RMS, 357, 369
Osmotic pressure, RMS, 65, 66, 68, 71
Osnig anticline, XVI, 171
Ospino-Racines, E., XXIX, 1131, 1132, 1133, 1138
Ospipov, XXIV, 259
Osterhof, H. J., and Bartell, F. E., PROB, 288
Ostracod, XXIII, 229
Ostracoda, XXII, 901; XXV, 638, 1218, 1232; XXVI, 16, 307, XXVII, 1062; XXVIII, 599
Eocene, in Mexico, IX, 298
from Funafuti, MSC, 11
from Jackson Eocene of Mississippi, XXI, 93
from Kiamichi and Duck Creek section at Denison Dam, distribution chart, XXVII, 1068
from middle Albian and upper Albian deposits in north Texas, occurrence chart, XXVII, 1071
of Vicksburg, XXIII, 250
value in correlation, VIII, 545
Ostracoda and foraminifera, bearing of, on Lower Cretaceous Fredericksburg-Washita boundary of north Texas, XXVII, 1060
from borings at Greenville, Mississippi, check list of, XXIII, 1397-1399
from upper Midway sediments of Louisiana, check list of, XXV, 740
in north Texas, references on, XXVII, 1080
Ostracods, RMS, 197, 289; XXII, 908; XXIV, 142; XXV, 132, 273, 653, 656, 723, 1226, 1235; XXVI, 1388; XXVIII, 594, 1705; XXIX, 166
Oil Creek, STRAT, 791
Zenith pool, STRAT, 148
Osireia beds, RMS, 171; XXI, 735, 740; XX, 291; XXV, 306
Osireia and *Astradopsis* succession of upper Miocene, XXV, 239
Osireia oleana zone, XXIX, 1010, 1015
Osireia-Pecten miguelsensis zone, XXV, 217
Osireia sellaeformis fauna in Mississippi, Louisiana, Arkansas, and Texas, XV, 535
Osireia shale, II, 81; VI, 72
Osireia thirsae localities, XXV, 734
O'Sullivan member of Mannville formation, XXIX, 1615
Oswald, Felix, XIV, 689
Oswald horizon in Fairport field, Kansas, STR I, 39, 41
Oswald limestone, PROB, 777; XXI, 507
Oswald pool, PROB, 576
Osway beds in New York oil fields, STR II, 273
Osway formation in Bradford field, Pennsylvania and New York, STR II, 413
Music Mountain pool, STRAT, 495
Oswego-Big lime series in Garber field, Oklahoma, STR I, 178, 189
Oswego County, New York, Trenton in, XXII, 89, 92
Oswego formation, XXIV, 1997
Oswego lime, II, 119, 123; IV, 174, 179; V, 130, 140, 399, 581; VI, 464
Bruner pool, Oklahoma, STR I, 213; XI, 935
(Oswego)
Inscho pool, Oklahoma, STR I, 217
South Burbank pool, structure of, XXI, 570, 571
Oswego limestone, GAS, 496, 497; PROB, 292; XXII, 225
cross section showing beds from Arbuckle limestone to, XXV, 1711
Montgomery County field, Kansas, GAS, 501, 503
Osage County field, Oklahoma, STR II, 379
Oswego sandstone, XXII, 82
Otates horizon, MEX, 26, 28, 29, 33, 34, opp. 45, 168, 174; XXVIII, 1142, 1145; XXIX, 1446
Otay, RMS, 456
Otis field, Rush and Barton counties, Kansas, GAS, 470, 480, 481; XXIV, 1788
Otoe City pool, XXVIII, 780
Otsego field, Muskingum County, Ohio, map showing Middle Kittanning coal in, STR I, 132
Otter formation in Big Snowy Mountains, XXIII, 470
in northern Great Plains, XXVII, 1298
Otter sand, IV, 306
Otter time, XXVII, 1302
Otterville limestone, VI, 7
Otto, George H., RMS, 601; XXIX, 219, 221
Ouachita and Arbuckle mountains, Oklahoma, correlation of rock facies in, XXI, 15
tectonics in, discussion, XX, 1127
Ouachita and Marathon overthrusting, XXIV, 110
Ouachita-Amarillo mountain province, XIII, 424
Ouachita-Ardmore-Marathon basin development, XIII, 564
Ouachita basin, XIII, 585; XXIV, 2008
Ouachita belt of Paleozoic rocks, relation of, to oil and gas fields of Midcontinent region, XVIII, 1059
Ouachita boulder problem, XX, 479; discussion, XX, 1125
bibliography on, XXIX, 208
Ouachita deformation, relation of Rough Creek fault of Kentucky to, XXII, 1682, 1685
Ouachita dome, XIII, 428
Ouachita geosyncline, XXIII, 192
Arkansas and Oklahoma, age of Jackfork and Stanley formations of, as indicated by plants, XVIII, 1010
Caddo field, Louisiana, STR II, 186
pre-Permian sequence in, XV, 1004
Ouachita-Marathon-Arbuckle orogeny, XXIV, 110
Ouachita-Marathon basin, XXIV, 100
Ouachita-Marathon geosyncline, XXIV, 110
Ouachita-Marathon overthrust, Bend flexure, and Concho, Muenster, and Electra arches in north-central Texas, structural map on top of San Saba formation, showing, XXIV, 107
Ouachita Mountain area, XXI, 1009
Ouachita Mountains, FOP, 90; GAS, 535, 538; PROB, 340, 611, 615; V, 14, 22, 38, 550, 631, 679; VI, 15, 182, XIII, 425; XV, 999, 1016, XXI, 1017; XXIII, 1335; XXIV, 2146; XXV, 1522, 1627; XXIX, 200

(Ouachita)

- Arkansas Valley and northern Oklahoma, XXV, 1671
 Bendian section in, XXII, 855
 Cambrian in, XXV, 1631
 carbon ratios in, PROB, 85
 carbon ratios north of, discussion, XX, 102
 Carboniferous rocks of, XVIII, 971
 Carboniferous stratigraphy of, with special study of the Bendian, XVIII, 1018
 gas fields north of, PROB, 576
 geologic map of, XX, 480
 Oklahoma, apparent recent crustal movement at western end of, XIX, 1219
 Oklahoma, pre-Pennsylvanian sequence of, XXI, 3, 15
 Oklahoma and Arkansas, Mississippian in, XXV, 1651
 Oklahoma and Arkansas, Ordovician in, XXV, 1638
 Oklahoma and Arkansas, Silurian and Devonian in, XXV, 1641
 Pennsylvanian geosyncline of, XXI, 1403
 Pre-Cretaceous rocks found in wells in Gulf Coastal Plain south of, XV, 801
 stratigraphy of Bendian of the Oklahoma salient of, XXII, 852
 Ouachita Mountains and Arkansas Valley, source of Pennsylvanian sediments of, XXI, 1419
 Ouachita Mountains province, XXV, 1
 Ouachita orogeny, XXIV, 101
 age of, and its tectonic effects, XIV, 57
 Ouachita rejuvenation, XXVI, bet. 224 and 225
 Ouachita River flood plain, relation to Pleistocene terraces, GAS, 745
 Ouachita structure, buried, XXIII, 192
 Ouachita structures from Mexican border to Arkansas, XXII, 1682
 northeastward trend under Mississippi Embayment, XXII, 1686
 Ouachita system, PROB, 572
 Ouachita system front, buried, XXI, 1016
 Ouachita thrusts, FOP, 91; XIII, 33; XXV, 1523
 Ouachita trough, XXIV, 110
 Ouachita uplift, in Mid-Continent, XIII, 585; XX, 1342; XXV, 1660
 Oklahoma, X, 295
 Ouachitas, frontal, XXII, 900
 great height during Morrow time, XXII, 861
 southern, Bendian in, XXII, 889
 Our experience with underground storage of gas (The Peoples Natural Gas Company), XXIV, 1482
 (The Manufacturers Light and Heat Company, Pittsburgh, Pennsylvania), XXIV, 1478
 Oural-Volga Permian basin, Perm province, Russia, discovery of oil in, XIII, 859
 Ouray dolomite, XXVII, 858; XXVIII, 791
 Ouray limestone, VI, 207
 Ouray limestone fauna, XXV, 2110, 2123
 Oursan, MSC, 92, Fig. 14 (in pocket)
 Oursan Ridge, MSC, 65
 Oursan sandstone, Arca montereyana in, MSC, Fig. 14 (in pocket)
 Outcrop of basic igneous rocks in

(Outcrop)

- Kansas, IV, 183
 Outcrop and well samples, California, comparison of properties of, SBP, 186
 Rocky Mountain, comparison of properties of, SBP, 252
 Outcrop samples, SBP, 13, 17, 88, 401, 402, 411
 California, SBP, 91-97, 167-194, 382
 Outcrop samples, general summary of, SBP, 397
 location, SBP, 192, 243, 410, 411
 productivity parameter of, SBP, 191, 250, 382
 relation of properties to oil zones, SBP, 382
 relation to well samples, California, SBP, 185-189
 relation to well samples, Rocky Mountains, SBP, 252
 Rocky Mountain area, SBP, 195-255
 sections, SBP, 411
 sections, California, A-V, SBP, 167-194
 sections, Colorado, k-p, SBP, 243-255
 sections, Wyoming, a-j, SBP, 243-255
 Outcrop sections of Cenozoic formations in Texas and Louisiana, and their mineral assemblages, XXIV, 2089
 Outline for type report on an oil field, I, 131
 of Chinese geology, XXVIII, 1417
 Outlines of structural geology, XXVI, 1160
 Outlook for oil and gas in Pennsylvania, V, 357
 for research in exploration, XXIX, 1203
 Outpost well, XXIX, 631
 definition, XXVIII, 705
 Outpost wells in Kansas in 1943, XXVIII, 769
 Oval domes in Emba salt-dome region, XXIII, 505
 Over- and under-thrusting, relationship between, as revealed by experiments, XII, 825, 952
 Overall field, XXIV, 90
 Overall pool, XXIII, 849
 Overbeck, R. M., Schwennessen, A. T. and Dubendorf, H. H., Long Beach oil field and its problems, VIII, 403
 Overbrook anticline, XXVII, 801
 Overburden, removal of, PROB, 818
 Overexpansion of retail outlets, XXI, 186
 Overhang at Barbers Hill, Chambers County, Texas, prediction of: study in quantitative calculations from torsion-balance data, XIX, 25
 effect on oil and gas, XVI, 478
 effect on surrounding sedimentary formations, XVI, 477
 from cap rock at High Island dome, contour map showing extent of, GC, 952; XX, 603
 geology and geophysics of southeast flank of Jennings dome, Acadia Parish, Louisiana, with special reference to, GC, 961; XIX, 1308
 High Island, GC, 940; XX, 591
 of cap rock and salt at Jennings dome, GC, 971, 976; XIX, 1318, 1323
 Overhanging cap rock, PROB, 661
 Overhanging cap rock or salt at High Island dome, wells drilled through,

(Overhanging)

- GC, 942; XX, 594
 Overhanging cap rock and salt at Barbers Hill, Chambers County, Texas, XVI, 469
 on domes of Gulf Coast, theories concerning cause of, XVI, 479
 Overhanging salt, wells drilled through, GC, 168; XVII, 1519
 Oversel producing area in Allegan County, Michigan, XXV, 1131
 Overlap, MSC, 158; PROB, 783
 at base of Blau more formation, FOP, 19; XXV, 1451
 of Catahoula on Fayette and of Oakville on Catahoula in Fayette County, Texas, GC, 549, XVII, 547
 progressive, of formations of Georgia Coastal Plain, XXII, 793
 progressive, of younger formations on older ones from New Jersey southward along Atlantic coast, XXII, 801
 Overlap and buttressing of Miocene in Santa Maria oil field, sections to illustrate, XXIII, 76
 Overlap-offlap nature of Foxen formation, XXIII, 55
 Overlap pinch out reservoirs, XXIX, 1568
 Overlap relations in Los Angeles, exposed oil sand showing, SC, opp 120; XX, opp. 1666
 Overlaps in Miocene in San Joaquin Valley, XI, 611
 Overproduction, cause of, XIX, 502
 Overproduction and discovery rate in California, XXIII, 946
 Overthrust fault in Artesia field, New Mexico, STR I, 117
 McKittrick field, California, STR I, 18, 19
 problem of, XVIII, 1595
 Overthrust faults in Black Knob Ridge, XXI, 21
 Overthrust sheets northwest of Victoria, MEX, 159
 Turner Valley field, Alberta, XIX, 1430, 1436, 1438, 1440-1442, 1461
 Overthrust structures in Cordillera Oriental and Magdalena Valley, XXIX, 1078
 Overthrusting in Arbuckle Mountains, Oklahoma, XVIII, 567
 in Magdalena Valley, XXIX, 1078
 of Carrizo Mountain schist, XXIV, 151
 relief of stress by, XXVII, 1216
 Overthrusting and underthrusting, data on, XV, 398
 Overthrusts, XXVII, 1257; XXIX, 439
 in Wind River Canyon area, XXIII, 1473
 rôle of, STR II, 691
 Overtopping of natural levees, RMS, 161, 164
 Overturned beds in Arbuckle Mountains, Oklahoma, XVII, 865
 Overturned folds, rôle of, STR II, 691
 Ovid coal, XXV, 33, 45, 56
 Ovid shale, XXV, 32
 Oviedo, II, 133
 Ovoid faecal pellets, RMS, 518-522
 Owasso field, PROB, 435, 764
 Owen, A. L. S., Briggs, Henry, and Wilson, John, PROB, 998
 Owen, D. D., I, 26; XXII, 280; XXIII, 1374

- Owen, Edgar W., X, 570; XVII, 816, XXIV, 1165; XXVI, 294, 522
 American Association of Petroleum Geologists, mid-year meeting, Pittsburgh, resolutions, XXI, 1611
 artificial horizon and geological perspective, XXVI, 1185
 Association finances, XXIV, 198
 memorials, XXIV, 1160
 minutes, twenty-sixth annual business meeting, Houston, April, 1941, XXV, 951
 report, minutes, of business committee, 1939-1940, XXIV, 923
 report of business committee for 1940, XXV, 964
 report of president for 1941, XXVI, 923
 report of secretary-treasurer for 1939-1940, XXIV, 912
 report of secretary-treasurer for 1940, XXV, 953
 review, XVIII, 554
 San Antonio Section of American Association of Petroleum Geologists annual meeting and field trip, Uvalde, March, 1930, XIV, 526
- Owen, Edgar W., Weaver, Paul, Aum, Fritz L., Markham, Edmond O., and Ver Wiebe, Walter A., development and use of engineering geology: foreword, XXVI, 1795
- Owen, J. E., and Born, W. T., effect of moisture upon velocity of elastic waves in Amherst sandstone, XIX, 9
- Owen, Kenneth Dale, XVII, 1293; XIX, 546, 1693
- Owen, Kenneth Dale, and Deussen, Alexander, XXV, 109; XXVI, 1006
 correlation of surface and subsurface formations in two typical sections of Gulf Coast of Texas, XXIII, 1603
- Owen, L., origin of Red Sea depression XXII, 1217
- Owen, Richard, SD, 7, 372, 395, IX, 772, 837; XXIII, 1229
- Owens, Frith C., XVII, 1293, 1461; XIX, 1374; XXVI, 266
 memorial of Elridge Douglas Phillips, XVI, 327
 memorial of John W. Reiss, XXVII, 1279
- Owens, Frith C., and Taegel, E. A., developments in South Texas in 1942, XXVII, 739
- Owens, H. J., and Brockway, E. R., IX, 984
- Owens, I. D., Survey, Texas (well 371), SBP, 292-335, 409
- Owens, J. S., and Schlocker, Julius, XXVII, 207
- Owens Lake, CAL, 61, 312
- Owens River, CAL, 25
- Owens Snobold Oil Corporation, XXI, 1022
- Owens Valley, CAL, 16
- Owenyo limestone, CAL, 62
- Owl Canyon, section at, showing Morrison limestone, Entrada sandstone, Jelm formation, and Lykins formation, XXIII, 1159
- Owl Creek-Bridger uplift, XXIII, 1439, 1441
- Owl Creek formation, XXI, 809; XXII, 1647
 marine fauna of, XXI, 808
- Owl Creek formation and Prairie Bluff (Owl Creek)
 chalk of eastern Gulf region, XXI, 806
- Owl Creek Mountains, XXVII, 429
 Phosphoria and Dinwoody in, XXVIII, 1657
- Owby pool, XXVI, 1024; XXVII, 758
- Ownership, concepts of, XXII, 1080
 in place, difficulties, XXII, 565
 in place, principle of, an impossible tenet until geological problems are solved, XXII, 572
 of minerals that may be produced from privately owned land, XXII, 1081
 of oil and gas, rule of capture, in determining, XXII, 565
- Owsley County gas field, Kentucky, STR I, 73, 81, XI, 484
- Oxalates, use of, in dispersion, RMS, 539-541
- Oxbow lakes, RMS, 156, XXV, 827
- Oxfordian, MEX, 11, 12, 94
- Oxfordian beds, correlations of, XXVII, 1512
- Oxfordian limestone of southern Mexico, origin of, XXVII, 1512
- Oxfordian transgression, MEX, 92
- Oxidation, PROB, 37, 38, 239, 690; RMS, 357, 363, 381; XII, 904
 bacterial, of petroleum hydrocarbons, products of, XXVII, 1187
 in sea, RMS, 95
 of aliphatic hydrocarbons, XXIV, 1888
 of ammonium to nitrites, RMS, 424
 of chromic acid in sediments, RMS, 432
 of organic matter in oil shales, effect of, XIII, 313
 of petroleum, PROB, 263, 265-268, 691
 of sulphur, RMS, 424
 state of, in sediments, SBP, 400 (See also Reduction, state of)
- Oxidation factor, RMS, 434; SBP, 44, 45, 56-59, 394, 400
- Appalachian area, SBP, 369, 372
- California, SBP, 123-125, 143, 144
- California outcrop samples, SBP, 182, 183
- central California samples, SBP, 143, 144
- East Texas, SBP, 321-323
- Gulf Coast, SBP, 340, 345
- Los Angeles Basin, SBP, 123-125
- Los Angeles Basin samples, SBP, 123
- lower for productive beds than for barren, in Mid-Continent region, XXI, 1393
- Mid-Continent, SBP, 276, 277
 of ancient sediments, size-distribution of, SBP, 44
 relation to state of reduction of sediments, SBP, 58, 59
 relation to source beds, SBP, 381-384
- Rocky Mountains, SBP, 227-232
- Rocky Mountains outcrop samples, SBP, 250, 251
 use of, in regional studies, SBP, 81
 variation of, among ancient sediments, SBP, 44, 45
- West Texas, SBP, 287, 288
- Oxidation-reduction potential of sediments, RMS, 418-424
- Oxidation state of sediments, RMS, 434
- Oxidation theory of origin of Gulf Coast crude oil, argument against, XXI, 938
- Oxidizable inorganic substances, effects of, on oxidation factor, SBP, 56-60
- Oxidized material, RMS, 275, 366
- Oxidizing agents, SBP, 21
- Oxnard field, California, XXII, 706
- Oxy-acids, PROB, 261
- Oxydized heavy oil, MEX, 39
- Oxygen, PROB, 37, 148; RMS, 365, 419, 422, 423, 429, 443-445, 448, 474, 535, 538
 absorption of, in sediments, RMS, 419-421
 as a means of measuring currents, RMS, 104
 consumed by marine bacteria in sea water enriched with paraffine oil and treated with different concentrations of sodium sulphide, XXVII, 1184
 consumed by mixed cultures of marine bacteria in presence of different hydrocarbons in aged sea water, XXVII, 1178
 consumed in raw and sterile sea water in presence of petroleum hydrocarbons, XXVII, 1177
 consumption of, in sea water, RMS, 439
 consumption of, in sea water, causes of, RMS, 94
 deficiency of, in firds, RMS, 100
 depletion of, by bacteria, RMS, 418
 dissolved, distribution of, RMS, 91
 distribution of, in the sea, RMS, 92
 effect of, on microbial oxidation of petroleum hydrocarbons, XXVII, 1182
 heavy isotopes of, RMS, 67
 in Atlantic Ocean, RMS, 368
 in Baltic sediments, RMS, 305
 in basins, RMS, 96, 304
 in bottom waters, RMS, 266
 in deep water, RMS, 380.
 in firds, RMS, 359
 in sea water, RMS, 71, 143
 in sediments, PROB, 29, 35
 relation of, to organisms, RMS, 91, 92
 vertical distribution of, RMS, 91, 93, 94
- Oxygen atoms, RMS, 474
- Oxygen content, decrease of, with time, RMS, 444, 445
 of interstitial water in sediments, RMS, 95
 of organic constituents of sediments, XXI, 1385
 of organic matter, RMS, 4, 445
 of organic matter and coal, SBP, 19 of sediments, RMS, 444
- Oxygen ions, RMS, 459, 477
 in montmorillonite, RMS, 461
- Oxygen minima, in sea, RMS, 93
- Oxygen supply for anaerobic sulphate-reducing bacteria, PROB, 921
- Oxygen tension, XXVII, 1184
 of open sea water, PROB, 266
- Oxytropidoceras ammonite zone in upper Magdalena Valley, XXIX, 1088
- Oyster Bayou field, XXVII, 733
- Oyster beds, XXI, 1433; XXII, 1648; XXVI, 264, 267
 in Fayette, GC, 607; XIX, 1376
 underlying Mier sandstone and Alamo sandstone in Zapata County, Texas, GC, 605; XIX, 1374
- Oyster biostrome in Tumey shale, XXVIII, 966
- Oyster reefs, RMS, 180; XXVII, 616

Oyster sequence in Miocene of California, XXV, 247
 Oyster shell bed in Beaumont clay, XXIX, 1709
 Oyster shells, Monterey, XXV, 235
 Oyster succession of Cuyama Valley, XXV, 248
 Oysters, MEX, 55, 57, 141; RMS, 171, XXV, 138; XXIX, 1014
 in lenticular Miocene beds near Burkeville, Texas, XXVIII, 993
 Middle Jurassic, XXVII, 1501
 Miocene, XXV, 254
 pools, RMS, 99
 Ozan-Brownstown, East Texas, STRAT, 609
 Ozan formation, XXII, 1480, 1509, XXIII, 296
 Bellevue field, Louisiana, STR II, 240
 Homer field, Louisiana, STR II, 209
 south Arkansas, XXII, 975
 Stephens field, Arkansas, STR II, 6
 Ozan shale, XXII, 1669
 Ozark anticline, PROB, 558
 Ozark-Arbuckle facies of rocks, possible source of oil and gas, FOP, 90; XXV, 1522
 Ozark arch, XIII, 422
 Ozark area, Arkansas and Oklahoma, Silurian and Devonian in, XXV, 1644
 Missouri, Arkansas, and Oklahoma, Ordovician in, XXV, 1639
 Ozark-Boston Mountain uplift, XX, 1342
 Ozark Chemical Company, XXV, 160
 Ozark dome, PROB, 541; XIII, 422
 Ozark highland bordering the Centralia-Sandoval area, Illinois, STR II, 122
 Ozark Highlands, GAS, 533, 535, 538, 539, 543, 547, 820
 Pennsylvanian in, GAS, 543
 Ozark monocline, XVII, 796
 Ozark Mountains, PROB, 611-613, 615, XXII, 1539, 1546
 Ozark Natural Gas Company, GAS, 566, 572
 Ozark plateaus, STR I, 224; GAS, 546; XI, 1051
 Ozark region, XXI, 773
 block faulting in, GAS, 548
 doming of, several times during Mississippian, XXIV, 850
 southern, Missouri, Arkansas, and Oklahoma, Osage formations of, XVIII, 1132
 Ozark uplift, PROB, 574; V, 22, 128, 153, 503; XXII, 1685, XXIII, 1357; XXVIII, 70
 Oklahoma, X, 295
 stratigraphy of some Lower Ordovician formations of, XXIX, 296
 structure of, XI, 679
 Ozarkia, VI, 470; XXIV, 789; XXVIII, 115, 118
 land during Chester epoch, XXIV, 844
 Ozarkian in Mid-Continent, XXV, 1627
 in New York and Pennsylvania, GAS, 965
 Ozarkland, *das*, review, XXI, 1498
 Ozarks, central, buried and resurrected hills of, XVI, 629
 southwestern, Oklahoma and Arkansas, Mississippian in, XXV, 1651
 Ozocerite and naphtha on Lake Baikal, Siberia, IX, 811

Ozocerite, PROB, 261, 408; V, 382; XX, 285
 Ozone, formation of, from oxygen, XXXVIII, 934

P

Paalzow, Richard, XXV, 133
 Paars, PROB, 361
 Paars shallows, PROB, 362
 Pabst, A., XXVII, 160, 171
 Pace *et al.*, SD, 336
 Pacheco, Joviano, XIII, 1215
 Pacheco group, XXVII, 280
 Pachitea River, XXI, 1347
 Paciencia y Aguacate pool, MEX, 46, 53, 164, 179, 180, 185, 201, 203
 Pacific, MSC, 170; RMS, 53, 54, 88, 92, 115, 116, 117, 142, 212, 350, 386, 397, 410, 413, 445
 eastern, MSC, 11, 168
 folding on borders, CD, 55
 land area now submerged beneath, CAL, 35, 173
 north, MSC, 168
 northern, migration across, CAL, 158, 161, 302
 south, MSC, 168
 ~~varland~~ submerged beneath, CAL, 35
 Pacific area, Japan largest user of oil in, XXV, 357
 Pacific basin, RMS, 219
 oil movements in, 1938, XXV, 357
 petroleum in, XXV, 356
 Pacific Beach, Pleistocene fossils from, CAL, 287, 288
 Pliocene beds at, CAL, 227
 Pacific border province, GAS, 222
 Pacific Coast, MSC, 20, 21
 distribution of Cretaceous, CAL, 111
 Eocene land mammals of, CAL, 155
 fresh-water deposits of, CAL, 198
 Jurassic and Triassic, CAL, 76, 117
 limestone of, CAL, 129
 Oligocene faunas, CAL, 155
 organic origin of oil of, X, 697
 Pacific Coast formations, CAL, 121
 Pacific Coast sediments, RMS, 224
 Pacific Coast states, possible future oil provinces in, FOP, 25; XXV, 1457
 references on future oil provinces in, FOP, 25; XXV, 1457
 Pacific Coast Tertiary, MSC, 161
 Refugian stage of, MSC, 99; XX, 215
 Pacific coastal region of northern Peru, Ecuador, and southern Colombia, XXIX, 534
 Pacific continent, of Haug, CAL, 76
 Pacific current, RMS, 117
 Pacific fault in Peru, XII, 30
 Pacific fauna, MEX, 139
 Pacific geosynclinal belt, XII, 113; XIII, 434
 Pacific Jurassic sea, CAL, 75
 Pacific land mass, MEX, 92, 94
 Pacific Ocean, MSC, 255, 307, 350
 north, foraminifera of, MSC, 11
 north, marine deposits from, MSC, 12
 observations on evolution of, XXV, 1811
 Recent of, MSC, 281
 Pacific Ranges, CAL, 35
 Pacific Section of American Association of Petroleum Geologists, MSC, 1
 meeting, November, 1925, X, 100
 meeting, 1926, XI, 207
 meeting, 1934, XIX, 134
 organization of, VIII, 532
 possible future oil provinces in Pacific

(Pacific)
 Coast states, FOP, 25, XXV, 1457
 Pacific Section papers, abstracts of, XIX, 134, 1841; XXI, 1612
 Pacific Section thirteenth annual meeting, XX, 1519
 Pacific slope, CAL, 104; MSC, 119, 154, 179
 Pacific slope province, MSC, 116
 Pacific Society of Petroleum Geologists, VIII, 839
 Pacific species of foraminifera, Pleistocene, Pliocene, and Miocene, XXV, 1225
 Pacific states, flora of, CAL, 300
 Pacific type of magmatic rocks, MEX, 145
 Pacific Western Company, GAS, 175
 Pacific Western Oil Company, Rubel 16, 17 (wells 52, 53), SBP, 87-153, 403
 Pacifico fault, XXVII, 16
 Pack, Frederick J., GAS, 221
 Pack, Robert W., GAS, 150, SD, 506; SBP, 92, SC, 53, 69; III, 312, VII, 352, 607, IX, 229, 991, X, 130, 495, 699, 710, 717, 895, XI, 615; XIII, 213, 217, 233; XVII, 1126, 1176; XVIII, 485; XX, 1599, 1615; XXVII, 255
 Pack, Robert W., and Anderson, Robert, CAL, 172; IX, 997; X, 699; XIII, 222, 226, 237; XIV, 411, 1323; XVII, 82, 84; XIX, 1195, 1201; XX, 1606; XXIII, 33; XXIV, 1722, 1732, 1733, 1734, 1735, 1738, 1745, 1747, 1930; XXVIII, 472, 506, 954; XXIX, 971, 982, 985, 986, 987, 993, 1005
 Pack, Robert W., and English, W. A., SC, 53, 69, XIII, 218; XIV, 404; XVI, 10, XIX, 1822; XX, 1615
 Pack, Robert W., *et al.*, MSC, 61
 Pack ice, RMS, 214
 Packard, Earl L., CAL, 98; VII, 413; XXVI, 163, 165
 Packard, Earl L., and Kellogg, Remington, MSC, 69, 70, 154, 196, 204, 213, 222, 226, 230, 232, 240, 244, 248, 251, 258, 261, 264, 276, 291, 293, 299, 305, 333, 343, 344, 346, 348, 353
 Packard, H. C., XI, 112
 Packard, Henry Jessup, XIII, 594
 memorial of, XV, 106
 Packard, S. A., and Kamb, H. R., Olla field, La Salle Parish, Louisiana, XXV, 747
 Packing of aggregate, XXVI, 1722
 of clastic particles, RMS, 528
 Paden pool, XXVIII, 772
 Padgett, F. W., XV, 624
 Padgett, F. W., and Hamor, W. A., XXI, 1468
 Padre Canyon field, California, XXI, 979
 Paackelmann, W., and Schindewolf, O. H., XXIV, 289
 Page, XIII, 570; XXIII, 1551
 Page, Ben M., XXVIII, 1778
 Page, H. J., and Williams, W., XVIII, 362, 364
 Page, James H., STRAT, 103, 104
 larger gas fields in Kansas, XXIV, 1779
 Page, James H., and Charles, Homer H., shale-gas industry of eastern Kansas, XIII, 367
 Page, John C., XXVI, 1826
 Page, Lincoln R., XXIV, 5

- (Page)
abstract, XXII, 1709
Page, Lincoln R., and Adams, John Emery, PTNM, 608, 612, 704; XXIV, 7, 13, 14, 36, XXVI, 253, 384, 608, 612, 704
stratigraphy, eastern Midland basin Texas, XXIV, 52
Page, Wilson K., XIII, 1095
Page area, Schleicher County, Texas, contoured on base of Palo Pinto limestone, XXV, 633
showing thickness between base of Palo Pinto and producing limestone, XXV, 634
Page field, Schleicher County, Texas, FOP, 99; XXV, 630, 1531
a reef, XXV, 636
Permian in, XXV, 632
stratigraphy in, XXV, 632
Strawn series limestone productive in, XXV, 636
Paggi, Charles, SD, 518
Paggi Brothers, SD, 504
Pahang volcanic series in Malaya, XXII, 7
Pahasapa-Englewood limestones, XXVI, 1565
Pahasapa limestone, V, 189
Pai-Khoi ridge, XXI, 1441
Paige, Sidney, MEX, 148; III, 173; XIII, 807; XVI, 692, 805, 807; XVIII, 818, 993; XXVI, 1398
Paige, Sidney, and Darton, N. H., XIV, 620
Paige, Sidney, and Girty, G. H., V, 553
Paige, Sidney, and Hayes, C. W., handbook for field geologists, review, VI, 260
Paige, Sidney, Miser, H. D., and Longwell, C. R., XIII, 1444
Paine, Paul, of property valuation, review, XXVI, 1779
Paine, Paul M., and Stroud, B. K., VII, 621
Paine member of Lodgepole limestone, XXVI, 315
Paine residues, XXVI, 329
Paint Creek-Bethel sandstone production, XXVI, 1603
Paint Creek formation in Illinois, XXIII, 1368; XXIV, 217, 827
in Kentucky, XXII, 269
productive in Loudon (Beecher City) pool, XXIII, 808
Paint Creek group in Kentucky, XXII, 275
Paint Creek limestones, XXV, 878
Paint Creek uplift, Kentucky, GAS, 924, 927; PROB, 487, 509, 518; STR I, 75, 78, 87; XI, 478; XXVIII, 741
Paintrock anticline, XXIV, 1293
Madison and Tensleep waters in, XXIV, 1307
Paiva, Glycon de, XXIX, 557
Paiva, Glycon de, Reyes, Jorge Muñoz, and Mariaca, Guillermo, XXIX, 513
Pajaro, igneous rocks near, CAL, 95
Pakan member, XXIX, 1626
Pakowski, Foremost, and Milk River formations of southern plains of Alberta, stratigraphy of, ALTA, 53; XV, 1181
Pakowski formation in Alberta, ALTA, 7; XV, 1135
Pakowski shale, Border-Red Coulee field, STRAT, 274
Palache, Charles, XXVII, 154, 160
Palachó, MEX, 64, 135, 136, 179, 180, 202
Palachó syncline, MEX, 172
Palacios, XXII, 741
Palaeogen in Indischen Archipel, XXI, 122
Palagonite, producing rock in Hilbig field, Bastrop County, Texas, XIX, 212
Palafox sandstone, GC, 601, XIX, 1370
Palangana and Piedras Pintas salt domes, SD, 723, 725
Palangana dome, Texas, SD, 720, 721, 724, 726, 730, 739, IX, 538-553
fractures in sulphur area, GC, 259; XVII, 1202
maps of sulphur area, GC, 259; XVII, 1202
structure sections through sulphur area, GC, 258
Palangana field, V, 219
Palangana-Piedras Pintas area, fracture drainage lines of, GC, 256; XVII, 1199
Palangana pool, MEX, 49, 64, 164
Palaeogeographie und Tekonik, review, XXI, 278
Palaeontologisches Praktikum, review, XIII, 1494
Pale beds in Milk River Ridge region, Alberta, ALTA, 90, 91; XV, 1218
Pale beds and Foremost formation in Lethbridge-Brooks area of southern Alberta, subsurface study of, ALTA, 69; XV, 1197
Paleo-biochemical conditions of source sediments of petroleum, XXI, 766
Paleobiology, MSC, 87; XXII, 1105
Paleobiometry, XXVI, 1728
Paleobotany, textbook of, XXIV, 750
Paleocene, CAL, 120, 121, 303; MSC, 109, 127; SC, 79; XX, 1625
Dakota basin, XXVI, 1560
East Texas, SBP, 294
Florida, clastic facies of, XXVIII, 1703
Florida and southern Georgia, XXVIII, 1703
Martinez (Kcm), SBP, 96, 167-194
Midway group (Tmi), SBP, 292-349
North Dakota, XXVII, 1568
North Sea, RMS, 332
pre-Martinez, XXIX, 967
Sabine uplift, XXIX, 52
undifferentiated beds (Te), SBP, 95, 167-194, 416
Wyoming, XXIII, 1447
Paleocene and Cretaceous of Santa Lucia Range, California, XXVIII, 449
Paleocene and Eocene in Rocky Mountains, XXIII, 1150
map showing, XXIII, 1148
Paleocene and Eocene, marine, of north Germany and south Scandinavia, XXII, 315
Paleocene basins and deposits, SC, 13; XX, 1559
Paleocene beds of Midway age, Florida and parts of Georgia and Alabama, map, XXVIII, 1706
Paleocene distribution, XXVIII, 512
Paleocene fauna, XXV, 644
Paleocene paleogeography, SC, 16; XX, 1562
Paleocene series, Sabine uplift, XXIX, 56
Paleocene strata, Santa Cruz Island, SC, 107; XX, 1653
Santa Monica Mountains and Santa
(Paleocene)
Ana Mountains, SC, 117; XX, 1663
Paleoclimatologic maps, XXIX, 428
Paleoecology, value in geologic research, XXVI, 1697
Paleoecology and environments inferred for some marginal Middle Permian marine strata, XXVIII, 1012
Paleogene of Barbados and its bearing on history and structure of Antillean-Caribbean region, XXIV, 1548
references on, XXIV, 1607
Paleogene deposits in East Indies, XXII, 31
Paleogene movements in East Indies, XXII, 34
Paleogeographic and palinspastic maps, XXIX, 426
Paleogeographic features of southern South America, XXIX, 496
Paleogeographic map of California at or near close of Cretaceous, XXVIII, 518
of California during Refugian time, XXVIII, 967
of time represented by Grand Tower limestone deposition, XXVI, 1751
Paleogeographic maps, XXVI, 219; XXIX, 427
of Caliente Range, XXV, bet. 216 and 217
of Cretaceous Vaqueros, Upper Miocene and Pliocene of California, CAL, 298
of Florida, variations in, XXIII, 1713
of middle and southern California showing regional features in Oligocene and Miocene, XXV, 195
of Upper Cretaceous zones in Great Valley, California, XXIX, 1000
showing geologic development of Mexico, XXVIII, 304, 306, 308, 309, 310, 312, 134, 316
Paleogeographic relationship of mud deposits, RMS, 205
Paleogeographic significance of foraminiferal assemblages, MSC, 11
Paleogeographic study, rhythm of Permian seas, XXVI, 217
Paleogeographical conclusions concerning Paleozoic sedimentation of Western Australia, XXV, 393
Paleogeography, III, 286, 294; V, 102, 541
discussion, XXIII, 344
in Gulf region, Upper Jurassic, XXVII, 1522
of Big Snowy group, XXVII, 1301
of Blaine and Dog Creek seas, XXVIII, 1021
of Blaine time, XXVI, bet. 224 and 225
of Caliente Range, XXV, 208
of Chozo, upper Veso, and Upper Hennessey time, XXVI, bet. 224 and 225
of early Permian, CD, 144
of Grayburg-Marlow time, XXVI, bet. 240 and 241
of latest Pennsylvanian time, XXVI, bet. 224 and 225
of oil-bearing deposits in Pontocaspian countries, XVIII, 777
of parts of border province of Mexico adjacent to West Texas, XX, 417
of Rustler time, XXVI, bet. 240 and 241

- (Paleogeography)
of Salado and Castile time, XXVI, bet. 240 and 241
of sediments of eastern Russia, XXV 1400
of Upper Cretaceous zones in Great Valley, California, XXIX, 1002
of Wolfcamp time, XXVI, bet. 224 and 225
relations of productive areas to, XXI, 1246
Upper Cretaceous, of Montana, notes on, VIII, 554
Paleogeography and correlation of upper Paleozoic of Western Australia, XXV, 371, 1809
Paleogeography and geologic history of West Texas region in Permian time, PTNM, XXVI, 711
Paleogeography and historical geology of Mid-Continent oil district and its importance to petroleum geology, short sketch of, V, 541
of the Mid-continent oil district and its importance to the petroleum geologist, a short sketch of, abstract, V, 102
Paleogeography and lithogenesis of marine Jurassic of Wyoming, XXI, 759
Paleogeography and stratigraphy, relations of, to petroleum geology, III, 286
Paleogeography and tectonics of Basin System of Hungary, XVIII, 925
Paleogeologic, pre-Cretaceous, map of Dakota basin, XXVI, 1580
Paleogeologic, pre-Pennsylvanian, map of Dakota basin, XXVI, 1577
Paleogeologic maps, XXIX, 433
Paleogeology, application to petroleum geology, XVII, 1116
post-Paleozoic-pre-Mesozoic, in Northern Great Plains, XXVII, 1290
studies in, XVIII, 1107
Paleolithic maps, XXIX, 433
Paleontologic and stratigraphic studies of wells in Florida, XXVI, 1425, 1426
Paleontologic analysis, XXVI, 1728
Paleontologic arguments, bearing on drift theory, CD, 80, 133, 224
Paleontologic break between Tamesi and Méndez, MEX, 83
Paleontologic character of Upper Cretaceous deposits, XXII, 1635
Paleontologic criteria of unconformities, XXVI, 53
Paleontologic criteria and angular unconformities used in differentiation of Cambrian, Ordovician, and Silurian systems, XXIV, 287
Paleontologic data obtained from mechanical analyses of sand, XXI, 1322
Paleontologic evidence, some, on age of oil-bearing horizon at Burkburnett, Texas, V, 154
used to help solve San Andres problems, XXV, 81
Paleontologic factors controlling distribution and mode of life of Cretaceous ammonoids in Texas, area, XXIV, 1164
Paleontologic laboratories, XXVII, 939
Paleontologic markers at Esperson dome, GC, 863; XVIII, 1638
Paleontologic method of classification, XXVI, 218
Paleontologic record for stages in Cretaceous, XXVII, 268
Paleontologic relationships of Carboniferous-Permian boundary as variously defined, XXIV, 313
Paleontologic work, earliest, on Cretaceous of California, XXVII, 254
near Tejon Ranch, SC, 17; XX, 1563
Paleontologic zonation in Gulf Coast, XXII, 985
Paleontologic zones in Gulf Coast, sections showing distribution of, XXII, 993-995
sequence of, in southern Louisiana, XXIV, 437
Paleontologic zones and boundaries, fossiliferous marine sections best standard sections for definition of, XXIV, 318
Paleontologie française, MSC, 90
Paleontologist, some memories of, XXIII, 1861
Paleontologists, RMS, 582
Paleontology, XXI, 711
application of, by oil companies, XXVIII, 903
application of, to economic work, XXVII, 939
applied, XXIV, 1752
applied, bibliography on, XXIV, 1772-1778
applied, objective of, XXIV, 1763
applied, use in interpretation of stratigraphy, XXIV, 1752
as used in search for oil, references on, XXVIII, 908
Avery Island dome, SD, 372
Belle Isle dome, SD, 390
dating of strata by means of, XXVII, 941
definition, XXVIII, 902
establishing Permian subsurface correlations, XXIII, 1697
Homberg, XXIV, 834
invertebrate (1935), review, XX, 228
invertebrate, of southern plains of Alberta, ALTA, 155; XV, 1283
Jefferson Island dome, SD, 360; GC, 993; XIX, 1612
Journal of, XI, 776; XXVII, 940
Keechi dome, SD, 248
Kinderhook, XXIV, 789
marine ecology as related to, XXVI, 287; XXVII, 656
Meramec, XXIV, 817
methods in, XXII, 317
New Design, XXIV, 829
of Black Hills, XXI, 717
of Borden group in Indiana and Kentucky, XXIV, 807
of Chico Martinez Creek area, XXVII, 1372
of Claiborne group in Louisiana; GC, 397; XVII, 627
of Elvira group, in Eastern Interior Basin, XXIV, 841
of Osage formation, XXIV, 806
of Permian from Texas to Nebraska, XXIII, 1697
of Permian of trans-Pecos region, XXV, 97
of producing zones in eastern Kentucky, GAS, 933
of Seguin formation, XXVII, 616
of Vicksburg formation, GC, 404; XVII, 634
Palestine, SD, 258
petroleum, and the search for oil, XXVIII, 902
petroleum geology's debt to, VII, 612
(Paleontology)
review, XIII, 1401
trans-Pecos Texas, XXIV, 307
Travis Peak, XXIII, 636
utilitarian role of, XXIV, 1755
value in correlations in South Texas, XXVI, 1005
West Ranch field, XXVIII, 199
zonal, foraminifera in, XXIV, 2049
Paleontology and climates, Pennsylvanian, XIV, 1279
Paleontology and mineralogy, applied—
an appraisal, XXVII, 938
economic application of, XXVII, 942
stratigraphic significance of, XXVII, 940
Paleontology and stratigraphy of Santa Maria district, California, XXVII 1335
Paleo-oceanographic maps, XXIX, 428
Paleosaurian fauna, XXIV, 263
Paleostratigraphic map of Devonian of western Kentucky, XXV, 693
Paleozoic, CAL, 16, 21, 24, 25, 40, 42, 60-66, 74, 86, 94, 95, 97, 108, 142, 294; SC, 7; MEX, 7; XX, 1553
Alberta, GAS, 9, 11, 14, 17, 39, 43, 45; ALTA, 148; VII, 157; XI, 239, XV, 1276
Anzoategui, XXI, 234
Appalachian province, PROB, 101
Arkansas, XXV, 1029
Australasian upper, correlations, XXV, 399
early, geosyncline of Oklahoma, XXIX, 1338
East Indies, XXII, 5
eastern Russia, XXV, 1403
Europe, no geological reason for lack of oil in, XX, 1477
Franklin Mountains, Texas, XXIV, 160
Great Basin and California, XVI, 4
late, age of Morehouse formation of northeastern Louisiana, XXVI, 1672
late, ammonoid-bearing beds of U.S.S.R., general correlation of, with those of western Texas, XXII, 1016
late, crustal movements of Europe and North America, XIX, 1253
late, mountain belt, XXIX, 497
late, mountain belt across South America, XXIX, 498
late, orogenic movements in Europe, XIX, 1257
late, rocks in Gore area, columnar sections, XXVI, 1378
late, stratigraphy of Gore area, Colorado, XXVI, 1375
late, stratigraphy of Gore area, references on, XXVI, 1397
lower, tentative correlations on basis of graptolites, table of, XX, 1252
lower, unconformities, discussion, XIV, 947
Myo Range, CAL, 62
Nevada, XXVI, 1803
New Mexico, IV, 95
North Sea, RMS, 331
South Dakota, VI, 552
southern plains of Alberta, ALTA, 13; XV, 1141
Taylorsville district, CAL, 62
Texas, PROB, 110; GAS, 610
Thornburg dome, Colorado, STR II 103
trans-Pecos Texas, XIX, 228
Turner Valley, XXIV, 1623

- (Paleozoic)
 under Florida, XXIII, 1712
 upper, Chinati series, Presidio County, Texas, XXII, 924
 upper, development of Nashville dome, Tennessee, XX, 1071
 upper, folding in East Indies, XXII, 7
 upper, map of Western Australia showing distribution of outcrops of, XXV, 373
 upper, of Western Australia, bibliography on, XXV, 412
 upper, of Western Australia: correlation and paleogeography, XXV, 371, 1809
 upper, rocks in Western Australia, sections of, XXV, 390
 upper, section of Chinati Mountains, Presidio County, Texas, XXIV, 180
 west Texas, FOP, 98; XXV, 1530
 Western Australia, foreign correlations of, XXV, 401
 Paleozoic and Mesozoic, oscillations during, in St. George district, Utah, XXIII, 124
 Paleozoic and Mesozoic rocks measured at Cinnabar Mountain, Park County, Montana, and at Mount Everts, Yellowstone National Park, Wyoming, section of, XVIII, 368
 Paleozoic and pre-Cambrian formations, various, heavy minerals of, XXVIII, 114
 Paleozoic and pre-Cambrian rocks of Vance well, Delaware County, Ohio, XXIV, 672
 Paleozoic and Recent branching Hexactinellida; Titusvillidae, XXV, 2082
 Paleozoic area in Arkansas, map of physiographic provinces of, showing porosities of sandstones in, XXI, 70
 Paleozoic beds in Florida, XXVIII, 1723
 Paleozoic coals, PROB, 76
 United States, carbon ratios of, PROB, 86
 Paleozoic crystallines, V, 669
 Paleozoic era, uplift of borders of Illinois basin at end of, XXI, 775
 Paleozoic folding of Australia, CD, 208
 Paleozoic foraminifera, XXV, 1223
 Paleozoic formations, diagram indicating succession and stratigraphic relations of, in western states, XXIV, 310
 in Europe, possibility of oil and gas production from, XX, 1476
 in light of pulsation theory, XXII, 934; XXIII, 1580
 Japanese Islands, XXV, 767
 New York-Pennsylvania region, GAS, 950, 952, 953
 St. Lawrence lowlands, GAS, 94
 San Andres Mountains, New Mexico, XXIV, 1680
 Paleozoic fossils of Western Australia, XXV, 377-385, 387-398, 402-408, 410, 411
 Paleozoic geology, XVIII, 1062
 Paleozoic geosynclines in Oklahoma and Texas, XV, 997
 Paleozoic Gondwana block, XV, 1050
 Paleozoic graptolite shales, XXI, 1146
 Paleozoic horizons, natural gas from, in southern Cincinnati Arch region, GAS, 853
 Paleozoic islands, XXVIII, 301
 Paleozoic limestone in Turner Valley, (Paleozoic)
 Alberta, Canada, XXIV, 1620, 1622
 correlation of different zones in, XXIV, 1624-1626
 graph of mineralogy of, XXIV, 1627
 Paleozoic limestone in Turner Valley field, electric log of, XXIV, 1638
 Paleozoic-Mesozoic boundary in Wind River Range, XXV, 133
 Paleozoic-Mesozoic contact in Moose Mountain area, XXVII, 43
 Paleozoic occurrences of oil in United States, VII, 60
 Paleozoic oil deposits, possibility of, in Europe, XX, 1476
 Paleozoic oils, PROB, 237
 in western Europe, search for, XIX, 1824
 of Appalachian province, PROB, 107 with paraffine base, PROB, 138
 Paleozoic orogeny in eastern Colorado, FOP, 59; XXV, 1491
 Paleozoic periods of tilting in Dakota basin, XXVI, 1570
 Paleozoic petroliferous strata usually located at relatively low altitudes, XXII, 846
 Paleozoic plankton of North America, review, XIX, 567
 Paleozoic region in Arkansas, sandstone porosities in, XXI, 67
 Paleozoic remnants in La Barge region, XXV, 1739
 Paleozoic revolution, late, XXVIII, 190
 Paleozoic rocks in Chinati Mountain area, sketch map showing location of principal exposures of, XXIV, 181
 in Wales, XXIV, 288
 of Amazon trough, XXIX, 546
 on Andean plateau, typical exposures and structure of, XXIX, bet. 508 and 509
 relation of Ouachita belt of, to oil and gas fields of Mid-Continent region, XVIII, 1059
 review, XV, 215
 Wyoming, PROB, 239
 Paleozoic sands, early, in Mississippi Valley, flow diagram showing probable progress of sedimentation of, XXVI, 1754
 Paleozoic section and top of pre-Cambrian, view of, exposed in west wall of Wind River Canyon, XXIII, 1448
 Paleozoic sedimentary basin of Bolivia, Paraguay, and Argentina, oil possibilities, XXIX, 509
 Paleozoic sedimentary rocks in Arkansas Valley, GAS, 545
 in Michigan-Lima-Indiana districts, PROB, 535
 Paleozoic sediments, V, 172, 209, 269, 330, 375, 491, 552, 670
 Appalachian, SBP, 349-379
 fossiliferous, in Colombia, XXV, 1789
 in Shafter area, XXIV, 181
 in Wichita Mountains, XXV, 289
 Mid-Continent, SBP, 255-285
 organic content, SBP, 26-35
 Rocky Mountains, SBP, 194-243
 West Texas, SBP, 285-292
 Paleozoic shales, radioactivity and organic content of, XXIX, 1
 references on radioactivity of, XXIX, 21
 (Paleozoic)
 uranium content versus carbon content in, XXIX, 11
 uranium content versus particle size in, XXIX, 12
 Paleozoic strata of north-central Texas, stratigraphic classification tables of, XXIV, 66
 underlying, origin of McMurray oil sands in, XXII, 1145
 Paleozoic stratigraphy of Colorado, résumé of, XXIX, 1356
 of Franklin Mountains, West Texas, XXIV 157
 Paleozoic system in south Arkansas, XXII, 962
 Paleozoic tectonic features in south-central United States, map of, XXI, 1016
 Paleozoic volcanic materials, altered, and their recognition, XII, 143
 Palermo, dust falls in, RMS, 498
 Palestine and Sinaitic Peninsula, geology, and petroleum and natural gas possibilities of, XI, 135
 Palestine and Sinaitic Peninsula, oil and gas horizons possible in, XI, 142
 discussion, XI, 515
 Palestine and Transjordan, geology and bitumens of the Dead Sea area, XX, 881
 Palestine dome, Texas, VI, 58, 329; IX, 839; X, 47-53
 Palestine formation, XXV, 874
 Palestine saline, SD, 212
 Palestine salt dome, Texas, SD, 9, 35, 36, 216, 222, 227, 253-261
 Palestine sandstone, XXIV, 211, 838; XXVI, 1603
 in Kentucky, XXII, 282
 Palinspastic and paleogeographic maps, XXIX, 426
 Palinspastic maps, XXIX, 433
 of hypothetical area, XXIX, 441
 uses of, XXIX, 435
 Palinspastic outline map for pre-Appalachian paleogeography, XXIX, 445
 for pre-Nevadian paleogeography, XXIX, 448
 for pre-Taconian paleogeography, XXIX, 437
 Pallasse zone, CD, 15
 Palliser, J., XXIX, 1607
 Palm Spring formation, CAL, 203, 312
 Palma Real, MEX, 130, Fig. 32 (in pocket)
 Huasteca beds in Hacienda of, MEX, 130, Fig. 32 (in pocket)
 Palmar formation, XXVIII, 1095, 1187
 Palmén, E., RMS, 125
 Palmer, and Blanckenhorn, Max, XX, 886
 Palmer, Chase, PROB, 869; III, 315; IX, 235, 929, 930, 932, 944; XI, 1305; XIV, 941; XIX, 319; XXIV, 1215; XXVI, 1318
 Palmer, Dorothy Bryant Kemper, CAL, 14; SD, 511; XXIV, 1550, 1587, 1771
 Palmer, Dorothy, and Bermudez, Pedro K., MSC, 211
 Palmer, H. S., V, 159; XI, 1286; XXI, 341
 Palmer, Katherine van Winkle, XX, 220; XXVI, 1650; XXIX, 886
 basilosaurus in Arkansas, XXIII, 1228
 review, XX, 321
 Palmer, Katherine Van Winkle, and

(Palmer)

- Price, W. Armstrong, XVII, 506, 512
- Palmer, Mrs. R. H., XVI, 552
- Palmer, R. H., MEX, 11, 23, 99, 151; PROB, 391, 397; XVI, 552; XXVIII, 1121, 1122, 1124
- geology and petroleum possibilities of Olympic Peninsula, Washington, XI, 1321
- geology of eastern Hidalgo and adjacent parts of Vera Cruz, Mexico, XI, 1173
- Palmer, R. L., XIX, 1230
- Palmer, Robert N., XXVII, 1518
- Palmer, T. Survey, Texas (wells 370, 371), SBP, 292-335, 409
- Palmer Corporation, GAS, 774
- Palmer method of classification of waters, GC, 272, PROB, 855, 893; XIX, 319; XXIV, 1215; XXVI, 1318
- Palmer Trust well, SD, 221
- Palmito limestone, XXIX, 1093
- Palm, Ben, XXIII, 1638
- Palm in Catahoula formation, XXIII, 184
- oil fields along, to Newport uplift, XII, 630
- Palo Blanco, GAS, 999
- Canton Ozuluama, Veracruz, Fig 32 (in pocket)
- Canton Tuxpan, Veracruz, Agua Nueva in, MEX, 53, 223
- Canton Tuxpan, Veracruz, mixed facies at, MEX, 43, 223
- State of Tamaulipas, 84
- Palo Escrito Range, CAL, 44
- Palo Pinto County, Texas, XXIV, 89
- gas in, XXVI, 1045
- Palo Pinto formation, III, 138; V, 157; XXIV, 88
- Palo Pinto limestone, XXV, 632
- Bryson field STRAT, 541, 542
- production, XXV, 1080
- Seymour pool, STRAT, 763
- Smith-Ellis field, Texas, STR II, 559, 561
- Walnut Bend pool, STRAT, 785
- Palo Pinto pay, XXV, 1677
- productive in Jones and Shackelford counties, Texas, XXIV, 89
- Palo Seco field, Trinidad, Santa Flora tension fault east of, XXIV, 2113
- Palo Seco structure, XXIV, 2123
- Paloma oil field, Kern County, California, XXIV, 742, 1113; XXVII, 871
- extension, XXVI, 1148
- gravity of oil in, XXIV, 1113; XXVII, 871
- structure section trending northwest through, XXIV, 1120
- Palomas Canyon fault, SC, 99; XX, 1645; XXI, 224
- Palos Verdes Hills, California, MSC, 2, 25, 77, 119, 123, 124, 130, 155, 185, 200, 206, 207, 209, 211, 212, 218, 219, 221-223, 230-232, 237, 238, 244, 245, 247-249, 251-253, 255-257, 259, 261-279, 281-286, 288, 289, 292, 294, 295, 297-300, 303, 304, 307-310, 312-314, 317-320, 324, 326-328, 330-332, 334, 335, 337-344, 347, 348, 350, 351, 354, 356; SC, 114; XX, 1660
- Miocene stratigraphy and paleontology of, XX, 125
- outcrop of San Onofre breccia, Middle Miocene, on west side of, SC, opp. 120; XX, opp. 1666

(Palos Verdes)

- outcrop section R, SBP, 167-194, 411
- Palos Verdes Hills to Santa Monica Mountains, structure section, representing conditions at end of Miocene, SC, 119, XX, 1665
- Paluxy formation, XXII, 1480; XXVII, 487, 782, 785, 786; XXVIII, 39, 277, 843, 844; XXIX, 1419, 1454
- south Arkansas, XXII, 972
- Sulphur Bluff field, Texas, XXI, 111
- Trinity redbeds of, XXII, 726
- Walnut Bend pool, STRAT, 781
- Paluxy sand, XXIII, 896; XXVI, 383 (Kp) (Cretaceous), SBP, 295-335, 414
- productive at Chapel Hill field, XXV, 1083
- Sulphur Bluff field, production from, XXI, 1065; XXIII, 894
- Paluxy sands, Arkansas-Oklahoma area, XII, 1066
- Paluxy sandstone, III, 168; V, 310
- Palygorskites, RMS, 468
- Pamirs, Koubergandy beds of, XXII, 1018
- Permian ammonite zones of, XXII, 1016
- Pamlico Sound, RMS, 235, 450
- organic sediments in, PROB, 30
- Pampa de Clemesi formation, V, 599
- Pampa nose, XXIII, 995, 1005, 1049
- Pampa pool, XXIII, 1005
- Pampean Ranges, XXIX, 497
- Pamunkey Eocene, XXIX, 910
- in north Carolina, XXIX, 911
- Pamunkey group, XXIX, 80
- Pan, C. H., non-marine origin of petroleum in North Shensi, and Cretaceous of Szechuan, China, XXV, 2058
- Pan American Company, XXI, 1058
- Pan American Congress of Mining Engineering and Geology, First, XXVIII, 893
- Pan-American Highway, Laredo to Mexico City, geologic road log of, XX, 457
- Pan American Production Company, XXIV, 1088
- Panama, MSC, 20, 169, 332
- Gulf of, RMS, 115, 446, 521
- stratigraphy and geology, III, 363; IV, 263
- Panama and Costa Rica, notes on stratigraphy of, III, 363
- Panama Canal zone, MSC, 115, 129, 178, 220
- foraminifera of, MSC, 115, 129, 178
- Panama portal, CAL, 135, 155, 161
- Panamint Valley, CAL, 257
- Pancho Rico faunule from type locality of *Elphidium hughesi*, MSC, Fig. 14 (in pocket)
- Pancho Rico formation, MSC, 238
- Paneth, F., XVII, 1259; XXIV, 1546; XXIX, 15
- Pangaea, CD, 36, 39, 106-108, 115, 119, 135, 192
- Panhandle, Texas, XXII, 926
- oil and gas field, geology of, XXIII, 983
- oil and gas field, subsurface structural map of. In Oldham County, structures mapped on Blaine; in Sherman and Moore counties, on top of Brown massive dolomite; in other counties, on top of Panhandle Big lime, XXIII, 994
- production and drilling statistics,

(Panhandle)

- XXI, 1031
- productive section, XXI, 1027
- type locality for oil-producing Granite wash, XXIII, 1000
- Panhandle and Eastern gas transmission line, XXVI, 1105; XXVII, 823
- Panhandle and north-central Texas, developments in, 1936-1937, XXI, 1015
- Panhandle anticline, Texas, X, 737, 741
- Panhandle Big Lime, GAS, 387; XXIII, 1039
- top of, XXIII, 987
- Panhandle Eastern Pipe Line Company, XXIII, 1056
- Panhandle field, GAS, 385; V, 465, 505, VI, 64, 91, 98
- oil wells and gas wells added during 1939, XXIV, 1030
- Panhandle helium gas field, XXIII, 1052
- Panhandle lime, XXI, 1031; XXIII, 987
- Panhandle Oil and Refining Company, XXVI, 206
- Panhandle oil boom, XXIII, 1012
- Panhandle Refining Company (well 379), SBP, 292-335, 409
- Pannonian formations in Hungary, XVIII, 781, 937, 939
- Panoche Creek-Cantua Creek district, MSC, 78, 101
- Panoche district, CAL, 156, 312
- Panoche formation, CAL, 106; 168-195, 414; XXVIII, 472; XXIX, 989 (Kpn) (Cretaceous), SBP, 96, 168-195, 414
- Panoche group, XXVII, 280
- Panoche Hills, CAL, 11
- Panoche quadrangle, Fresno County, California, Yokut sandstone in, XXIV, 1751
- Panoche shale, XXIX, 987
- Panthalassa, CD, 39
- Panther Creek field, GAS, 822
- Panther pool, XXIII, 851
- Pánuco, MEX, 16, 23, 33, 34, 37, 43, 49, 50, 52, 64-66, 75, 80, 94, 118, 149, 159, 162, 164, 175, 201, Figs. 9, 12, 22 (in pocket)
- Pánuco district in Mexico, Cacalilao pool, GAS, 1000
- Pánuco gray, MEX, 49
- Pánuco gusher, MEX, 178
- Pánuco oil field, Mexico, PROB, 380, 384, 385, 389, 390, 392, 396; GAS, 999, 1002, 1003, 1005, 1067; MEX, 4, 49, 163, 166, 170, 172, 173, 175, Fig. 22 (in pocket); XII, 395; XX, 1303
- Cretaceous in, XII, 416
- gravity of oil in, XII, 428
- oil occurrence in fractures in, XII, 416
- pressures in, MEX, 229
- salt water in, MEX, 5, 173, 178
- temperatures of oil at, MEX, 227
- Pánuco River group of wells, temperatures of oil in, MEX, 226, 227
- temperatures of salt water in, MEX, 228
- Pánuco River Valley, Mexico, Cretaceous, X, 671

- (Pánuco)
Jurassic, X, 671
relation to origin and accumulation of oil in Mexico, X, 667
- Pánuco-Sierra Tamalipas area, emergence at end of Maestrichtian in, MEX, 97
- Pánuco-Topila area, compared with Tancoco district, MEX, 190
- Panyity, Louis Samuel, PROB, 437; XIX, 798, 915
memorial of, XXVII, 1399
oil- and gas-bearing horizons of Ordovician of Ohio, V, 609; abstract, V, 104
- Panyity, Louis Samuel, Newby, Jerry B., Torrey, Paul D., and Fettke, Charles R., PROB, 316, 844
Bradford oil field, McKean County, Pennsylvania, and Cattaraugus County, New York, STR II, 407
- Paoan series, XXV, 2060
- Papagayos shales, Mexico, MEX, 55, 68, 71, 76, 77; XI, 1218
- Papantla, MEX, 2, 136-139; MSC, 178, 179
- Papantla district, XX, 1304
- Paper mills in northeast Louisiana, GAS, 770
- Papoose field, PROB, 411, 777
- Papp, Karl N., SD, 178, 207; IX, 1228, 1246; XXI, 1274
- Papua, analyses of oil in, XI, 170
pseudo-tectonic structures in, XVII, 1106
Tertiary geosyncline in, XXVIII, 1454
- Papua and Mandated Territory of New Guinea, note on present knowledge of Tertiary sequence in, XXVII, 1266
- Papua and New Guinea, oil exploration work in, review, XV, 715
- Paradis field, XXVII, 737
- Paradise area, St. Charles Parish, Louisiana, XXIV, 1088
- Paradox basin, Utah, XIX, 1488
- Paradox formation, eastern Utah and western Colorado, FOP, 67; XVII, 963; XIX, 1487; XXV, 1499; XXVII, 858
mostly gypsum and salt, XXI, 1250
- Paradox Valley, Colorado, XI, bet. 118 and 119
- Paradox Valley rock salt, flowage curve for, XIV, 1045
- Paraffin hydrocarbons, chemical effects of alpha-particle bombardment of, XXVIII, 938
- Paraffine, Lytton Springs field, Texas, X, 974
- Paraffine and hexane, comparison of, XXIV, 1882
- Paraffine-aromatic type crude oil, XXVII, 1601
graph, XXVII, 1604
- Paraffine bacterium, PROB, 264; XXVII, 1179
- Paraffine base, PROB, 107
- Paraffine-base crudes, XXI, 1187
- Paraffine dirt, SD, 352; II, 36; III, 89
as an indication of petroleum, review, IX, 1118
- Paraffine hydrocarbons, GAS, 1118
- Paraffine-lined cardboards, use of, in tubed bottom samplers, RMS, 650
- Paraffine Oil Company, SD, 524, 529
- Paraffines, PROB, 111, 452, 648
in marine muds, PROB, 42
- Paraffinic oils, PROB, 140, 238, 240, 245
- Parafusulina*, zone of, XXV, 97
- Parafusulina* fauna of middle Delaware Mountain age, XXIV, 59
- Parafusulina rothi* beds, PTNM, 701; XXVI, 701
correlation of, PTNM, 704; XXVI, 704
- Parafusulina* zone, XXIV, 271
in Ural region, XXIV, 271
- Parallel folding, PROB, 690
- Bradford field, Pennsylvania and New York, STR II, 419
- Parallel folds, calculation of stratigraphic thickness in, XXVIII, 1376
- Parallelism of isosalinity lines and structural contours for Woodbine of East Texas, GC, 274
- Parameter, productivity, SBP, 83-85
productivity, Appalachian samples, SBP, 374-377
productivity, California outcrop samples, SBP, 191-193
productivity, California samples, SBP, 148-151
productivity, East Texas, SBP, 326-331
productivity, general discussion, SBP, 83-85, 381-384
productivity, Gulf Coast, SBP, 345-347
productivity, Mid-Continent, SBP, 278-283
productivity, Rocky Mountain outcrop samples, SBP, 253-255
productivity, Rocky Mountain samples, SBP, 238-240
productivity, West Texas, SBP, 289, 290
- Parameters, RMS, 80, 563, 574, 586
variation curves of, RMS, 587
- Paramontmorillonite, RMS, 468
- Paraná, correlation of Devonian area of, with areas of Amazon, Matto Grosso, Goyaz, Uruguay, and Paraguay, XX, 1228
- Fossils do Devoniano do*, review, XX, 987
- Paraná basin, XXIX, 539, 560
Brazil, Uruguay, and Paraguay, geology of Devonian areas of, XX, 1208
Devonian in, XXIX, 553
geological section, XXIX, 555
possibilities for petroleum, XXIX, 553
tectonics of, XIX, 1760
- Paraná trough, XXIX, 508, 557
- Parasepiolite, RMS, 468
- Parasepiolite and montmorillonite in colloidal clay in Great Salt Lake, XXII, 1345
- Paratype Gulch, XXVIII, 953, 960
- Pardee, A. H., X, 311
- Pardee Company, SD, 274, 309, 336
- Pargasite and actinolite, analyses of, XXVII, 174
- Pargasite and zoisite in Franciscan metamorphics, XXVII, 181
- Paria, Gulf of, structure, VI, 474
- Parinos sandstone in Negritos district, Peru, XII, 13
- Paris, June 14-19, 1937, Second World Petroleum Congress, XXI, 131
- Paris basin, XVI, 1133
- Paris Basin sediments, MSC, 175
- Paris shale, XVIII, 1052
- Parishes in Louisiana in which development was active in 1938, XXIII, (Parishes)
897, 898
productive in Louisiana, XXVI, 1260
- Park, James, XVI, 834, 835
- Park, R. W., discussion of origin of petroleum of California, X, 698
- Park City beds, index map of part of northeastern Utah showing localities of, XXIII, 83
- Park City beds on southwest flank of Uinta Mountains, Utah, XXIII, 82
discussion, XXIII, 1249
- Park City formation, VI, 226; XXIII, 84, 93; XXIV, 624
- Pennsylvanian faunule from, XXIII, 86, 94
- phosphatic shale member of, XXIV, 628
relationship of lower member of, to Weber formation, XXIII, 95
type section of, section eastward along line from Big Cottonwood Canyon, to Ashley Creek, Uinta County, Utah, XXIII, 84
- Park County, Colorado, igneous sill on Hartsel anticline, XXI, 989
- Park County, Wyoming, Gooseberry anticline in, XXI, 991
- Heart Mountain and South Fork thrusts, XXV, 2021
- outcrop section B, SBP, 243-255, 411
- Shoshone anticline, XXVII, 449 (wells 200-202), SBP, 194-243, 406
- Park Range, XXVII, 430
- Parker, Ben H., SBP, 3; XI, 112, 128; XV, 420; XVII, 110; XXIII, 1165
geology of Two B' tites dome in southeastern Colorado, discussion, XVIII, 1544
- Parker, Ben H., and Van Tuyl, F. M., XXV, 1872
an appeal for cooperative study of time of petroleum formation, XXI, 268
coalification theory of origin of oil and gas, discussion, XVIII, 1547
extraterrestrial hydrocarbons and petroleum genesis, XIX, 900
suggested research on origin of petroleum, XVII, 743
- Parker, Ben H., Van Tuyl, F. M., and Skeeters, W. W., migration and accumulation of petroleum and natural gas, review, XXIX, 460
- Parker, E. C., I, 33; IV, 173; V, 121; IX, 982; XV, 409; XXIII, 1795
- Parker, E. W., SD, 397
- Parker, F. L., and Cushman, J. A., MSC, 12, 38, 153, 192, 204, 208, 210, 214, 216, 219, 221, 225-227, 230, 232-234, 237, 241, 251, 253, 260, 262, 266, 271, 274, 275, 287, 290, 292, 305, 312, 316, 320, 324, 325, 329, 333, 342, 352, 353, Fig. 14 (in pocket)
- Parker, Frank S., XIX, 539; XXIX, 956
- Parker, George, De Noya 5 (well 276), SBP, 255-285, 407
- Parker, Lloyd, XXVIII, 29
- Parker, W. G., and Hanna, Marcus A., notes on an occurrence of galena at Pierce Junction salt dome, Harris County, Texas, XVII, 438
- Parker, W. K., VIII, 489
- Parker, W. P., Brady, H. B., and Jones, T. R., MSC, 11
- Parker County, Texas, development, XXVIII, 776
- Parkersburg-Lorain syncline, PROB,

- (Parkersburg)
487; XXV, 785
Parkersburg syncline, GAS, 992; XI, 1026
Ohio oil fields, STR I, 141
Parkfield area, faunule from McLure shale of, MSC, Fig. 14 (in pocket)
Parkfield block, CAL, 52, 55, 56; XIII, 204
Parkhurst, I. P., and Beecher, C. E., XII, 174; XV, 913
Parkinson, D., XXV, 2127
Parkman sandstone, V, 204
Parks, E. M., PROB, 619, 911; X, 428, 1047; XIII, 145; XIV, 142; XIX, 163
migration of oil and water, a further discussion, VIII, 697
water analyses in oil production and some analyses from Poison Spider, Wyoming, IX, 927
Parks, Ernest K., review, XXVI, 1779
Parks, G. S., and Huffman, H. H., XXVIII, 931
Parks, William A., GAS, 60, 94, 97; VIII, 720
Parks field, III, 49
Parks fold in Stephens County, Texas, STR II, 476
Parks formation, XXIV, 86
Parma district, western Italy, search for oil in, XVI, 1152
Parma sand in Gratiot County pool, GAS, 807
Parma sandstone, XXI, 1599; XXIV, 1969; XXVIII, 190
Michigan, GAS, 794; STRAT, 245
Parmalee, Cullen W., Fuller's earth deposit at Olmstead, Illinois, review, VI, 155
Parr, S. W., SD, 469; XXVII, 1210
Parr, W. J., XXV, 382
Parr, W. J., and Chapman, F., XXV, 388
Parral-Jimenez-Cañas area, southern Chihuahua, XXVIII, 1169
Parras basin, XXVIII, 313, 321
Parras shale, XXVIII, 1156, 1160
Parent, R. G., XXIX, 1265
Parritas formation, XXVIII, 1157, 1167
Parsons, C. P., GAS, 1017; XII, 1095
Parsons, E., XVIII, 298
Parsons, K. R., XXI, 2
Particle movement in flume, XXIX, 1243
Particle orientation, XXIX, 1244
Particle properties, maps of, XXIX, 1255
quantitative approach to, XXIX, 1235
Particle size, RMS, 533; XXIX, 1244
as affected by abrasion, RMS, 38
of clays, RMS, 479, 480
Particle transportation, effects of sphericity and roundness on, XXIX, 1240
Parting quartzite, XXVI, 1377
Partlow sand, Hardin field, STRAT, 568
Partnership between geology and geophysics in prospecting for oil, XXIV, 1204
Pasadena area, California, RMS, 632
ground-water contours, XVI, 351
Pasadenan orogeny, SC, 49, 102, 135, 143; XX, 867, 1595, 1648, 1681, 1689
Pasayten formation, XXIX, 1391, 1392
Pascagoula clay, GC, 415; XVII, 645; XXVIII, 62
Paschal, E. A., VIII, 312
deep well near Marlow, Stephens County, Oklahoma, XXII, 1106
major tectonic provinces of southern Oklahoma and their relation to oil and gas fields, XXV, 1
memorial of Charles Theodore Casebeer, XXV, 1831
Pascoe, E. H., XI, 557, 573; XVIII, 285, 290, 294, 297, 301, 305, 310, 312; XXIV, 751
Pascoe, Edwin, XVIII, 323, 326
Pasieczna limestone, Europe, VI, 536
Paskapoo sandstone, IV, 250
Paskenta beds of F. M. Anderson (Kpa) (Cretaceous), SBP, 96, 168-195, 414
Paskenta group, XXVIII, 458
Paskenta Knoxville, CAL, 83, 112, 312
Paso Abajo fault, MEX, 180
Paso Comales, MEX, 117, 118, 124, 126
Huasteca beds at, MEX, 131
list of micro-fauna occurring at, MEX, 126
Paso del Haba, gas seepage at, MEX, 157
Paso Real, MEX, 131, 220, 221, Fig. 32 (in pocket)
Paso Robles, CAL, 175, 189, 231, 285, 312; MSC, 49, 109, 121, 199, 202, 204, 219, 230, 242, 243, 248, 254, 260, 266, 276, 277, 290, 291, 305, 316, 321, 323, 329, 334, 353, 356; SC, 92; XX, 1638
Paso Robles and Santa Maria basins, Nonion faunas of, MSC, 17
Paso Robles Basin, MSC, 2, 86, 167, 180, Fig. 14 (in pocket)
Paso Robles deposits, SC, 48; XX, 1594
Paso Robles formation, CAL, 231, 235, 285; MSC, 122; PROB, 406; SC, 77; XX, 1623; XXI, 1341; XXVII, 1342, 1358
fossils of, XXVII, 1359
McKittrick field, California, STR I, 18; XI, 618
Santa Maria field, XXIII, 53
Wheeler Ridge, California, X, 497
Paso Robles overlap, San Emigdio Mountains, XI, 615
Paso Robles road, MSC, 49
Pass Abel, RMS, 180
Pass A'Loutre, RMS, 169
Pass A'Loutre crevasse, RMS, 164
Pass Justin, RMS, 180
Passa Dois series in Southern Brazil, XIX, 1743
Passau, G., V, 670; XVIII, 1171
Passes at mouth of Mississippi, RMS, 157, 167
Patagonia, RMS, 225
occurrence of oil at Commodoro Rivadavia, Argentine, review, IX, 181
southern, and Tierra del Fuego, Cretaceous trough of, XXIX, 503
Patagonia reserve zones, XVI, 560
Patagonia unconformities, IX, 181
Patapasco clay member correlated with upper part of Wilcox, XXIX, 80
Patat, and Fischer, F., XX, 44
Pate, W. F., and Bassler, R. S., XXVI, 13, 14
Patella vulgata, faecal pellets of, RMS, 517, 518, 520
Patia gorge, Tertiary in, XXIX, 1134
Patin oil sand, XXVII, 1125, 1145, 1153
Patnode, H. Whitman, SBP, 6; XXI, 1378
relation of organic matter to color of (Patnode)
sedimentary rocks, XXV, 1921
Pato red member of Vaqueros, SC, 80; XX, 1626
Patoka field, XXI, 785; XXVI, 1094
Patos conglomerate in Trinidad, XX, 1442
Patriciu, V., XVIII, 874
Patrick, R. B., XXV, 1842
Patrick, Ruth, XXII, 1307, 1331, 1333; XXIX, 897
Pat's Branch, West Virginia (well 427), SBP, 349-379, 410
Patterson, David R., Assistant Secretary of War, XXV, 1265
Patterson, Joseph, XX, 1461, 1463
Permian of Logan and Lincoln counties, Oklahoma, XVII, 241; discussion, XVII, 562
stratigraphy of Eocene between Laredo and Rio Grande City, Texas, XXVI, 256
Patterson, R. C., GAS, 2; XIX, 826
Patterson, R. R., XXIV, 1215
Patterson Hills, XXI, 838
Patterson pool, Kearny County, Kansas, XXVI, 400, 1073
Pattison, W. H., XIX, 691
Patton, H. B., V, 259
Patton, Leroy T., XXI, 466; XXVIII, 1018
crystalline rock in deep well in Winkler County, Texas, XXIX, 222
Custer formation of Texas, discussion, XXII, 925
igneous rocks from deep wells in West Texas, XXIX, 1028
Patton, Leroy T., and Sellards, E. H., GAS, 439; PROB, 352; STR II, 524
subsurface geology of Big Lake oil field, X, 365
Patton, W. C., XX, 565
Patton limestones, original porosity in, XXIII, 314
Patton Oil Company, GC, 911; XX, 562
Patton oil field, XXVI, 1256
Patton pay zone, Lisbon field, isopach map of, XXIII, 315
Patton producing zone, Lisbon field, XXIII, 289, 290, 304
analysis of cores, XXIII, 316, 317
Patton salt-water sand, XXIII, 317
Paul, C. M., XV, 37
Pauling, L., RMS, 461, 462, 474, 625
Pauls Valley field, result of coordinating variable data, XXVII, 922
Pauls Valley pool, XXVII, 794, 799
gravity of oil in, XXVII, 800
Paulsen, Jasper W., Jr., XVIII, 1348
Pautsch, E., methods of applied geophysics, discussion, XII, 863, review, XII, 561
Pavilion gas field in Genesee County, New York, GAS, 952, 985; XXII, 80, 83
Pavonina and *Siphogenerina*, foraminifera of genera, MSC, 12
Pawhuska formation in Cushing field Oklahoma, STR II, 398
Pawhuska limestone, I, 135; III, 259, 270; V, 547, 566, 581; VI, 320; XXIII, 223; XXIV, 1997
central Oklahoma, STR II, 400; XX, 1460
Pawnee, Creek, and Tulsa counties, northeastern Oklahoma, Red Fork shoestring sand pool, STRAT, 473
Pawnee Creek stage, CAL, 182
Pawnee limestone, V, 297; VI, 465;

(Pawnee)

- XXV, 37, 39, 42, 49, 55, 69
 Pawnee Royalty Company, XXIV, 1007
 Pawpaw formation in northern Texas, XIII, 1298; XXIX, 173
 Paxson, Roland B., SD, 478
 Paxson, Roland B., and Bartor, Donald C., PROB, 668; XXI, 475, 482
 Spindletop salt dome and oil field, Jefferson County, Texas, SD, 478; IX, 594
 Pay, new, at Rock Crossing, Wilbarger County, Texas, XXI, 525
 Pay zones, established, in Permian, new areas of, XXV, 1048
 in Permian in West Texas, XXVII, 754
 in Permian in West Texas and New Mexico discovered in 1941, new areas of, XXVI, 1018
 of Sewell-Eddleman area, XXVI, 213
 Payette-Weiser area, GAS, 223, 233-237
 Payette-Weiser-Ontario region, nitrogen in, GAS, 1059
 Payne, F. T., and Stroud, Ben K., preliminary report on proposed pipe line from Monroe gas field to New Orleans, review, VI, 383
 Payne, J. Norman, XXIII, 817; XXIX, 1654
 subsurface geology of Iowa (lower Mississippian) series in Illinois, XXIV, 225
 Payne, Kenneth A., and Collins, R.L., XXIX, 900
 Payne, Max B., XXVIII, 954; XXIX, 958, 971, 979, 982, 983
 Payne, Thomas G., XXVII, 926
 stratigraphical analysis and environmental reconstruction, XXVI, 1697
 Payne County, Oklahoma, Ramsey oil pool, XXIV, 1995
 Payne sandstone, II, 78
 Paynes Hammock sand, XXVIII, 1344
 transition into the Catahoula, XXVIII, 1353
 Payton pool, Pecos and Ward counties, Texas, XXVI, 1632
 bottom-hole pressures at, XXVI, 1645
 drilling and production methods at, XXVI, 1646
 gas cap at, XXVI, 1645
 geologic history of, XXVI, 1639
 isopach map, XXVI, 1636, 1640, 1644
 map of West Texas and southeastern New Mexico showing location of, XXVI, 1633
 map showing areas of producing zones, XXVI, 1638
 Permian Guadalupe series in, XXVI, 1637
 Permian Ochoa series in, XXVI, 1635
 production at, XXVI, 1643
 southwest-northeast section, XXVI, 1641
 stratigraphic column, XXVI, 1634, 1635
 structure in, XXVI, 1639
 structure-contour map drawn on top of Yates sand, XXVI, 1642
 Triassic in, XXVI, 1635
 Yates sand productive in, XXVI, 1635
 PCA pool, XXVI, 1038
 Peabody, George, XXIV, 1684
 Peabody field, Kansas, STR I, 60;

(Peabody)

- PROB, 317, 410, 770; IV, 755; V, 144, 507, 580; VI, 429
 typical dome, STR II, 677
 Peace Creek pool, XXVII, 811
 Peace Creek-Zenith trend, XXVII, 810; XXVIII, 770
 Peace River district, western, British Columbia, petroleum geology of part of, VI, 112
 Peace Treaty bed, XXIII, 1789
 Peachtree area, lower, Wilcox County, Alabama, XVI, 492
 Peacock, H. B., how can geophysicists best serve? XXVI, 1200
 Peacock, M. A., XI, 1283, 1289, 1293
 Peacock, M. A., and Tyrrell, G. W., XIX, 212
 Peacock formation, XXI, 466
 Peake, R., RMS, 409
 Peale, A. C., III, 289; XVII, 966, XXVI, 313
 Peale formation, CAL, 62
 Pearce, J. E., XVII, 944; XX, 1363, 1365
 Pearce, J. R., RMS, 547
 Pearce Creek pool, XXVI, 1077
 Pearcey, F. G., MSC, 13, 15
 Pearl River Oil and Gas Company, GAS, 892
 Pearl shale, II, 75
 Pearlman quadrangle, CAL, 33
 Pearlman regional gravity-minimum system, XXIX, 214
 Pearsall field, Texas, XXIX, 1441
 Pearsall formation, distribution and thickness, XXIX, 1442
 in South Texas, correlation, XXIX, 1441, 1446
 in South Texas and in Coahuila, sections, XXIX, 1444-1446
 of Aptian age, XXIX, 1419, 1446
 stratigraphic and lithologic features, XXIX, 1442
 Pearsall pool in Frio County, Texas, XXI, 1047
 Pearson, RMS, 582
 Pearson, L. K., and Raper, H. S., PROB, 41
 Pearson, S., and Son, Ltd., MEX, 3
 Pearson, W. L., XIV, 1351
 Pearson glauconite, XXIX, 63
 Pearson pool, Oklahoma, PROB, 772
 Pearson Switch field, Oklahoma, STR II, 316-318, 324
 Pearsonia field, IV, 175
 Pearson's Branch section of Seguin formation, disconformity in, XXVII, 613
 Pearson's Branch section and Moss Branch section of Seguin formation, XXVII, 614
 Peat, adsorption of different substances on, XXIV, 1877
 Peat bogs in Pliocene, CD, 45
 Peat deposits, RMS, 170, 436, 641
 of North Sea, RMS, 331, 343, 344
 Peavey pool, Kansas, XXIII, 805
 Pebble Beach, MSC, 36
 Pebble roundness, diagram prepared for estimating, XXVI, 1712
 Pebbles, RMS, 40, 45, 171, 211, 225, 227, 252, 257, 259, 269, 272, 530, 589
 beach, roundness of, RMS, 589
 cause of shape of, RMS, 40
 glacial, RMS, 388
 in East Indies, RMS, 354
 rotation of, in streams, RMS, 13
 size of, RMS, 583

- Pebbly Sand horizon, XXIX, 1099
 Pecan Gap, Wolfe City, and Annona formations in East Texas, correlation of, XXVIII, 522
 Pecan Gap chalk, PROB, 302; XXI, 111
 basal phosphate zone of, XXVIII, 525
 Corsicana district, GAS, 667
 fossils of, XXVIII, 525
 Mexia fault zone, Texas, STR I, 330
 new localities in Red River and Bowie counties, Texas, XVI, 212
 Texas, SD, 217, 228, 243, 250, 252; IX, 1154, 1159; X, 20, 28, 42, 44
 Texas, correlation of, XVII, 1506
 thickness of, XXVIII, 529
 Pecan Gap fossils, check list of, XXIII, 1529
 Pecan Gap time, GAS, 655, 660
 Pecero, MEX, 124
 Pecero well, Tantoyuca beds in, MEX, 117
 Pechelbronn, Alsace, nitrogen at, GAS, 1060
 temperature gradient in, discussion, XIII, 1569; XIV, 105
 Pechelbronn field, Alsace, X, 409; XII, 493; XVI, 1097
 Pechelbronn oil-bearing region, Lower Alsace, temperature gradient in: its determination and relation to oil reserves, XIII, 1257
 Pechelbronn sand, PROB, 828
 Pechelbronn system of oil mining, X, 407
 Peck, Albert B., XXII, 1307, 1338, 1345, 1378
 Peck, R. E., XXIX, 1265
 Peck Park, MSC, 130
 Peckham, H. E., II, 134, 152
 Peckham, S. F., PROB, 12, 13; IX, 613; XI, 395; XIX, 469, 481, 485, 487
 Pecopteris flora, CD, 21
 Pecos, northern, and Crane counties Ordovician in, XXIX, 1341
 Pecos and Crane counties, green shale at top of Silurian in, XXIX, 1341
 Pecos and Ward counties, Texas, Payton pool, XXVI, 1632
 Pecos Canyon sandstone, IV, 99
 Pecos County, Texas, basement rocks in Shell-Humphreys well, XIV, 314
 Ellenburger discovery in, XXVIII, 819
 Gulf-Wentz pool, XXVII, 764
 Ordovician development in Apco structure, XXIV, 478
 Ordovician pools in, XXIV, 1037
 south-north cross sections, XXIV, 15, 29
 (well 303), SBP, 285-292, 408
 Pecos River near Artesia, New Mexico, comparison of rocks exposed on west and east sides of, XXI, 897
 south of Cailsbad, Eddy County, New Mexico, cross section of area west of, showing character of pockets retaining sodium sulphate-bearing brines, XXV, 153
 Pecos uplift, XIX, 234; XXV, 1626
 Pecos Valley of New Mexico and Texas, correlation of back-reef formations of, with those of Texas and Oklahoma, XXI, 879
 cross sections of rock formations of, XXI, 845

- (Pecos)
 index map, XXVI, 81
 map, XXI, 835
 Permian formations of, XXI, 833
 Pecos Valley and Llano Estacado, XXI, 845
 Pecos Valley Drilling Company, XXI, 866
 Pecos Valley field, Texas, GAS, 454, 455
 Pecos Valley Gas Company, GAS, 437
 Pecten, CAL, 164, 179, 180, 210, 230, 232, 249, 250, 287-289
Pecten andersoni sand, MSC, 232, 251, 344
 at Kettleman Hills, XVIII, 467
Pecten varia, faecal pellets of, RMS, 517, 520
 Pedalfers, XVII, 473
 Peddie, John B., IX, 803
 Peden, W. M., XXVI, 1318
 Pedernal quartate, V, 606
 Pedocal soils, XXIX, 1704
 Pedocals, XVII, 473
 Peek pool, XXIX, 763
 Peeker sandstone in southeastern Ohio, GAS, 900
 Peel, XVIII, 1163
 Peele, Robert, XIII, 1124, 1146
 Pegmatites and aprites in Whittier conglomerates, XXIV, 662
 Pegram limestone, XXV, 678, 679
 Peguan-Irrawaddian in Burma, XI, 563
 Peigneur, Lake, at Jefferson Island salt dome, XIX, 1615
 Pekár, Desiderius, IX, 807
 Pekers, C. L., RMS, 85
 Pelagic, MSC, Fig. 5 (in pocket); RMS, 259
 Pelagic deposits, RMS, 373; XXIV, 1167
 Pelagic facies, MSC, 82
 Pelagic foraminifera, RMS, 257, 260, 397
 Pelagic mammals, MSC, 154
 Pelagic organisms, RMS, 258
 blown by wind into areas of shallow water, MEX, 100
 Pelagic sediments, PROB, 28, 30
 factors influencing deposition of, XXIII, 1671
 Pelagic sediments of North Atlantic Ocean, RMS, 373
 references on, RMS, 394
 Pelagic types of foraminifera in Chapapote formation, MEX, 117
 Pelecypod, XXIV, 792
 Pelecypod fragments, XXV, 1377
 Pelecypods, MEX, 38, 76, 109; MSC, Fig. 4 (in pocket); PTNM, 600, 604; RMS, 201, 212; XXI, 808; XXII, 94, 291, 1638, 1666; XXIII, 23, 88, 639, 672; XXV, 235, 639, 644, 653, 656, 688, 834; XXVI, 180, 600, 604, 803, 1387, 1393; XXVII, 1449; XXVIII, 277, 525, 610, 1099, 1320, 1322, 1613
 Blaine and Dog Creek, XXVIII, 1029
 in dolomite of Minco division of Permian, XXI, 1525
 in Edna gas field, XXV, 109
 of Temblor and Vaqueros in Caliente Range, XXV, 220
 Pelican gas field, GAS, 2, 28
 Pelissier, XIII, 1258
 Pellekaan, W. van Holst, XIII, 645; XIV, 917; XVII, 454
 Pellets, faecal, RMS, 287, 289, 292
 Pelometer method of mechanical analyses, RMS, 551
 Pelona schists, XXI, 213
 Pelouen, A. R., XIX, 691
 Pemberton, John Roy, PROB, 145, 747; XIII, 165; XX, 950; XXVI, 1218
 Elk Hills, Kern County, California, STR II, 44
 résumé of past year's development in Kentucky from a geologic standpoint, II, 38
 Pena, Rafael de la, Survey, Texas (well 382), SBP, 292-335, 409
 Pence, George D., memorial of Linn Markley Farish, XXIX, 1530
 Pencil Cave, XXV, 796
 structural contour map of central Tennessee on top of, XXVII, 1045
 Pencil Cave and Lebanon limestone members of Carters limestone in middle Tennessee, XXIV, 1647
 Pencil Cave formation in Tennessee oil fields, STR I, 245
 Pencil Cave metabentonite horizon, XXVII, 1043
 Pencil Cave zone in Smithland gas field, GAS, 861
 Penck, and Bruckner, XX, 868
 Penck, A., RMS, 411
 theory of universal ocean, CD, 39
 Penck, W., XXI, 1596
 Pendleton fauna, XXIX, 62
 Pendleton formation, XXIX, 61
 Pendleton sandstone, XXV, 684, 691
 Pendroy fault zone, XXIX, 1265
 Pendroy field, XXVIII, 792
 gravity of oil in Madison limestone at, XXVIII, 796
 Pendular condition in unconsolidated sand, XV, 193
 Pendulum apparatuses, use of, XIX, 22
 Pendulum gravity observations, at 14 new stations in Atoka and Bryan counties, Oklahoma, and Wapanucka in Johnston County, XXIV, 2143
 Penéfen conglomerate, XXI, 833
 Peneplain, theory of, XXVI, 773
 Peneplanation of Australia in Middle Tertiary time, XXI, 1122
 ultimate, results of, XXVI, 774
 Penetration of light in sea, RMS, 81
 Penfield, S. L., XXII, 1267
 Peninsula of Lower California, XX, 1281
 Peninsular Ranges, CAL, 1, 9, 20-22, 41, 95, 119, 237, 255, 274, SC, 1, 11, 71, 114; XX, 1547, 1557, 1617, 1660
 continental sediments in, CAL, 200
 distinct during Pliocene, CAL, 251
 granitic basement at surface of, CAL, 27
 granitoid rocks in, CAL, 94, 96
 oldest fossils Triassic, CAL, 65
 part of land area designated Mohavia, CAL, 119
 plutonic rocks of Jurassic in, CAL, 74
 San Jacinto fault, CAL, 39
 volcanic rocks in, CAL, 203
 Penitas field, XXVII, 744
 Penn-Atlantic Oil Company, Absher 1 (well 384), SBP, 292-335, 409
 Penn-Goldsmith zone, XXV, 1050; XXVI, 1023
 Penn-Ohio Gas Company, F13, 465 (well 429), SBP, 249-279, 410
 Penn United Gas Company, GAS, 980
 Bradford Agricultural Society 1 (well 414), SBP, 349-379, 410
 Pennine nappe, CAL, 37
 Penning, W. H., XXI, 340
 Pennington, Harry, XVII, 1460
 Pennington County, South Dakota, log of wildcat well in, XXIII, 1234
 Pennsylvania, PROB, 2-4, 13, 15, 17, 18, 70, 73, 106, 316, 340, 499, 841, 844; STRAT, 494, 538
 Baumé gravity of crude oil in, PROB, 103
 Big Sinking field, STRAT, 181
 birth-place of world's oil industry, XXIX, 1738
 Bradford oil field, STRAT, 879
 Burgettown Quadrangle, STRAT, 879
 Carnegie Quadrangle, STRAT, 879
 Claysville Quadrangle, STRAT, 879
 counties productive in, XXV, 1137, 1140
 decline curves, IV, 210
 decrease in drilling for oil in 1943, XXVIII, 729
 deep sand development in Tioga County, XV, 925
 deep sand developments, 1941, XXVI, 1118, 1120
 deep sand developments, 1942, XXVII, 840
 deep sand developments, 1943, XXVIII, 730
 deep sand exploration in, map, XXV, 1136
 developments in 1942, XXVII, 838
 developments in 1944, XXIX, 671
 Devonian in, STRAT, 511; XXV, 1141; XXVI, 1115, XXIX, 671
 geophysical exploration in 1941, XXVI, 1123
 graywackes and the petrology of Bradford oil field, discussion, XXV, 2071
 Hebron gas field, Potter County, XX, 1019
 isocarb map of, XIX, 860
 Mississippian in, STRAT, 494, 511; XXV, 1141; XXVI, 1115; XXVII, 839; XXVIII, 727
 Music Mountain oil pool, McKean County, STRAT, 492
 north-central, Oriskany gas fields in, XXVIII, 732
 north-central, Oriskany sand wells completed in 1940, XXV, 1145
 north-central, Oriskany sand wells completed and drilling in 1941, XXVI, 1121
 north-central, Oriskany sand wells completed and drilling in 1942, XXVII, 844
 north-central, Oriskany sand wells completed in 1943, XXVIII, 731
 Pennsylvania, northern, wells completed during 1939 in Tioga, Potter, and McKean counties, XXIV, 970
 Pennsylvania, northern and central, shallow-well completions in gas fields of, in 1941, XXVI, 1116
 in 1942, XXVII, 842
 in 1943, XXVIII, 729
 Pennsylvania, northern, and central New York, natural gas from Oriskany formation in, XV, 601
 northern, and New York, subsurface distribution of Hamilton group of, XXI, 311
 northwestern, types of stratigraphic oil pools in Venango sands of, STRAT, 507
 Pennsylvania, Ohio, and West Vir-

(Pennsylvania)

- ginia, problems of underground gas storage in, XXVIII, 1561
- oil and gas map, XXIX, 673
- oil and gas map, 1943, XXVIII, 727
- oil and gas producing horizons of, Prob, 433
- oil and gas sands of, XIX, 838
- oil developments during 1940, XXV, 1137
- oil fields in, SBP, 410
- oil reserves, VI, 44, 570
- Ordovician in, XXV, 1142
- origin, migration, and accumulation of petroleum and natural gas in, PROB, 447
- Oriskany gas developments in, confined to Tioga and Potter counties, XXV, 1143
- outlook for oil and gas, V, 357; abstract, V, 100
- Pennsylvania in, STRAT, 494, 509; XXV, 1141
- physical characteristics of Bradford sand, Bradford field, and relation to production of oil, XVIII, 191
- pools in, STRAT, 507
- porosity of oil sands of, VIII, 738
- review, VI, 386
- safety of water-flooding pressures at Bradford, XIX, 793, 1239
- Scenery Hill gas field, STR, II, 443
- seismograph exploration in Erie, Crawford, and Mercer counties, during 1940, XXV, 1143
- shale production, STR II, 708
- Silurian in, XXV, 1142
- southwestern, XXV, 1137
- southwestern, age of Devonian of, discussion, XIX, 1546
- southwestern, Devonian and Mississippian inliers of, XXV, 161
- southwestern, gas developments in, XXV, 1140; XXVIII, 728
- southwestern, references on Devonian and Mississippian inliers of, XXV, 163
- Pennsylvania, southwestern, shallow well completions in 1940, XXV, 1140
- in 1941, XXVI, 1115
- in 1942, XXVII, 839
- in 1943, XXVIII, 728
- Pennsylvania, southwestern, stratigraphic units of lower Mississippian and upper Devonian of, XXV, 163
- Steubenville Quadrangle, STRAT, 879
- Tidioute oil pool, STRAT, 880
- Upper Devonian in, STRAT, 495; XXVII, 838; XXVIII, 726
- Pennsylvania, wells completed and drilling in Summit pool, Fayette County, in 1940, XXV, 1138
- in 1941, XXVI, 1117
- in 1942, XXVII, 843
- in 1943, XXVIII, 731
- Pennsylvania, wells in, SBP, 410
- western, XXII, 261
- western, bibliography on geology of oil and gas fields of, XXVIII, 734
- Pennsylvania, western, deep tests completed and drilling in 1941, XXVI, 1122
- in 1942, XXVII, 845
- in 1943, XXVIII, 733
- Pennsylvania, western, development of shallow-sand gas territory of, 1941, XXVI, 1114
- western, sections across, XXII, 243

(Pennsylvania)

- western, shallow gas territory of, XXVIII, 726
- Pennsylvania and adjacent areas, Oriskany as source of gas and oil in, XXII, 241
- Pennsylvania and New York, accumulation-distillation curve of Bradford crude oil in Bradford field, STR II, 432
- Bradford field, STR II, 407
- Bradford sand in Bradford field, STR II, 425
- Devonian in Bradford field, STR II, 414, 417
- Devono-Carboniferous in Bradford field, STR II, 411
- geology and oil resources of Bradford field, XXI, 1354
- grain-size analysis of Bradford sand from vicinity of Knapp dome in Bradford field, STR II, 424
- microscopic subsurface work in, XV, 749
- Oriskany explorations in, XXI, 1582
- Oriskany gas fields of, XV, 837
- Pennsylvanian in Bradford field, STR II, 410
- production curve of typical Bradford sand property, Bradford field, STR II, 440
- Silurian in Bradford field, STR II, 417
- summary of geology of natural gas fields of, GAS, 949
- Pennsylvania and Ohio, chart showing vertical position of oil and gas in, XXII, 419
- Pennsylvania and southwestern New York, map of oil and gas fields, STR II, 408
- Pennsylvania and West Virginia, clay dikes in Redstone coal, XVII, 1527
- Pennsylvania core data, XXV, 869
- Pennsylvania-grade crude-oil production of Appalachian province in 1943, XXVIII, 730
- Pennsylvania maps and sections, list of, XXII, 470
- Pennsylvania oil fields, VI, 40
- Pennsylvania samples (wells 413-421), SBP, 349-379. (See also Appalachian samples)
- Pennsylvanian, PROB, 57, 58, 61, 110, 159, 173, 293, 298, 319, 349, 353, 356, 401, 411, 500, 517, 561, 600, 682, 716, 822, 852
- Adair County, Oklahoma, XXIV, 418
- Amarillo district, GAS, 390-392, 399; XVII, 879
- Appalachian region, PROB, 101, 104; XV, 117; XXV, 796; XXIX, 139
- Arbuckle-Wichita mountains of Oklahoma extended into New Mexico, Colorado, and edges of Utah and Wyoming in, XXIII, 1140
- Archer County fields, Texas, STR I, 424
- Ardmore basin, XXV, 1664
- Ardmore basin, fossils from, XIII, 899
- Arizona, VI, 47
- Arkansas and Louisiana, XXII, 723
- Bend Arch district, GAS, 613, 614, 621; XIII, 427
- Big Lake field, Texas, STR II, 510, 511
- Billings field, Oklahoma, XXIV, 2011
- Bowers field, Texas, XXVII, 25

(Pennsylvanian)

- Bradford field, Pennsylvania and New York, STR II, 410
- Bryson field, STRAT, 541, 542
- Burbank field, Oklahoma, STR I, 221; XI, 1046
- Bush City field, STRAT, 44, 45
- Canada, FOP, 119; XXV, 1551; XXIX, 656
- central Oklahoma, XXV, 1669
- Centralia-Sandoval area, Illinois, STR II, 122, 128
- Chanute pool, STRAT, 62, 63
- China, III, 101; XXVIII, 1422
- Chinati Mountains, Texas, XXIV, 182
- Colorado, VI, 88; XXIII, 922; XXVI, 1377
- Cornerville field, Oklahoma, XI, 1082
- Cross Cut-Blake district, STRAT, 551
- Cunningham field, Kansas, XXI, 505
- Cushing field, Oklahoma, STR II, 398
- Davenport field, STRAT, 389
- Depew area, Oklahoma, STR II, 366
- distribution of, in Mid-Continent, XXV, 1658
- divisions of, XXVII, 632; XXIX, 138
- Earlsboro field, Oklahoma, STR II, 321
- early, in Rocky Mountain region, XXI, 1247
- early, redbeds in Mid-Continent region, IX, 814
- east-central United States, XXII, 1525
- East Tuskegee pool, STRAT, 441
- eastern coal field, Kentucky, STR I, 74, 76
- Eastern Interior Coal basin, GAS, 814, 820, 821, 825, 833; XIII, 420
- eastern Kentucky, GAS, 916
- Eldorado field, Kansas, STR II, 163
- Engleware channel sandstone, southeastern Kansas, XIX, 1061
- Fairport field, Kansas, STR I, 38
- faulting and folding in Keokuk pool, XXIII, 236
- Florence field, Colorado, STR II, 78
- Florida, XXIII, 1712
- Francisco pool, Indiana, STR II, 138
- Franklin Mountains, Texas, XXIV, 165
- Freezeout Mountain-Bald Mountain area, XXV, 886
- Garber field, Oklahoma, STR I, 179
- Gay-Spencer-Richardson trend, STRAT, 809, 813
- Glenn pool, Oklahoma, STR I, 231; XI, 1056
- Golden Lanes, Kansas, XI, 1152
- Greenwich pool, XXIII, 648
- Headton oil field, IV, 47
- Hewitt field, Oklahoma, STR II, 292, 293
- Hull-Silk pool, STRAT, 665
- Illinois, GAS, 832, 834; IV, 45; XXII, 78, 655; XXIII, 812, 1355, 1496; XXIV, 209; XXV, 1116; XXVII, 818; XXVIII, 751; XXIX, 687
- in subsurface in Mid-Continent region, XXV, 1676
- Indiana, IX, 321; XIII, 1303
- Iowa, XXIV, 1496; XXV, 1113
- Jesse pool, Oklahoma, XXII, 1567
- Kansas, GAS, 464-467, 470-472, 477, 1055; STRAT, 44, 63, 108, 124, 143; II, 110; IV, 256; V, 276, 508; VI, 70, 375, 549; VIII, 446; XXI,

(Pennsylvanian)

- 1002; XXII, 1591; XXIII, 1697; XXIV, 1002
 Kansas and Oklahoma, XXI, 31; XXVII, 909
 Kentucky, STRAT, 181; IV, 305; V, 522; VIII, 630; XI, 481; XXVII, 820; XXVIII, 759
 Kentucky and Virginia, XXV, 794
 Keokuk pool, Oklahoma, XXIII, 223
 late, and Permo-Pennsylvanian in Rocky Mountain region, Paleogeography of, XXI, 1251
 Llano uplift, Texas, XXV, 1660
 Lost Soldier district, Wyoming, STR II, 638, 641
 Louisiana, XXVIII, 277
 lower, Arbuckle Mountains, XXIX, 194
 lower, arkosic conglomerates productive of oil in Montague and Clay counties, Texas, XXV, 1071
 lower, paleogeography of, in Rocky Mountain region, XXI, 1248
 Lower Cretaceous and Permian unconformable on, in Anadarko-Ardmore province, XXV, 10
 Madison pool, Kansas, STR II, 152
 Martinsville field, Illinois, STR II, 130, 132
 Martinsville field, Illinois, porosity of sand an important factor in causing oil accumulation in, STR II, 137
 Mexico, XXVIII, 305
 Michigan, GAS, 793; STRAT, 245; XXII, 394; XXIV, 1969
 Michigan fields, STRAT, 245
 Pennsylvanian, Mid-Continent, V, 543-584; XXV, 1660; XXIX, 139
 references on, XXV, 1702
 Pennsylvanian, Middle, XXIX, 195
 Mississippi, V, 495
 Missouri, XXIV, 1003
 Missouri and Iowa, XXV, 1675
 Montana, VI, 147; VII, 176; X, 987; XXVI, 1357; XXVII, 472
 Moose Mountain area, XXVII, 42
 Morrison field, Oklahoma, STR I, 152; XI, 1091
 Music Mountain pool, STRAT, 494
 Nebraska, VI, 88; XXIII, 1697
 New Mexico, GAS, 370; IV, 74, 96; V, 165, 606; VI, 49, 89
 New York and Pennsylvania, GAS, 960
 New York oil fields, STR II, 274
 Nikkel pool, STRAT, 111
 Nocona field, Texas, GAS, 1054
 Noodle Creek pool, STRAT, 701, 703
 North and South Dakota, FOP, 77; XXV, 1509
 north and west-central Texas, XXIV, 1044
 North Dakota, XXIII, 926; XXVI, 349, 1419
 north Texas, XXVI, 1043, 1046
 north Texas and Oklahoma, comparison of convergence of, XI, 675
 north-central Texas, XXIV, 81
 north-central Texas and southern Oklahoma, XXI, 1017
 northern Mid-Continent, FOP, 82; XXV, 1514
 northwest Arkansas, XIV, 132
 observed densities for basal, PROB, 620
 Ohio, GAS, 898; STRAT, 384; XI, 1026
 Ohio and West Virginia, oil from,

(Pennsylvanian)

- XXII, 416
 Oklahoma, STRAT, 389, 410, 441, 458, 475; STR I, 192, 194, 197, 206-208; I, 134; III, 268; V, 34, 117, 133, 149, 175, 405, 408, 469; VI, 5, 55, 161, 233, 368, 423; VIII, 505, 596, 603; X, 143, 645, 885; XXII, 1582; XXIII, 824, 1697; XXIV, 736, 1997; XXV, 8, 1708; XXVII, 798; XXVIII, 782; XXIX, 714
 Oklahoma, evidences of slumping previous to consolidation in, VIII, 505
 Oklahoma, north-south correlation of, I, 134
 Oklahoma, unconformities in, III, 257, 270
 Oklahoma City field, XVI, 967
 Oklahoma-Kansas section, XXV, 1661
 Olympic pool, STRAT, 458, 460
 Osage County field, Oklahoma, STR II, 378
 Ouachita-Amarillo province, XI, 425
 Ouachita Mountains, correlation of, with Pennsylvanian Ozark region, Ardmore basin, and Arbuckle Mountains, XVIII, 987
 Ozark Highlands, GAS, 543
 paleogeographic map of, XIV, 1289
 Pennsylvania, STRAT, 494, 509; XXV, 1141
 Petrolia field, Texas, STR II, 545
 Red Fork shoestring sand pool, STRAT, 475
 Rocky Mountain region, VII, 406; XXI, 993; XXIII, 1140; XXV, 1841, 1842; XXVII, 422, 465
 Rocky Mountain states, character of oil, PROB, 161
 Salt Creek field, Wyoming, STR II, 593
 Scenery Hill gas field, Pennsylvania, STR II, 444, 445
 Seminole district, Oklahoma, STR II, 321, 323-325, 335
 Sewall-Eddleman area, Texas, XXVI, 207
 Seymour pool, STRAT, 760, 762
 Shinnston pool, STRAT, 833, 837
 Smith-Ellis field, Texas, STR II, 559
 south Arkansas, XXII, 962
 South Burbank pool, XXI, 564
 south Texas, XXIII, 860
 southern Cincinnati Arch region, GAS, 854-856, 872
 southern Oklahoma, GAS, 579, 580, 585, 586
 southwestern Oklahoma, XIV, 48
 standard section, XXIX, 141
 Stephens County, Texas, STR II, 471
 subdivisions, in Washington and adjacent counties, Oklahoma, XXIV, 720
 subdivisions, nomenclature, and correlations of, XXV, 1659
 Tatum pool, XIX, 404
 Tennessee, V, 646
 Texas, GAS, 610; STRAT, 541, 551, 665, 762, 781; III, 132; V, 377, 503; VI, 88, 151; X, 457, 461; XXIII, 845, 1697; XXV, 1065; XXVI, 204; XXVII, 776; XXIX, 723
 Texas, helium and nitrogen in, GAS, 1054, 1055

(Pennsylvanian)

- Texas and New Mexico, XXVII, 911
 Texas Panhandle, XXIII, 997, 998, 1002
 Tri-County field, Indiana, STR I, 25
 unconformable on Chester series, XXV, 873
 unconformities in, X, 1303
 upper, XXIX, 195
 upper, beds overlapping earlier formations in Arbuckle Mountains, XXIX, 188
 upper, clastics, XXIII, 1040
 Utah, VI, 205, 207, 224, 244; XXIII, 85, 124, 126; XXVII, 858; XXIX, 1143
 Venango district, STRAT, 509, 510
 Walnut Bend pool, STRAT, 781
 Pennsylvanian, west of Nemaha Granite Ridge, Kansas, X, 205
 discussion, X, 636
 Pennsylvanian, West Texas, PTNM, 616; XXV, 1055; XXVI, 616; XXVII, 763; XXIX, 1336, 1346
 West Virginia, STRAT, 809, 833
 Western Interior coal basin, XIII, 424
 western Kentucky, XVI, 250
 Wherry pool, STRAT, 124
 Wichita region, Texas, section, STR II, 546
 Wilbarger County, Texas, STR I, 299
 Wind River area, XXV, 131
 Wind River Mountains, Wyoming, XXV, 131
 Wyoming, PROB, 160; XXI, 991; XXIII, 481, 921, 1447; XXIV, 1101, 1220; XXV, 1150, 1152, 1157; XXVII, 473
 Wyoming, helium in, GAS, 1059
 Wyoming, pay zones of, XXII, 686
 Wyoming and Montana fields, XVI, 866
 Yates dome, XIII, 1556
 Zenith pool, STRAT, 143
 Pennsylvanian and Mississippian in Arkansas Valley region, Oklahoma, GAS, 515, 535
 Pennsylvanian and Mississippian formations, isopach map, XXVI, 1575
 Pennsylvanian and Mississippian periods, areas of thickest sedimentation in Oklahoma during, XXIV, 2008
 Pennsylvanian and Mississippian rock sequences properly of systemic rank, XXIX, 129
 Pennsylvanian and Mississippian rocks of North America, classification of, XXIX, 125
 Pennsylvanian and Mississippian strata near Black Knob Ridge, XXI, 13
 Pennsylvanian and Permian, boundary between, somewhat below top of Oquirrh formation in Rocky Mountains, XXIV, 627
 division line between, in Texas-New Mexico Permian basin, XXIV, 41
 in north-central and West Texas, major subdivisions of, XXIV, 80
 Pennsylvanian and Permian crudes of Oklahoma, comparisons of, XXV, 574
 Pennsylvanian and Permian rocks in Salt Creek area, Mosquito Range, Colorado, stratigraphy and structure of, XIX, 971
 Pennsylvanian and Permian sediments

- (Pennsylvanian)
exposed in central and west-central Oklahoma, XX, 1454
Pennsylvanian and Permian stratigraphy in north-central Texas, XXIV, 74
of southwestern United States, symposium on, XIII, 883
Pennsylvanian and pre-Pennsylvanian, Freezeout Mountain-Bald Mountain area, XXV, 891
Pennsylvanian and Upper Cretaceous production in Rattlesnake field, FOP, 75; XXV, 1507
Memorial shale of, in Oklahoma, XXV, 1591
of Paradox formation in Utah and Colorado, XVII, 970
petroliferous iron ore of, in eastern Ohio, XXVIII, 1051
Pennsylvanian beds, early, deposition of, on truncated Billings fold, XXIV, 2016
in Illinois basin, correlations of, XXII, 655
in New Mexico of Wabauunsee age, XXIV, 178
in western Illinois and southern Iowa, correlation of, XXVI, 1586
Pennsylvanian bituminous shales, GAS, 593
Pennsylvanian Caney beds, XXIII, 227; XXV, 1669
Pennsylvanian Cisco or Wolfcamp faunas, XXIII, 1699
Pennsylvanian climates and paleontology, XIV, 1279; discussion, XV, 84
Pennsylvanian conglomerate, STRAT, 124
Pennsylvanian correlation in east-central United States, XXII, 1520
in Illinois coal basin, significant uncertainties in, XXIII, 1507
interbasin, Illinois and Iowa, XXVI, 1585
Pennsylvanian crudes, PROB, 237, 240 of Texas, XXV, 570
Pennsylvanian faunas, XXIX, 143
Pennsylvanian faunule from Park City formation, XXIII, 86
Pennsylvanian folding, GAS, 548
Arbuckle area, XVIII, 583
Pennsylvanian formations, California, CAL, 61-63
eastern Oklahoma, thickening of, XI, 657
Marmaton and Cherokee Mid-Continent, regional extent of, XIV, 1249
north-central Texas, preliminary paper on stratigraphy of, III, 132
shallow, in vicinity of Olympic pool, cross section showing correlations of, XXII, 1582
Texas and Oklahoma, correlation of, XIII, 883
Pennsylvanian fossils, XIII, 459
distribution of, XXIV, 175
from Stanley shale, XXI, 12
in Moab region, Utah, XI, 790
in Wind River Mountains, XXV, 132
Pennsylvanian geosyncline of Ouachita Mountains, XXI, 1403
Pennsylvanian geosyncline basins in Oklahoma possible generating regions for oil of Kansas, XVII, 793
Pennsylvanian Hermosa formation in Elk Mountains, Gunnison County, Colorado, stratigraphy of, XIX,
- (Pennsylvanian)
1668
Pennsylvanian life in North America, environment of, XIII, 459
Pennsylvanian limestones, residues of some, XIX, 412
Pennsylvanian-Mississippian contact, GAS, 490
Pennsylvanian-Mississippian unconformity, PROB, 292
in Illinois basin, XXV, 874
Pennsylvanian movements creating anticlines in west Texas, FOP, 97; XXV, 1529
Pennsylvanian oil in Rocky Mountain states, gravity, PROB, 165
in Wyoming, gravity, PROB, 162, 163
Pennsylvanian oil and gas horizons at Oklahoma City field, XVI, 999
Pennsylvanian orogenic movement, XXIII, 830
Pennsylvanian Ouachita geosyncline, XXIX, 1338
Pennsylvanian overlap, discussion, XV, 471
Pennsylvanian overlap, in United States, XV, 113; discussion, XV, 704
Pennsylvanian paleogeography in Henryetta district, Oklahoma, VII, 50
Pennsylvanian period in Illinois basin, XXI, 779
Pennsylvanian-Permian of Glass Mountains and Delaware Mountains, correlation of, XIII, 903
Pennsylvanian-Permian boundary, XXIX, 169
in north-central Texas, XXIV, 95, 306, 315
in north-central Texas redefined by M. G. Cheney, XXIV, 13
in southern Nevada, problems of, XX, 1198
in western United States, XXIV, 308
Pennsylvanian-Permian contact in north-central Texas, map, STR I, 423
Pennsylvanian producing horizons, PROB, 161, 453
Pennsylvanian production in Illinois in 1942, XXVII, 818
Rattlesnake field, New Mexico, XXI, 1250
San Juan field, Utah, XXI, 1150
Pennsylvanian quartz sands in Crinerville field, Oklahoma, STR I, 207
Pennsylvanian redbeds in Borie region, Wyoming, XXI, 995
Pennsylvanian reservoir rocks, oil and gas produced from, in Mid-Continent, XXV, 1676
Pennsylvanian rocks, STRAT, 785
Arkansas-Oklahoma coal basin, columnar sections of, XX, 1344
columnar section of, XXII, 101
Kansas, stratigraphic classification of, XXI, 275
Marathon Mountains, geosynclinal, XXIX, 1338
New Mexico, chart showing correlation of, XXIV, 174
New Mexico, correlation of, XXIV, 173
New Mexico, references on, XXIV, 178
radioactivity studies on, XXIV, 1538
sections of, exposed in Washington
- (Pennsylvanian)
and parts of adjacent counties, Oklahoma, XXIV, 718
Wichita region, Texas, STR II, 545, 546
Pennsylvanian salt-bearing beds, southeastern Utah and southwestern Colorado, XIX, 1487
Pennsylvanian sands, PROB, 301
eastern Ohio, STR I, 142
lenticular, producing formations in Illinois, XXI, 787
productive of oil in Doyle area, Oklahoma, XXIV, 1029
Pennsylvanian sedimentation around Healdton Island, IV, 47
in Arkansas coal field, XXI, 1403
Pennsylvanian sedimentation and stratigraphy, Weller and Wanless theory of, XXIII, 1511
Pennsylvanian sediments, Arkansas coal field, source of, XXI, 1418
Amsden formation (Ca), SBP, 194-243
Atoka formation (Cat), SBP, 255-285
basal, PROB, 620
carbon content, SBP, 27-31
carbon-nitrogen ratio, SBP, 34, 35
Cherokee shale (Cr), SBP, 255-285
coal, SBP, 349-379
Douglas group (Cd), SBP, 255-285
Kansas City group (Ckc), SBP, 255-285
Lansing group (Cl), SBP, 255-285
Marine beds (Cmp), SBP, 255-285
Marmaton group (Cma), SBP, 255-285
McAlester shale (Csm), SBP, 255-285
Ouachita Mountains and Arkansas Valley, source of, XXI, 1419
Redbeds (Crp), SBP, 194, 259-261, 280, 414
Savanna sandstone (Csh), SBP, 255-285
Shawnee group (Csh), SBP, 255-285
source of, XV, 146
Stanley shale (Csl), SBP, 255-285
Tensleep sandstone (Ct), SBP, 194-243
undifferentiated beds (Cpe), SBP 285-292, 351-379, 413
Union Valley (Cuv), SBP, 255-285
Wabauunsee group (Cw), SBP, 255-285
Wapanucka limestone (Cwp), SBP, 255-285
Pennsylvanian shales, PROB, 59, 294
Crinerville field, Oklahoma, STR I, 206
Illinois, RMS, 489
Pennsylvanian source beds, PROB, 61, 294
Pennsylvanian strata above and including Herrin coal No. 6, stratigraphic column of, XXIII, 1513
correlations of, in Arkansas and Oklahoma coal fields, XVIII, 1050
Illinois-Iowa correlations of, XXVI, 1587
Pennsylvanian stratigraphy, Colorado, XXVI, 1395
Illinois basin, XXI, 784
Pennsylvanian surface formations, age and correlation of, and of oil and gas sands of Muskegoe County, Oklahoma, XIX, 503
Pennsylvanian system, areal geologic map of Chester series below,

- (Pennsylvanian)
 XXIV, 210
 discussion of divisions of, XXIX, 142
 of Michigan, XXI, 1599
 of New Mexico, XXVII, 1158
 of North America, classification of, XXIX, 140
 Pennsylvanian time, major structural development at Salem during, XXIII, 1367
 paleogeography of latest, XXVI, bet. 224 and 225
 Pennsylvanian underclays, RMS, 483
 Pennsylvanian uplift, Ancestral Rocky Mountains, XIV, 782
 early, importance in Mid-Continent, XXV, 21
 Hueco Mountains, XIX, 232
 Pennsylvanian waters, PROB, 863
 Pennsylvanian Wells formation, XXIII, 85
 Pennsylvanian zones in Rocky Mountain region, XXVII, 471
 Penny, F. W., IX, 1001
 review, XI, 1238
 Penny, O. H., X, 1249
 Penny sand in New York oil fields, STR II, 280
 Penokee pool, XXV, 1107
 Penrose, R. A. F., Jr., GC, 471, 551; SD, 9; IX, 839; XIII, 1336, 1348, 1356; XVII, 464, 469, 477, 482, 489, 1294, XXIX, 1715
 Penrose Bequest, MSC, 6
 of Geological Society of America, PTNM, 538; XXVI, 538; XXIX, 885
 Pentane, GAS, 1075, 1118, 1122, 1149
 Pentosans in sediments, RMS, 443
 Pentremital limestone, XIV, 133
Pentremites elongatus zone, XXI, 1163
 Peoples Natural Gas Company, XXII, 1183
 data on storage pools operated by, XXVIII, 1565
 Our experience with underground storage of gas, XXIV, 1482
 storage operations, XXVIII, 1575 (well 420), SBP, 249-379, 410
 Peoples sand, II, 121
 Pepper, J. F., SBP, 356
 Pepperberg, Leon J., GAS, 1073, 1095, 1096, 1145; PROB, 420, 421, 779; III, 161; XVIII, 1079
 factors governing estimation of recoverable oil reserves in sand fields, discussion, XVIII, 1079
 memorial of, XXI, 970
 Nigger Creek field, Limestone County, Texas, STR I, 409
 review, V, 680
 thermal currents as factor in oil accumulation, VII, 429
 Peptizer for mechanical analyses, RMS, 537, 539, 540
 Percentage content of fractions in crude oils, variation with depth and age, XXI, 917
 of low, medium, and high boiling fractions, variation of, with depth and with age, XXI, 918
 Percentage method of stratigraphic dating, XXIV, 2051
 Percentages of minerals in Oriskany sandstone, XXII, 557-559
 Percha shale, IV, 105; XXIV, 164; XXV, 2111, 2122
 Perched water table, XVI, 338
 Percilla area, Houston County, Texas, XXII, 730; XXIII, 894; XXIV, (Percilla)
 1066; XXV, 1087
 Percival, J. C., XI, 404
 Peregrina, stratigraphy, MEX, 7-9, 14
 Perez, Nestor Luis, XXII, 1102
 Perforating casing on basis of gamma-ray logs, results of, XXV, 1782
 Peri-Alpine type of oil occurrences, XVIII, 737
 Peridineans, RMS, 441, 444, 445
 chemical composition of, RMS, 442
 Period, XXIII, 1087
 Periodic revolutions not in harmony with Wegener's theory, CD, 86
 under Joly's hypothesis, CD, 48, 52
 Periodic variations in sea, RMS, 57, 58
 Periodical library service at Association headquarters, XVIII, 1215
 Periodicity in nature and succession of geological periods, XXIX, 1035
 of geological phenomena, CD, 94
 Periods of geologic time, elements of natural foundation of, XXIV, 348
 Peri-Pacific region in recent tectonics, XX, 858
 Peripheral fault, High Island dome, GC, 932; XX, 583
 Peripheral sink, XX, 1416
 postulated by fluid mechanical concept of salt-dome formation, GC, 102, XVIII, 1198
 Perkins, Joseph M., XI, 633
 Perkins area in Calcasieu Parish, Louisiana, XXIV, 1085
 Perm, district, XXII, 759
 Permanence of the oceans and continents, CD, 191
 Permanency of earth's greater features, CD, 140
 Permanganate, SBP, 37
 Permeability, GAS, vi; PROB, 448, 461, 472, 475, 481, 482, 807-809, 828; RMS, 215, 457, 528; XXVI, 1723
 apparatus used in measuring, XXVII, 70
 continuance of, most important reservoir factor in pressure-maintenance program, XXVIII, 227
 important in Chemung gas fields, GAS, 974
 its measurement and value, XVI, 373; XVII, 868
 of core, determination of, XXVII, 69
 of cores, increase in, when acidized, XXV, 852
 of cores and connate-water saturation, relation between, XXV, 1313
 of Jones sand, XXVIII, 223
 of Patton zone, XXIII, 317
 of porous media, measurement of, XVIII, 161
 of producing formations in Hugoton field, XXIV, 1802
 of producing sand in Government Wells field, GC, 639; XIX, 1139
 of producing zones in Turner Valley field, XXIV, 1634
 of reservoir sand body, application to repressuring, XXV, 1178
 of rock, measurement of, XIV, 1347
 of sands in oil, influence of connate water on, XXII, 1248
 of unconsolidated rocks, XIX, 1233
 volume, and pressure, comparison of, XXII, 197
 Permeability and absorption of oil and gas sands, apparatus for determining, IX, 442
 Permeability and impermeability of limestone reservoir rocks, MEX, (Permeability)
 191, 207, 214, 219
 Permeability and porosities of pay sands in north-central Texas, XXIV, 117
 Permeability and porosity, distinction between, XVI, 373
 estimating from radioactivity logs, XXV, 1776
 of Wilcox deposits, XXIV, 1920
 relative, of producing formations of Hugoton field as indicated by gas withdrawals and pressure decline, XXIV, 1798
 Permeability analyses, STRAT, 504, 524, 528, 729, 730
 Permeability determinations, results of, XXVII, 73
 Permeability measurements, XXV, 854
 on consolidated Travis Peak sandstone, graph showing effect of water on, XXVII, 76
 on Walnut limestone, graph showing effect of water on, XXVII, 75
 Permeability profiles, Schuler fields, XXVIII, 225, 226
 Permeability trap reservoirs, XXIX, 1554, 1555
 Permenter's Farm beds in Walton County, Florida, XXV, 269, 273
 Permiakov, I. G., XXIII, 503
 Permian, CAL, 62, 64, 91, 96, 281, 301; GAS, 99, 381; MEX, 7, 8; PROB, 43, 110, 173, 350, 353, 411, 413, 576, 822
 Amarillo district, GAS, 390; XVII, 879
 Appalachian region, XXIV, 312; XXV, 796
 Arizona and New Mexico, X, 819
 Association subcommittee on, classification of Permian rocks, XXIV, 337
 Australia, XXI, 1124
 Australia, sea temperatures of, XX, 1066, 1067
 base of, XXIII, 1709; XXIV, 273, 353
 base of, at base of Kungurian, XXIV, 277
 base of, drawn at Cisco-Wichita boundary in north-central Texas, XXIV, 305
 base of, in Pecos Valley, XXI, 872
 base of, in western Texas, at base of Wolfcamp beds, XXIV, 282
 Big Lake field, Texas, STR II, 506, 508, 512
 Billings field, Oklahoma, XXIV, 2011
 Central basin of Appalachian geosyncline, XXV, 781
 central Oklahoma, XXV, 1682
 characteristics of, XXVI, 254
 China, III, 101; XXVIII, 1423
 Chinati Mountains, Texas, XXIV, 182
 classification of, XXII, 925; XXVI, 254
 climate, XXI, 883
 climate in United States tropical, CD, 99
 Colorado, VI, 89
 correlation of standard series of, XXIII, 1677
 Cunningham field, Kansas, XXI, 503, 505
 cyclical nature of sedimentation in, XXVI, 254
 Dakota basin, XXVI, 1563
 Diablo Plateau, unconformity at base of, FOP, 104; XXV, 1536

- (Permian)
different opinions concerning base of, XXIV, 275
distribution of, in Mid-Continent region, XXV, 1678
Dunkard beds classed as, by David White, XXIV, 313
Eastern Shelf area, PTNM, 694; XXVI, 694
eastward change in, from fossiliferous marine beds to nonfossiliferous red mudstone, grit, and conglomerate, characteristic of Permian of Great Basin, Colorado Plateau, and Rocky Mountain provinces, XXIV, 631
Europe, I, 86
Florence field, Colorado, STR II, 78
Franklin Mountains, Texas, XXIV, 171
French fields, XVI, 1137
Freezeout Mountain-Bald Mountain area, XXV, 886, 891
Garber field, Oklahoma, STR I, 179
Gay- Spencer- Richardson trend, STRAT, 809
Glass Mountains, Texas, PTNM, 644; X, 877; XXVI, 644
Goldsmith field, Texas, XXIII, 1527
gradual retreat of sea during, XXVI, 254
Grand Canyon, X, 824
great thickness of, near Wileysville, Wetzel County, West Virginia, XXV, 796
Greenwich pool, XXIII, 648
Guadalupe Mountains section, thickness of, PTNM, 553; XXVI, 553
Hewitt field, Oklahoma, STR II, 292, 293
Hugoton field, STRAT, 85, 87; XXIII, 1058
Hull-Silk pool, STRAT, 665
in Oklahoma and Kansas, stratigraphy of, XXI, 1513
in Oklahoma and southern Kansas, major divisions of, XXI, 1515
in parts of Rocky Mountain and Colorado Plateau regions, XXIV, 617
in subsurface in Mid-Continent, XXV, 1687
inclusion of Wolfcamp series in American standard section of, XXIV, 353
India, IX, 1269
Iowa, XXV, 1687
Iraty formation, oil shales of, XXI, 120
Kansas, GAS, 466, 467; STRAT, 85, 108, 124, 141; II 75, 111; IV, 184; V, 421, 508; VI, 70, 551; X, 786; XXIII, 1697; XXIV, 1782; XXV, 1685
Las Delicias area, XXVIII, 307
Permian, Logan and Lincoln counties, Oklahoma, XVII, 241; discussion, XVII, 562
Permian, Lost Soldier district, Wyoming, STR II, 638, 641
lower, arguments for classifying Sakmarian, Wolfcamp, and equivalent rocks as, XXIV, 327
lower, boundary in trans-Pecos Texas, XXIV, 308
lower, correlations in Cleveland, McClain, and Garvin counties, Oklahoma, XVI, 119
lower, of western Urals and Preduralie, scheme of correlation of (Permian) sections of, XXII, 775
lower, pre-Redbeds, XXIII, 1040
lower, Rotliegende series, XXIV, 293
lower, Texas, New Mexico, Oklahoma, Kansas, and Nebraska, Sakmarian correlated with, XXIV, 275
lower, *Uddenites*-bearing beds in western Texas assignable to, XXIV, 307, 316
lower, West Texas, XXVIII, 815
lower boundary of, defined by U. S. Geological Survey and state surveys of Kansas, Nebraska, and Oklahoma as base of Cottonwood limestone, XXIV, 301
lowermost, in northern England, correlated with Saxonian (upper Rotliegende) deposits of continental Europe, XXIV, 294
map of ice, coal measures, and arid regions, CD, 17
marine facies of, XXI, 846
Mexico, map, XXVIII, 304
Michigan, XXIV, 1953
Mid-Continent, V, 548-584; XXV, 1680
Mid-Continent, references on, XXV, 1704
Mid-Continent, subdivisions, nomenclature, and correlations of, XXV, 1679
Middle, of southern Urals, XXIII, 497
Montana, IV, 314; VII, 175
Morrison field, Oklahoma, STR I, 148
names defined in type region of proposed American standard section of, preferable at present to use of Russian names, XXIV, 358
Nebraska, XXIII, 1697; XXV, 1686
Nemaha Mountains region, Kansas, STR I, 61
Nevada, XX, 1199
new areas of established pay zones in, XXV, 1048
New Mexico, STRAT, 752; I, 101; IV, 74, 95; V, 165, 329, 605; VI, 87, 89; XXI, 856; XXV, 155; XXVI, 63
New Mexico, development and exploration of established pay zones in, XXVII, 767
Noodle Creek pool, STRAT, 701, 702
north and west-central Texas, XXIV, 1044; XXVIII, 837
North Cowden field, Texas, XXV, 600
North Dakota, XXVI, 349, 1419
north Texas, XXVI, 1046
North Sea, RMS, 331, 332
north-central Texas, shallow salt-type structure in, XVII, 577
north-central Texas and southern Oklahoma, XXI, 1017
northern Mid-Continent, FOP, 82; XXV, 1514
of Oklahoma, Kansas, and Texas, bibliography of, XXI, 1573
of Russia, comparison of, with Permian of America and Orient, XXIV, 265
of trans-Pecos region, paleontology of, XXV, 97
of West Texas and southeastern New Mexico, PTNM, XXVI, 535
of western America from paleobotanical standpoint, review, XI, (Permian) 517
oil and gas districts that produce from, in Mid-Continent, XXV, 1687
Oklahoma, II, 54-58, 114; III, 256, 263, 444; IV, 173; V, 32, 175, 327, 427, 469, 627, 628, VI, 54, 368, 413; X, 645, 786; XXIII, 825, 1697; XXIV, 736, 1997; XXV, 10, 1684; XXVIII, 785
Oklahoma and northern Texas, correlation, X, 144
Oklahoma City field, XVI, 965
oldest, in northeastern Arizona, southwestern Colorado, and southern Utah, XXIV, 309
Ouchita-Amarillo province, XIII, 425
Page field, XXV, 632
paleogeography of, CD, 144
paleontology of, from Texas to Nebraska, XXIII, 1697
Panhandle fields, Texas, oil and gas in, VII, 242
Permian, Pennsylvanian, Mississippian and Ordovician formations at Greenwich pool, cross section showing relationship of, XXIII, 656
Permian, Petrolia field, Texas, STR II, 544
-post, deposits in north central Oklahoma, observations on, I, 136
provinces of, West Texas, PTNM, 664; XXVI, 664
rapid evolution of fusulines, ammonites, corals, land plants, and reptiles in, XXIV, 278
regional correlation chart of, from Texas to Nebraska, XXIII, 1708
regional correlations of, PTNM, 664; XXVI, 664
Robberson field, Oklahoma, VII, 635
Rocky Mountain region, VII, 406; XXIII, 1141; XXVII, 423, 465
Russia, XI, 497; XXIII, 956; XXV, 1396, 1404
Russia, Murchinson's recognition and naming of, XXI, 833
Salt Creek field, Wyoming, STR II, 593
Sand Belt, STRAT, 752
Sand Hills area, Texas, XXIV, 126, 131
Seymour pool, STRAT, 760, 762
Shinnston pool, STRAT, 833
should proposed standard section of, be called "stages"? XXIV, 2044
some marginal Middle, marine strata, paleoecology and environments inferred for, XXVIII, 1012
(?), south Arkansas, XXII, 962
southeastern New Mexico and northern Trans-Pecos Texas, correlation of, XIII, 649
southern Mid-Continent, XXVI, 219
southern Urals, XXIII, 497
southern Utah, northern Arizona, northwestern New Mexico, and southwestern Colorado, correlation of, XIII, 1413
standard series divisions of, proposed by Adams and others, recommended for general use, XXIV, 340
subsurface cross section of, from Texas to Nebraska, XXIII, 1694, 1702
subsurface cross section of, from Texas to Oklahoma, XXIII, 1704

(Permian)

- Texas, GAS, 1054, STRAT, 605, 702, 752, 760; I, 93; III, 25, 94, 117, 132, 170; IV, 270, 274; V, 14, 23, 154, 378, 419; VI, 88; X, 464; XXII, 925; XXIII, 845, 1697; XXV, 1068
- Texas, new formation name for uppermost beds of, XXII, 925
- Texas, notes on, I, 93
- Texas, structural development and oil accumulation in, XIII, 1033
- Texas and New Mexico, XXIV, 22; XXV, 78, XXVII, 911
- Texas and New Mexico, correlation of, XIII, 997
- Texas Panhandle, X, 735; XXIII, 997, 1002
- the type: its classification and correlation, XXIV, 237
- Tonkawa field, Oklahoma, VIII, 274 top of, XXIV, 354
- trans-Pecos Texas, XIX, 233
- type, in Russian platform and Uralian geosyncline, XXIV, 237
- type area in Russia, Wolfcamp series correlated with, PTNM, 548; XXVI, 548
- unconformable on Ellenburger in Sand Hills area, XXIV, 130
- U.S.S.R., XXII, 1015
- upper, age, Emba salt series of, XXIII, 497
- upper, evaporites, XXVIII, 1621
- upper, formation of Delaware basin of Texas and New Mexico, XIX, 262, 561
- upper, Ochoa series of Delaware basin, West Texas and southeastern New Mexico, XXVIII, 1596
- upper, of western Oklahoma, cross section of, XXI, 1553
- upper, Redbeds, XXIII, 1040
- upper, salt series in Hanover, stratigraphic section of, XII, 471
- upper, and Triassic redbeds in Yates area, Texas, XXIV, 140
- Ural region, subdivisions, XXII, 1014
- Urals, XXI, 1442
- Utah, PROB, 165; VI, 89, 205, 210, 244; XXIII, 124, 126
- Utah and Colorado, GAS, 370, 1057
- Wasson field, Texas, XXV, 1880; XXVII, 488
- West Texas, FOP, 95; PTNM, 616; XVI, 191; XXIV, 1037; XXVI, 616; XXVII, 751
- West Texas, developments in 1940 XXV, 1047; XXIX, 734
- West Texas, developments in 1941, XXVI, 1016
- West Texas, developments in 1942, XXVII, 753
- West Texas, lower boundary of, PTNM, 547; XXVI, 547
- West Texas, marked unconformity at base of, XXIV, 13
- West Texas, pav zones in, XXVII, 754
- West Texas, stratigraphic complexities, PTNM, 543; XXVI, 543
- West Texas, subdivisions of, PTNM, 549; XXVI, 549
- West Texas, upper boundary of, PTNM, 545; XXVI, 546
- West Texas and New Mexico, PROB, 322; XXII, 696; XXV, 73, 1715
- West Texas and New Mexico, new areas of pay zones discovered in 1941, XXVI, 1018

(Permian)

- West Texas basin province, XIII, 430
- West Texas region, correlation chart of, insert, PTNM, XXVI, prec. 535
- West Texas region, great thickness of, PTNM, 541; XXVI, 541
- West Texas region, structure during, PTNM, 721; XXVI, 721
- West Virginia, STRAT, 809, 833
- Westbrook field, Texas, STR I, 282, 285, 289
- Western Australia, XXV, 371
- western Oklahoma, XII, 705
- Wherry pool, STRAT, 124
- Wind River Canyon area, XXIII, 1449
- Wind River Mountains, Wyoming, XXIV, 629; XXV, 132
- Wolfcamp series, base of, XXVI, 221
- Wyoming, PROB, 160; III, 357, V, 191, 408; VI, 88, 89; XXI, 991; XXIII, 481, 1447; XXIV, 1220
- Wyoming and Black Hills, XXIV, 312
- Wyoming and Montana fields, XVI, 866
- Yates area, Texas, XXIV, 135
- Yates field, Texas, STR II, 487, 495; XIII, 1544; XV, 1088
- youngest folded beds of Appalachians, XXV, 422
- Zenith pool, STRAT, 141
- Permian and Carboniferous, distribution of floras, CD, 21
- in Russia, boundary between, XXII, 1015
- Permian and Carboniferous deposits, succession of, in southern Nevada, XXIV, 309
- Permian and Carboniferous rocks of Kansas, work on, XXIV, 299
- outcropping, of Trans-Pecos Texas, stratigraphy of, XIII, 907
- Permian and Carboniferous systems, base of Abo sandstone boundary between, in New Mexico, XXIV, 308
- Permian and Cisco beds most important producers in north Texas, XXIII, 849
- Permian and later Carboniferous sediments in Russia, section of, at close of Kazanian epoch, XXV, 1401
- Permian and Lower Cretaceous unconformable on Pennsylvanian in Ardmore-Ardmore province, XXV, 10
- Permian and Middle and Upper Carboniferous formations in U.S.S.R., United States, and South China, correlation chart of, based chiefly on fusuline zones, XXIV, 266
- Permian and Pennsylvanian, division line between, in Texas-New Mexico Permian basin, XXIV, 41
- Oklahoma, XXVI, 1069
- Permian and Pennsylvanian rocks in Salt Creek area, Mosquito Range, Colorado, stratigraphy and structure of, XIX, 971
- Permian and Pennsylvania sediments exposed in central and west-central Oklahoma, XX, 1454
- Permian and Pennsylvanian stratigraphy in north-central Texas, XXIV, 74
- of southwestern United States, symposium on, XIII, 883
- Permian and post-Permian rocks, West

(Permian)

- Texas and southeastern New Mexico, correlation chart, XXVI, 1013
- Permian and Triassic in Hunter River area, New South Wales, XXIV, 637
- Wyoming, XXVII, 856
- Permian age, a probable buried mountain range of, east of present Rocky Mountains in New Mexico and Colorado, V, 605
- of Gulf Coast salt, X, 10
- of Ouachita deformation, XIV, 66
- Verden sandstone of Oklahoma, an exposed shoestring sand of, XXIII, 559
- Permian algal reef in South Park, Colorado, XVII, 863
- Permian ammonite zones of Crimea, XXII, 1016
- of Darwaz, XXII, 1016
- of Pamirs, XXII, 1016
- of southern Urals, XXII, 1016
- of western Texas, XXII, 1016
- Permian ammonoid zones of Soviet Russia, comparison of, with those of North America, XXII, 1014
- Permian ammonoids, XXIII, 1675
- Permian Ancestral Rockies, XIV, 782
- Permian anhydrite, GAS, 449
- Permian back-reef sediments in New Mexico, nomenclature of, XXVI, 84
- Permian basin, PROB, 352, 577, 870; XXV, 785, 1047; XXVI, 64, 85, 223, bet. 224 and 225; XXVII, 917
- Big Lake oil pool on southeast structural slope, STR II, 525
- correlation of San Andres with formations south and west of, XXV, 74
- Dockum series in, XIII, 1046
- Eastern platform of, XXV, 1053
- from Kansas to West Texas, diagram of, XXI, 885
- geological exploration of, XXI, 836
- microscopic subsurface work in, XV, 738
- notes on southern part of, XX, 1250
- of Russia, stratigraphic relations of Middle and Upper Carboniferous and Permian strata, of, XXIV, 264
- of west Texas and southeastern New Mexico, XXIII, 1525
- oil accumulation in XVI, 51
- oil-producing formations, XIII, 1029
- origin of, XXI, 888
- possible nature of limestone reservoirs in, XXII, 915
- relation to Wheat pool, XX, 781
- Salado formation of, XXIII, 1569
- section across, from Moscow to Urals, XXIV, 242
- section across, showing relationship of San Andres of central New Mexico to Dog Creek, Blaine, and Flower Pot-San Angelo of north-central Texas, XXVI, 234
- south, stratigraphic features of, XXV, 79
- stratigraphy of, XXIV, 241
- subnormal temperature in, XXI, 1193
- west of Urals, section, XXVI, 405
- West Texas, GAS, 417-424; PROB, 339, 1008; STR II, 516; XXI, 1084
- West Texas, dolomite porosity in Devonian of, XXVIII, 1043
- West Texas, electrical survey in, XIV, 1160
- West Texas, subsurface correlation methods in, XIII, 171

- (Permian)
 West Texas, upper Permian stratigraphy of, XIX, 1010, 1544
 West Texas and southeast New Mexico transverse section of, XIV, 969
 West Texas-New Mexico, extent of Castile formation of, XXIII, 1682
 West Texas-New Mexico, regional cross sections, XXIV, 12
 West Texas-New Mexico, section through, showing operators, wells, and locations, XXIV, 16, 30, 38
 Permian basin area, classification of traps in, XXI, 206
 Permian basin geology, XXI, 880
 Permian basin province in Leonard time, XXVIII, 1021
 Permian basin sea, showing zones of increasing salinity, XXI, 885
 Permian beds, correlations, elevations, and interval changes of, between two wells in Cooper pool, Lea County, New Mexico, shown by comparison of gamma-ray and electric logs, XXV, 1785
 dome in, in Big Lake field, Texas, STR II, 526
 exposed west of Shafter, younger than Cibola, XXIV, 187
 northwestern Oklahoma, stratigraphy of, XV, 405
 Permian Big lime, PROB, 351, 869
 Permian boundaries, relation of principles to definition of, XXIV, 351
 Permian boundary, lower, division among Russian geologists as to placement of, XXIV, 323
 lower, placement of, in northern Mid-Continent, above Carlton limestone member of Wellington shale, XXIV, 303
 Permian brachiopods, XXIII, 1675
 Permian brown dolomite, XXIX, 722
 Permian Capitan Reef fields, West Texas and New Mexico, XXVII, 897
 Permian-Carboniferous boundary, XIV, 282
 in northern Mid-Continent region, XXIV, 314
 in Russian section, tendency toward revision of, XXIV, 283
 in type section of eastern Russia, revision of, desirable, XXIV, 327
 Permian Cimarron red shales, anhydrites, and salt deposits, XXIV, 1798
 Permian committee of National Research Council, XXIV, 338
 Permian conference, XXIV, 604
 Norman, Oklahoma, May 8, 1937, discussions at, XXI, 1559
 pre-Congress, in the U.S.S.R., discussion, XXII, 771
 scientific results of, XXII, 771
 Permian contact, basal, in southern Kansas and northern Oklahoma, XXI, 1517
 Permian correlation, XIII, 913
 Permian correlation chart, Western Interior United States, XXV, 436
 Permian correlation meeting, Centennial, Wyoming, September, 1940, XXV, 429
 Permian crude oils, microscopic examination of, XXIV, 2181
 Permian crudes of West Texas, XXV, 568
 Permian deposits along flanks of Rockies in southern Wyoming and (Permian)
 Colorado, lower boundary of, XXIV, 312
 in parts of Rocky Mountains and Colorado Plateau region, composite correlation diagram showing relation of, XXIV, 633
 Permian developments, upper Delaware Mountain, Yates and Seven Rivers, XXIX, 744
 Permian discoveries in southeastern New Mexico in 1944, XXIX, 751
 Permian dolomite, GAS, 391, 441
 Amarillo district, GAS, 386
 Permian dolomite reef, producing structure in Cooper pool, XXV, 1785
 Permian epicontinental sea, XXI, 882
 Permian fauna in Val Verde County, Texas, XXV, 78
 Permian features in West Texas region origin of, PTNM, 726; XXVI, 726
 Permian formation, upper, of Delaware basin of Texas and New Mexico, XIX, 262, 561
 Permian formations, change of color with change of composition, XXI, 885
 interfingering of, XXI, 1559
 Minnekahta limestone surest key-bed in regional correlations of, and their subadjacent Pennsylvanian and superjacent Triassic beds, XXV, 431
 of Colorado, nomenclature, XIII, 1439
 of Pecos Valley of New Mexico and Texas, XXI, 833
 of Pecos Valley, correlation of, with those on eastern side of Permian basin in Texas and southwestern Oklahoma, XXI, 878
 Permian fossil plants in Kansas, Oklahoma, and north Texas, XXIV, 315
 Permian fossils, Arizona, X, 825
 found below Welch chert in Dickinson County, Kansas, XI, 1118
 investigations on, PTNM, 538; XXVI, 538
 Kansas, X, 148
 Moab region, Utah, XI, 792
 Oklahoma, X, 148
 Texas, X, 148
 Utah, XXIII, 85
 Wind River Mountains, XXV, 132
 Permian fusuline zones, XXIV, 270
 Permian fusulinidae of Texas, XXI, 1359
 Permian fusulinids, XXIII, 1675
 Permian gas well in Cunningham field, Kansas, XXI, 503
 Permian gas zone, productive at Cunningham field, Kansas, XXI, 521
 Permian geosyncline of West Texas, XIV, 923
 Permian Glass Mountains, XV, 1030
 Permian group, upper, in eastern Midland basin, XXIV, 61
 Permian Guadalupe series in Payton pool, XXVI, 1637
 Permian history and areal extent curves, XXVI, 247
 Permian ice-age in Australia, unity of, XXV, 407
 Permian invertebrate faunas, XXIV, 301
 Permian ledge-makers in Concho County, Texas, XVII, 1577
 Permian limes in Big Lake field, Texas, oil indigenous in, STR II, 525
 Permian limestone in Szechuan, possibilities for production in, XXVIII, 1439
 Permian limestone pay productive in North Cowden field, XXIV, 1031
 Permian limestones, PROB, 352, 577; GAS, 439, 442, 449
 of West Texas, dolomite in, XIX, 1678
 productive in Westbrook field, Mitchell County, Texas, XI, 473
 Permian limestones and calcareous shales of Embarras formation, probable source of oil in Tensleep sand, PROB, 161
 Permian limestones and dolomites, Big Lake field, Texas, X, 374
 Permian marine beds in Rocky Mountain states, PROB, 162
 Permian nomenclature, West Texas-New Mexico region, XXIV, 6
 Permian Ochoa series in Payton pool, XXVI, 1635
 Permian oil and gas in Rocky Mountain states, PROB, 163, 164
 Permian "omphalotrochus beds" of U.S.S.R.? Discussion, XXIV, 1128
 Permian outcrops on eastern side of West Texas basin, correlation of, XIII, 945
 Permian pay zone, new, XXIX, 744
 Permian pay zones, new, found in 1941, XXVI, 1016
 new, in West Texas, XXV, 1047
 Permian-Pennsylvanian, cross section of, northeastern Arizona to western Nebraska, XXIII, 1141
 Permian-Pennsylvanian boundary placed at base of Cottonwood limestone by David White, XXIV, 302
 Permian-Pennsylvanian contact in Stone-wall Quadrangle, Oklahoma, XX, 1462
 Permian Phosphoria formation, in northern Utah, southern Idaho, and Wyoming, XXIV, 311
 Permian plants of Autunian type in Appalachian area, XXIV, 317
 Permian precipitates in Texas Panhandle, XXIII, 1040
 Permian problems, XXIV, 337
 geologists consulted on, XXIV, 338
 Permian provinces and basins in United States, XXI, 837
 Permian redbeds, XXIII, 499, 566; XXVIII, 1615
 Artesia field, New Mexico, STR I, 114
 Big Lake field, Texas, X, 371
 helium in, GAS, 1055
 Hewitt field, Oklahoma, syncline of, STR II, 291
 Kansas, XXIII, 1751
 Kansas, early work on, XXIII, 1754; 1815
 Kansas, stratigraphy of, XXIII, 1755
 New Mexico, XXI, 856
 of southwestern Oklahoma, new classification of, VIII, 322
 Oklahoma and Kansas, XV, 427
 source of, XIV, 785
 southwestern Oklahoma, VIII, 322; XIV, 50
 trans-Pecos Texas, XXI, 856
 West Texas, IX, 1215
 Wilbarger County, Texas, STR I, 294
 Permian reservoirs, PROB, 59, 60

- Permian rocks, classification of, XXIV, 337**
 exposed west of Shafter, XXIV, 183
 in America in western Texas and New Mexico, XXI, 834
 in Fletcher potash core test, log, XXVI, 66-69
 in Guadalupe Mountains and Glass Mountains, stratigraphic diagram, PTNM, 542; XXVI, 542
 in New Mexico, geothermal experiments on, XXI, 1194
 in United States, diversity of opinion and usage in nomenclature and correlation of, XXIV, 337
 lower boundary of, zone of *Uddenites* in western Texas, XXIV, 316
 marine, important areas of, XXIV, 265
 of different lithologic character, temperature tests through, in Getty pool in eastern Eddy County, New Mexico, XXI, 1193
 of trans-Pecos region, fusuline zones of, XXV, 97
 of world an independent geologic system, XXIV, 339
 oldest, in area of west side of Central Basin platform, Texas-New Mexico, XXIV, 33
 radioactivity studies on, XXIV, 1538
 relation of classifications of, XXI, 428
 selection of an American standard section of, XXIV, 339
Permian saline deposits, distribution of, XXI, 884
Permian salt basin, XIII, 993; XXI, 1016, 1017; XXIII, 986
Permian salt formation in Germany XVI, 1145
Permian salts and anhydrites, XXVI, 230
Permian sea, island in, XVII, 1391
Permian seas, areal extent of, in southern Mid-Continent, XXVI, 246
 extension of, during Wolfcamp epoch, XXVI, 226
 rhythm of—a paleogeographic study, XXVI, 217
Permian section in Wichita Mountains, XIV, 47
 standard, of North America, XXIII, 1673, XXVIII, 1596
 standard, of western United States, XXIV, 619; XXV, 436
Permian sections along east side of Wasatch Mountains from Diamond Fork to Park City, Utah, XXIV, 623
 from Bass Trail, Arizona, to Rico, Colorado, XXIV, 620
 from Malta, Idaho, to Rattlesnake Hills, Wyoming, XXIV, 630
 from Park City, Utah, to Phosphoria Gulch, Idaho, XXIV, 627
 from Mineral Mountain to Fisher Valley, Utah, XXIV, 622
 in Oklahoma and southern Kansas, index map showing geographic location of, XXI, 1516
Permian sedimentation, factors controlling, XXI, 880
Permian sedimentary rocks, New South Wales, possibilities of heavy-mineral correlation of some, XXIV, 636; discussion, XXIV, 1682
Permian sediments, STRAT, 96
 carbon content, SBP, 27-31
- (Permian)**
 carbon-nitrogen ratio, SBP, 34, 35
 Chase group (Cch), SBP, 255-285
 Cimarron group (Cci), SBP, 255-285
 Council Grove group (Ccg), SBP, 255-285
 Delaware basin of West Texas and southeastern New Mexico, XXIII, 1673
 Embar formation (Ce), SBP, 194-243
 probability of, in East Texas basin, XXVII, 1229
 Sumner group (Cs), SBP, 255-285
 undifferentiated beds (Cp), SBP, 285-292, 413
 West Texas region, PTNM, 729; XI, 722; XXVI, 729
 Permian series, west Texas, XI, 722
 Permian stegocephalians, XXIV, 263
 Permian strata of Pecos Valley, XXI, 834
Permian stratigraphy, New Mexico and Texas, XXI, 859
 of Colorado Plateau, XXIV, 620
 of southeastern New Mexico and adjacent parts of western Texas, XIII, 927
Permian stratigraphy and structure of southeastern New Mexico and southwestern Texas, XIII, 957
Permian structure and stratigraphy of northwestern Oklahoma and adjacent areas, XIV, 161
Permian sub-committee of the committee on geologic names and correlations, XXIII, 1430
Permian subsurface correlations, paleontology establishing, XXIII, 1697
Permian succession of trans-Pecos Texas, study of rocks and fossils of, XXIV, 307
Permian symposium, discussion of, XIII, 1057
Permian system, XXIV, 289
 Delaware basin and vicinity suitable as a standard of reference for North America, XXIV, 339
 divisions of, XXII, 1674
 eastern Midland basin, XXIV, 55
 north-central Texas, XXIV, 94
 original definition of, XXIV, 240
 pronounced disconformity separating Permian from overlying Triassic, recognized as upper boundary of, XXIV, 340
 Salt Fork division of Cimarron series, in Kansas, XXI, 1557
 standard section of, in United States, of value, though incomplete, XXIV, 356
 Russia, XXIV, 249
 unconformity at base of, XXIV, 350
 U.S.S.R., map of type region of, XXIV, 238
 western United States, correlation of, XXV, 437
 zone of *Pseudoschwagerina* and *Proterinites*, lowest part of, XXIV, 340
Permian tilitites, distribution of, CD, 136
Permian time, length of, XXV, 1722
 map of West Texas region showing provinces of, PTNM, 665; XXVI, 665
 subsidence of western part of Mid-Continent region during, XXIV, 111
- Permian-Triassic in East Indies, thickness of strata, XXII, 7**
Permian-Triassic rocks, Como Bluff anticline, Wyoming, XXVIII, 1201
Permian-Triassic unconformity in East Indies, XXII, 7
 Permian unconformities, III, 256
 Permian volume, XXIII, 1593
Permian Word formation: its faunal and stratigraphic correlatives, Texas, XXIX, 1766
Permian zones in Rocky Mountain fields, XXVII, 472
Permo-Carboniferous, Argentina, XXIX, 515
 in Irwin River district of Western Australia, XXI, 1134
Permo-Carboniferous fossils, Western Australia, X, 1142
Permo-Carboniferous glaciation in Australia, XXV, 408
Permo-Carboniferous glaciation and the Wegener hypothesis, CD, 137
Permo-Carboniferous orogeny in south-central United States, XV, 991; XVI, 102; discussion, XVII, 91
Permo-Carboniferous rocks of Northwest Basin, X, 1139
Permo-Carboniferous sequence in Australia, XXV, 402
Permo-Carboniferous stratigraphy of Northwest Basin, Australia, XX, 1033
Permo-Mesozoic areas of Queensland XI, 76
Permo-Pennsylvanian, Dakota basin, XXVI, 1563
Permo-Pennsylvanian and Permian in Rocky Mountain region, paleogeography of, XXI, 1255
Permo-Pennsylvanian crudes of Texas, XXV, 569
Permo-Pennsylvanian deposits of pre-Redbed division, most important economically in Texas Panhandle, XXIII, 1040
Permo-Triassic formations, PROB, 61
Permo-Triassic Gondwana rocks of Uruguay, XIX, 1205
Permo-Triassic sands productive of oil in Emba salt-dome region, U.S.S.R., XXIII, 508
 Permutit reaction, XI, 1287
 Pernambuco beds of Brazil, XV, 160
 Pernet, A., XII, 799
 Perovskite, RMS, 602
 Perpendicular-slip fault, XXV, 2182
 Perquin, J. N. J., and Waterman, H. I., XVII, 1256
 Perrigo, H. H., XXVI, 1318
 Perrine, Irving, I, 32; IV, 118
geological conditions in central Kansas, II, 70
 memorial of William Peter Haseman, XVI, 527
responsibility of geologist in sale of oil and gas securities under new Securities Act, XIX, 1038
Perrinites zone, XXII, 1016; XXIV, 98
 Perris, Block, principal source of Whittier conglomerates, XXIV, 665
 Perrott, G. St. J., and Neal, R. O., GAS, 116
 Perry, Eugene S., GAS, 248, 269, 933; PROB, 697, 991; STRAT, 273, 291; XV, 1149, 1151, 1172; XXVI, 307, 327
 Kevin-Sunburst and other oil and gas fields of Sweetgrass arch, review, XIII, 691

- Perry, Eugene S., and Sloss, Laurence L., XXIX, 1151
 Big Snowy group: lithology and correlation in Northern Great Plains, XXVII, 1287
- Perry, Gene, subsurface structure of eastern Kentucky, VIII, 152
- Perry, J. H., XXVIII, 939
- Perry, S. L., XXIX, 25
- Perry County gas field, GAS, 946
- Perryman sand, V, 402
- Perrysburg field, GAS, 952
- Perryville limestone, Big Sinking field, STRAT, 177
- Pershing field, PROB, 592, 595, 616, 619
- Persia, PROB, 646; V, 397
- Persia, Egypt, and Mexico, reflected buried hills in oil fields of, X, 422
- Persia, hydrogen sulphide in Masjid-i-Sulaiman field, GAS, 1072
- Masjid-i-Sulaiman oil field; gypsum flowage, discussion, XIII, 685 review, VI, 383
- southern, geology of some salt plugs in Laristan, review, XV, 713
- unconformities, X, 430
- Persia-Mesopotamia, oil production in, IX, 1095
- Persian Gulf, CAL, 115, RMS, 227 production from countries surrounding, XXVIII, 1497
- Persian Gulf and Caspian Sea, XXVIII, 1502
- Persian Gulf region, reserves in, XXVIII, 919, 1490, 1497, 1503
- Persian oil field, in a, review, XII, 562
- Persian oil fields, X, 428
- reservoir rocks of, XVII, 229
- reservoir rocks of, and other limestone reservoirs, discussion, XVII, 563
- Persen, Salsgletscher in, review, XIV, 1358
- Persischen Golfs, die Geologie und Salzdomen im südwestlichen Teile des, review, XI, 765
- Personnel for geophysical exploration, problem of, XXVII, 952
- for study of oil discovery problems, XXVII, 927
- needed for oil finding, XXVII, 957
- Personnel problems in geology, new aid in handling, XXVII, 1548
- Personnel procurement regulations, memorandum of National Service Committee changes in, XXVI, 1862
- Perspective, distortion of, in stereographic pairs of aerial photographs, XXIX, 1758
- Pertinent data on Lisbon field, XXIII, 324
- Peru, RMS, 146
- Chicama valley, PROB, 89
- Eocene in, XII, 10
- geological exploration, XXI, 1347
- geology of Tertiary and Quaternary periods in northwest part of, review, VII, 443
- geology and developments, V, 585
- La Brea-Parinas field in, XXIII, 963
- Lower Cretaceous in, XXIII, 689
- Peru, middle Ucayali River, and upper Jurua River, Brazil, geological exploration between, XXI, 97; discussion, XXI, 1347
- Peru, Miocene in, XII, 25
- northern, Eocene in Talara region of, XXIX, 536
- (Peru)
- northwest, geology of, XII, 1
- oil in, X, 98
- oil on Agua Caliente anticline, Department of Loreto, XXIII, 688
- oil seepages in Cashiboya River, XXI, 99
- Oligocene in, XII, 23
- production of oil in, XII, 37; XXIII, 963
- Quaternary, VII, 443
- review on oil production, VI, 261
- South America, outline of geology and development of petroleum fields of, V, 585
- Tertiary in, VII, 443; XII, 9
- Peru and Brazil, area in, covered by reconnaissance work of Victor Oppenheim, XXI, 100
- Cruzeiro redbeds in, XXI, 105
- Peru and Ecuador, northern, oil fields and coastal lowlands of, XXIX, 535
- northern, structure of Pacific coasta belt of, XXIX, 537
- northern, sub-Andean trough in, XXIX, 518
- operating conditions in, XXIX, 538
- Tertiary in, XXIX, 536
- Peru oil fields, V, 585
- Peru sand, VI, 465
- Peruvian Departamento de Petróleo, XXIX, 542
- Pescada anticline, XV, 887
- Peshastin formation, XXIX, 1391
- Pessimism in geology, V, 412
- Petaluma, CAL, 13
- Sonoma County, California, oil possibilities of area northeast of, XI, 425
- Petaluma area, production in, XXVI, 1143
- Petch, Arthur, XXIX, 1417
- Peter, N., and Tausz, J., XXVII, 1176, 1179
- Peters, Leo J., XIV, 17; XVI, 1264
- Peters, Leo J., and Bardeen, John, XVI, 1291, 1292
- some aspects of electrical prospecting applied in locating oil structures, review, XVI, 616
- Peters Petroleum Company, He-Se-Mole 1 (well 272), Wheeler 1 (well 281), SBP, 255-285
- Petersburg or Alum Cave Coal V of Indiana, XXIII, 1390
- Petersburg Coal V, XXIII, 1385
- Petersen, C. G. J., RMS, 660, 661; XIII, 466
- Petersen dredge, RMS, 660, 661
- Peterson, A. F., XXV, 884
- Peterson, M. A., XXVII, 1410, 1465
- Peterson, Orrin F., memorial of Julius Segall, XIII, 295
- Peterson, Walfr., XIV, 583, 591; XVI, 1263
- Petit Chenier, XXV, 1012
- Petite Anse, Five Islands, Louisiana, PROB, 636; SD, 7, 10, 12, 362; IX, 836, 842
- Petkovic, VI, 530
- Petrashchek, W., VI, 529
- Petrified Forest, XVII, 1570
- Petrified wood, XXVIII, 25
- Petro sand in Centralia-Sandoval area, Illinois, STR II, 128
- Petrogenesis, sedimentary, XXVI, 1736
- Petrographic analysis, XXVI, 1699
- of sand in Great Salt Lake bottom, XXII, 1338
- Petrographic description of Bethel sandstone, XXVIII, 91
- Petrographic examination of Oriskany formation, XXII, 555
- of basalts in Indian Ocean, RMS, 400
- Petrographic methods, study and correlation of sediments by, review, VIII, 97
- Petrographic similarities and discrepancies on opposite sides of Atlantic, CD, 118
- Petrographic study of pre-Cambrian of Kansas, XI, 821
- of salt-dome cap rock, XIV, 1573
- Petrography, cap-rock, XV, 509
- of limestone in Turner Valley, XXIV, 1626
- of salt-dome caprock, SD, 50; IX, 42
- of upper Jackson, Catahoula and basal Oakville from Fayette County, Texas, GC, 538; XVII, 536
- sedimentary, XXV, 169
- sedimentary, manual of, XXIII, 256
- Pétrole en Pologne, review, XIII, 525
- les gisements de, review, VII, 579
- Petrolea anticline, XXIX, 1125
- Petroleum, XXIII, 106. (See Oil)
- American and Roumanian domes, SD, 202
- Argentina and Bolivia, observations on occurrence and origin of, X, 853
- California, physical properties of, PROB, 177
- California, relation of foraminifera to origin of, X, 697
- catalytic formation of, XXVIII, 1516
- chemical considerations regarding origin of, XV, 611
- chemical technology of, XXVII, 652
- Colombia, I, 156
- compaction as cause of migration of, XII, 1049
- consumption and uses of, IV, 137
- crude, in United States, production of, XXI, 164
- crude, Iraq exports of, 1938, XXV, 365
- crude, microscopic examinations of, XXV, 1249
- crude, refining of, XXI, 176
- crude, Russian production of, XXV, 370
- current ideas regarding source beds for, PROB, 51
- defined, XXVIII, 703
- distribution, XXI, 182
- effect of bacteria upon, RMS, 424-425
- effect of pressure on migration and accumulation of, X, 917
- effect of salt domes on accumulation of, XV, 61
- effects of underground storage conditions on characteristics of, XV, 455
- evidences for animal and vegetable origins of, XXVIII, 928
- evolution of, discussion, XXVIII, 143
- formation of, from gases and liquids formed from neokrogen, XXVIII, 1513, 1516
- fractionation and decomposition during capillary migration, review, XI, 997
- from Alaska, microthermal studies of some "mother rocks" of, XIII, 823
- from northern Alaska, fossil plants found in some "mother rocks" of, XIII, 841
- genesis of, review, XII, 454

(Petroleum)

genesis of source rocks of, under conditions differing from those of the present, XXI, 1104
 geochemical prospecting for, XXIV, 1400
 geologic distillation of, is it possible? XIII, 75
 geology and mining of, in Poland, XVI, 1061
 geology of Siam with reference to, XI, 407
 geophysical prospecting for, 1929, XIV, 1105
 German imports of, 1938, XXV, 368
 hot oil—the problem of, review, XX, 1133
 imports of, into the United Kingdom, 1938, XXV, 367
 in Colombia, climate conditions, factors in search for and production of, XXIX, 1069
 in earth's crust, distribution of, XXVIII, 1506
 in igneous and metamorphic rocks, symposium on occurrence of, XVI, 717
 in limestones, chemical treatment of, XXIV, 1362
 in North Shensi, and Cretaceous of Szechuan, China, non-marine origin of, XXV, 2058
 in oil sands, evaluation of, by its index of refraction, XXI, 1464
 in Pacific basin, XXV, 356
 in sediments at time of deposition, XIV, 1451
 in sediments in Santa Monica Bay, XXII, 213
 in United States and possessions, discussion, XVI, 704; review, XVI, 103
 in Wyoming, XXI, 764
 investigation of source beds of, American Petroleum Institute and United States Geological Survey, XXV, 1921
 Iran exports of, 1938, XXV, 366
 Italian imports of, 1938, XXV, 369
 low-temperature history of, XV, 615
 metamorphism of, VII, 608
 method of determining refractive index of, XXI, 1466
 migration of, XXIX, 18
 migration of, through sedimentary rocks, II, 168
 migration and accumulation of, PROB, 247
 mobility of, explanation of apparent anomalies in distribution, XXI, 1153
 natural gas, and natural gasoline activity, critical occupations, XXVI, 1556
 occurrence of, SD, 49; XXVIII, 703
 occurrence of, European domes, IX, 330
 origin of, PROB, 25, 32, 43, 44, 227, 260; RMS, 192; IV, 263; VIII, 669; IX, 158; XV, 455
 origin of—a method of approach, XXIX, 285
 origin and occurrence, XXVIII, 903
 Persia, review, XIII, 396
 Poland, geology and mining of, XVI, 1061
 policy of United States with regard to exports to Japan, XXV, 358
 porphyrin content of, XXVIII, 927
 possible conditions of accumulation

(Petroleum)

of, in sand bars, RMS, 192
 Powder Wash field, analyses of, XXII, 1038
 processes effective in development of, PROB, 179, 261
 production of, in Germany, XVI, 1144
 radioactivity of sedimentary rocks and associated, XXIV, 1529
 recent sedimentation and the search for, XXIX, 1233
 references on investigation of source beds of, SBP, 8
 references on recent sedimentation and search for, XXIX, 1259
 relation of micro-organisms to generation of, PROB, 35
 relation of oil shale to, IX, 1127
 relation of size and carbon content to origin and migration of, in sediments of Barataria Bay, XXIII, 593
 relation of, to base exchange, RMS, 463
 research on conversion of organic material to, by radiations from radioactive substances, XXVIII, 925
 research on rôle of biochemical agencies in creation of, XXVIII, 925
 reviews, VI, 260, 261; XII, 1118
 Romanian exports of, 1938, XXV, 364
 Roumania, IX, 1188
 science of, XXII, 777
 source beds of, list of wells studied in investigation of, SBP, 417
 source material of, and source material of coal, differences between, XX, 1478
 source materials, PROB, 179
 source materials for biochemical production of, XX, 294
 source rocks of, —a symposium of opinion, discussion, XXIV, 496
 source sediments of, XXI, 766
 stratigraphic accumulation of, XXI, 768
 Petroleum, stratigraphic distribution of, XI, 764; discussion, XI, 1121
 Petroleum, substitutes for, XX, 40
 suggested research on origin of, XVII, 743
 technique of prospecting for, XXI, 708
 theory of origin and accumulation of, XXVIII, 1510
 treatise on, review, VI, 260, 382
 twenty-five years retrospect, review, XX, 829
 types of organic matter which may be converted into, XXIX, 13
 uses and products of, XXVIII, 1485
 value of coastal and inland deposits as future source beds of, XII, 1057
 Petroleum and allied industries, review, XII, 223
 Petroleum and allied sciences, bibliography of, for 1919–1920, review, VII, 302
 Petroleum and coal—keys to future, review, XIII, 395
 relations in origin between, XIX, 937
 Petroleum and gas fields, and new concessions, Colombia, map, XXIX, 1109
 Petroleum and genesis of the Third Bradford sand, XXV, 1413

Petroleum and its products, review, XII, 1117
 Petroleum and mining industries, need for conservation, XXIV, 364
 Petroleum and natural gas in non-marine sediments of Powder Wash field in northwest Colorado, XXII, 1020, 1604
 in Poland, review, XVIII, 1713
 migration and accumulation of, XXIX, 460
 occurrence of, in non-marine sediments of Wasatch formation, XXII, 1023
 source material for, XX, 797
 Petroleum and natural gas possibilities of Palestine and Sinaitic Peninsula, geology and, XI, 135
 Petroleum and oil shale, low-temperature history of, XX, 282
 origin of, suggestive evidence on, VII, 67
 Petroleum and the war, XXV, 1264
 Petroleum accumulation, due to lateral migration, Nemaha Mountains region, Kansas, STR I, 72
 geochemical manifestations of, XXIV, 1402, 1415
 near-surface geochemical manifestations of, XXIV, 1402
 northern Cordilleran geosyncline and its relation to, XI, 19
 relations of, to structure, PROB, 429
 Petroleum accumulation and buried hills, STR II, 554
 Petroleum accumulation and faulting at Mexico, Texas, VII, 226
 Petroleum activities, recent, in Coastal Plain of south Georgia, XXII, 794
 Petroleum Administrator for War, Office of, recognition by, of need for further oil reserves, XXVII, 873
 Petroleum Administrator, Office of, XXVII, 989
 Petroleum aspects, stratigraphy of Sundance formation and related Jurassic rocks in Wyoming and their, XXI, 715
 Petroleum Congress, World, second, Paris, June, 1937, XXI, 131, 1232
 Petroleum Creek, California, outcrop section C, SBP, 167–194, 411
 Petroleum deposits, XXIII, 256
 Cuban, geology of, II, 133
 geochemistry of, XXIV, 1400
 important at unconformities, X, 422
 in Roumania, SD, 110
 origin and environment of source sediments of, XIV, 1465
 Petroleum development in America, outstanding features of, XIX, 469
 in Colombia, XXIX, 1138
 recent, in Illinois, XXII, 649
 Sugarland field, GC, 727; XVII, 1380
 Tampico region, history of, MEX, 1
 West Ranch field, XXVIII, 215
 Petroleum development and technology, reviews, in 1925, X, 1309; in 1926, XI, 998; in 1927, XII, 874; in 1928–1929, XIII, 1081; in 1930, XIV, 1236; in 1931, XV, 973; in 1932, XVI, 945; in 1933, XVII, 1395; in 1934, XVIII, 1378; in 1935, XX, 228; in 1936, XX, 1258; in 1937, XXI, 1353; in 1938, XXII, 1457; in 1939, XXIII, 1583; in 1940, XXIV, 1842; in 1941, XXV, 1950; in 1942, XXVI, 286; in 1943, XXVII, 1556; in 1944, XXIX, 106

- Petroleum developments in Canada in 1943, XXVIII, 864**
of Europe and Asia, status of Americans in, IX, 1089
- Petroleum discovery methods, graphic arrangement of a symposium on, XXVI, 1410**
- Petroleum Division, American Institute of Mining and Metallurgical Engineers, Inc., Petroleum Development and Technology, reviews, XIII, 1081; XVI, 945; XVII, 1395, XVIII, 1378; XX, 228, 1258; XXI, 1353; XXII, 1457**
- Petroleum engineer, relation to future production, IV, 137**
- Petroleum engineering, application of alignment chart to, IX, 803**
as an aid in exploration geology, XXIV, 1370
- Burk Burnett field, Texas, review, VI, 260**
- Deaner oil field, Okfuskee County, Oklahoma, review, V, 687**
review, IX, 1299
- Petroleum exploration an opportunity for geological tests of displacement hypothesis, CD, 157**
chart showing changes in dominant geological methods employed in, XXIV, 1357
geologic history of northern Mexico and its bearing on, XXVIII, 301
in United States, future of, XXI, 706
past trends in, XXIV, 1357
symposium on new ideas in, XXIV, 1355
value of micro-fossils in, VIII, 539
- Petroleum exploration and gravity anomalies by gravitational pendulum, XII, 889**
- Petroleum exploration and production, chemical engineering in, XXIV, 1361**
- Petroleum Exploration Company, XXII, 1447**
- Petroleum fields of Peru, South America, outline of geology and development of, V, 585**
- Petroleum formation, an appeal for cooperative study of time of, XXI, 268**
possible raw materials for, XV, 621
research on chemistry of, XXVIII, 925, 931
- Petroleum gas at Westbrook field, Texas, STR I, 292**
- Petroleum generation, XXI, 270**
bibliography of recent foreign literature on problem of, XX, 1237
exchange of time for temperature in, discussion, XIV, 1227
summary of recent foreign literature on problem of, XX, 1237
time versus temperature in, discussion, XV, 83
- Petroleum genesis, conditions in barred basins favorable to, XXI, 1130**
extraterrestrial hydrocarbons and, XIX, 900
relation to pressure phenomena, PROB, 236
sequence of events in, PROB, 239
- Petroleum genesis and radioactivity, XXVIII, 924**
references on, XXVIII, 950
- Petroleum geologist, function of present-day and future, largely changed from that of field ob-**
- (Petroleum)**
server to that of student and interpreter, XXIV, 1393
in the war, XXVII, 929
role of, in development of law of oil and gas, XXII, 1080
- Petroleum geologist and geophysicist, rôle of, in exploration, XXVII, 932**
- Petroleum geologist and the Securities and Exchange Commission, XXV, 1297**
- Petroleum geologists, an historical document of interest to, XXII, 1687**
in national defense program, XXV, 1203
influence of, on business, VII, 615
on National Roster of Technical and Specialized Personnel, inadequate information on evaluation of services of, XXV, 1207
organization of, VII, 623
- Petroleum geology, XXVII, 548; XXIV, 1355; XXIX, 470**
age of, XIV, 607
annual review of, XXVI, 1843
application of chemical analysis of crude oils to problems of, XXVII, 1595
as a profession, VII, 612
attitude of oil operators toward, VII, 613
cost aspects of, XXIV, 1394
elements of, review, IX, 362
field methods in, review, V, 425
future position of, in the oil industry, XXIV, 1389
handbook on, by Jean Chautard, VII, 579
how related to problem of continental drift, CD, 5
in California, twenty years of, XXIV, 1705
in 1942, review of, XXVII, 1164
in 1943, review of, XXVIII, 877
in Oklahoma, review, XI, 311
its past and its future, V, 445
of central sedimentary basin of Uruguay, XIX, 1205
of Colombia, South America, XXIX, 1065
of Colombia, South America, bibliography, XXIX, 1140
of Colombia, South America, beginning with formation of North Andean geosyncline and deposition of Cretaceous formations, XXIX, 1084
of Gondwana rocks of Southern Brazil, XIX, 1725; discussion, XX, 984
of part of western Peace River district, British Columbia, VI, 112
of state of São Paulo, Brazil, XXVI, 1163; review, XVI, 426
present and future, XXVIII, 905
presidential address, 1933, XVII, 548
project method for teaching, XXVI, 1277
publications on, VII, 621
relations of stratigraphy and paleogeography to, III, 286
research in, VIII, 475; XX, 619
review of, 1944, XXIX, 1211
short sketch of paleogeography and historical geology of Mid-Continent oil district, and its importance to, V, 541
stage of advancement higher in United States than elsewhere,
- (Petroleum)**
XXIV, 1390
summary of important developments in 1943, XXVII, 1653
two decades of 1903-1922, VII, 603
unconformities in Oklahoma and their importance in, III, 253
where will young graduates in, acquire field experience? XXIV, 1386; discussion, XXIV, 2047; XXV, 167, 1180; Editorial, XII, 1613
- Petroleum geology and The American Association of Petroleum Geologists, XX, 387**
- Petroleum geology and World War, VII, 619**
- Petroleum geology's debt to paleontology, VII, 612**
- Petroleum Geophysicists, Bulletin of Society of, XIX, 1080**
Journal of Society of, review, XX, 107
Society of, XIV, 1364
- Petroleum geophysics, practical, lecture notes on, XXIV, 1339**
sensitive and dependable aneroid needed in, XXI, 1181
- Petroleum hydrocarbons, bacteria with ability to oxidize, XXVII, 1182**
bibliography on microorganisms and, XXVII, 1191
conversion of fatty and waxy substances into, XVII, 1251
insoluble in water, XXVII, 1185
marine microorganisms which oxidize, XXVII, 1175
oxygen consumed in raw and sterile sea water in presence of, XXVII, 1177
products of bacterial oxidation of, XXVII, 1187
widespread in sea water and marine sediments, microorganisms capable of oxidizing, XXVII, 1188
- Petroleum indications near Brazilian-Peruvian border, XXI, 109**
- Petroleum industry, American, developments in, 1914-1919, XXVI, 136**
American, economic structure of, XXI, 149
application of paleontology in, XXIV, 1759
changes in supply-demand situation for, XXII, 767
cooperation between advanced students and men of, XXIV, 604
debt of geology to, V, 394
early, in Virginia and Ohio, XXII, 1095
economic and statistical aspects of, XXIV, 363
elements of, XXV, 904
fundamentals of, XXIII, 1106
future of geologist in, XXII, 517
geology in, XXIV, 1209; XXVIII, 899
handbook of, review, VI, 260; VII, 588
letter to geological departments in, XXVII, 237
of Roumania, review, XII, 1039
problems of labor in, XXI, 191
shift from salt industry to, XXII, 1091
status of petroleum geologists in, XXVII, 931
under proration, economic structure of, XXI, 169
wartime changes in, XXVII, 970

- Petroleum International Exposition, VIII, 102
- Petroleum investigations, review, XIX, 300
- in Switzerland, IV, 87
- Petroleum laws in Venezuela, XIII, 1194
- Petroleum occurrence possible in anticlinal structures of the Serra do Mõa, in Territory of Acre, Brazil, XXI, 99
- Petroleum occurrences in Cuba, XVI, 551
- in Gondwana rocks, XIX, 1778
- Petroleum poles of the earth outlined by marine basins tributary to Gulf of Mexico and to Caribbean Sea, XXVIII, 1502
- Petroleum possibilities in southeastern Idaho, review, VII, 197
- in Wind River Mountains, XXV, 150
- of Big Snowy group, XXVII, 1304
- of Costa Rica, review, VII, 455
- of Red basin of Szechuan province, China, XXVIII, 1430
- of Turkey, XV, 629
- relation of Devonian of Kentucky to, XXV, 710
- Petroleum possibilities and geology of Olympic Peninsula, Washington, XI, 1321
- Petroleum potentialities of Gulf Coast petroleum province of Texas and Louisiana, XIV, 1379
- Petroleum price trends during war, XXVII, 985
- Petroleum production, XXI, 811
- effect of price on, XX, 37
- Mexico, XI, 1216
- Petroleum production and supply, XX, 1
- Petroleum production engineer and his relation to future production, IV, 137
- Petroleum production engineering—oil field exploitation, XXIII, 1859
- review, XVIII, 961
- Petroleum production methods, review, V, 680, 682
- Petroleum production statistics for California, 1920-1939, XXIV, 1713
- Petroleum products, effect on marine bacteria, XXVII, 1178
- used for space heating in United States, GAS, 1143, 1144
- Petroleum prospecting, dynamic, return to, XXIII, 1743
- in Mississippi, VII, 684
- Petroleum provinces, important, XXVIII, 1509
- in United States originating in updip wedging-out of porosity in reservoir rock, XXVII, 900
- Petroleum refineries, operations of, complicated by war, XXVII, 981
- Petroleum research in northern Africa, XVI, 443
- projects in, XI, 1003
- Petroleum reserve data on Salem field, XXIII, 1372
- Petroleum reserves, developed, estimation of, XXII, 566
- of Madagascar, review, XV, 87
- of United States, XX, 3, 16
- of United States, estimated proved, XXVIII, 1489
- world, and petroleum statistics, XXVIII, 1485
- Petroleum reservoir, definition, XXIX, 1537
- Petroleum reservoirs associated with salt structures of Gulf Coast, PROB, 668
- classification of, XXIX, 1537
- classification of, table, XXIX, 1580
- geological discussion, XXIX, 1547
- Petroleum resources, foreign, bibliography of, VII, 593, 698; VIII, 352, 678, 834; IX, 368, 672, 815, 911
- in environs of Gulf of Mexico and Caribbean Sea, XXVIII, 1508
- in environs of land-locked Arctic Sea, XXVIII, 1508
- in environs of Mediterranean, Red, Black, and Caspian seas and Persian Gulf, XXVIII, 1508
- in environs of shallow, island-studded seas between Australia and Asia, XXVIII, 1508
- of Japan, XVIII, 908
- of Russia, XI, 493
- Petroleum samples, porphyrin content of, XXVIII, 929
- Petroleum Securities Company, XXIII, 935
- Burbank 1 (well 18), Fairview 1 (well 94), SBP, 87-153
- Petroleum shortage, probable, in United States, and methods for its alleviation, XX, 15
- Petroleum show, Geologists-International, VIII, 685
- Petroleum source materials, XXVIII, 1510
- deposition of, XXVIII, 925
- Petroleum source rock in northwestern Venezuela, Cretaceous limestone as, XV, 229
- reply to discussion, XV, 475
- Petroleum source rocks exclusively of salt-water origin, XX, 1479
- Petroleum statistics and world petroleum reserves, XXVIII, 1485
- Petroleum stocks, effect of war on, XXVII, 983
- Petroleum supply and demand in California district, XII, 651
- Petroleum-supply situation of Axis powers, XXV, 1272
- Petroleum tar, PROB, 206
- Petroleum Technologists, Institution of, IX, 406
- Petroleum technology, annual reviews of, XX, 1501; XXI, 1500; XXII, 1693; XXIII, 1729; XXV, 327; XXVI, 286
- scientific principles of, review, XI, 766
- Petroleum transportation system, XXV, 1286
- Petroleum types and sources, Laredo district, Texas, STR I, 407
- Petroleum war products, necessity for increasing, XXVII, 970
- Petroleums, origins of: chemical and geochemical aspects, XX, 280
- typical, composition of, XV, 620; XX, 287
- Petrolia-Tarra anticlinorium, XXIX, 1125
- Petrolia en Mexico*, review, XVI, 617, 707
- Petrolia anticline, GAS, 75
- Petrolia arch, XXV, 1070
- Petrolia field, Colombia, XXIII, 962
- Petrolia field, Texas, GAS, 1054; STR II, 548, 551; III, 49, 93; IV, 8, 121; XXV, 1070
- Petrolia pool, PROB, 340
- Petrolia structure in Petrolia field, Texas, STR II, 546, 548, 551
- Petroliferous areas, map of world showing, XXVIII, 1500
- possible, in Rocky Mountain region, FOP, 38; XXV, 1470
- Petroliferous basins, prospective, of eastern Brazil, XXIX, 542
- tributary to Caribbean, XXVIII, 1503
- Petroliferous basins and troughs of South America, prospective, XXIX, 558
- Petroliferous belt of central-western Mendoza Province, Argentina, XI, 261
- Petroliferous formations of Tampico Embayment, Mexico, abstract, V, 101
- Petroliferous iron ore of Pennsylvanian age in eastern Ohio, XXVIII, 1051
- Petroliferous provinces, XIII, 414
- criteria for, XIII, 436
- of Colombia, map, XXIX, 1108
- potential, of Colombia, XXIX, 1107
- Petroliferous provinces and major structural features of California, PROB, 740
- Petrologic studies of sediments in North Sea, RMS, 332
- Petrological relations of sediments of southern North Sea, RMS, 343
- of sediments of southern North Sea, references on, RMS, 347
- Petrology, conditions of sedimentation and sources of Oriskany sandstone as indicated by, XXII, 541, discussion, XXII, 1108
- Petrology of Bethel sandstone of south-central Illinois, XXVIII, 63
- of California, CAL, 276
- of Whittier conglomerates, southern California, XXIV, 649
- Petrology and graywackes of Bradford oil field, Pennsylvania, discussion, XXV, 2071
- Petry, L. C., XV, 166
- Petsch, A. H., XIX, 1358, XX, 403
- Petten, Holland, RMS, 334
- Pettengill, Samuel B., hot oil—the problem of petroleum, review, XX, 1133
- Petterson, XXIX, 1483
- Petterson, Hans, XXIV, 1531
- Pettigrew, Virgil E., X, 459
- Pettijohn, XXVII, 919, 926
- Pettijohn, F. J., RMS, 38, 213, 542; XX, 1086; XXVI, 44, 45, 62, 1699; XXIX, 1234
- mineral analysis of sediments, RMS, 592
- Pettijohn, F. J., and Krumbein, W. C., XXIV, 1359; XXVI, 1706
- manual of sedimentary petrography, review, XXIII, 256
- Pettijohn, F. J., and Lundahl, A., XXIX, 1245
- Pettit limestone productive at Chapel Hill field, XXV, 1083
- productive in Louisiana, XXVI, 1264; XXVIII, 269
- Pettit limestone zone in Arkansas, XXII, 970
- Pettit pool, PROB, 763
- Pettit zone of lower Glen Rose, productive in East Texas, XXIII, 891, 896; XXV, 1081; XXVI, 1052; XXVII, 784, 786; XXVIII, 841
- Pettus and Mirando districts, Gulf

- (Pettus)
 Coastal Texas, factors governing accumulation of oil and gas in, and their application to other areas, XV, 755
 Pettus area, PROB, 443
 Pettus Refining Company, XXII, 755
 Pettus and, XXII, 755
 Driscoll pool, GC, 630; XVII, 826
 Government Wells field, GC, 638; XIX, 1138
 Lopez field, STRAT, 689
 Petty, T. F., STRAT, 545, 698
 Pew, J. Edgar, XVIII, 1459
 fifth dimension in the oil industry, XXV, 1283
 oil industry; its importance and some of its problems, VII, 277
 Peyotes, MEX, 54, 161, 166. (See Lomerio Peyotes)
 Peyrot, A., XIX, 526, 527, 532
 Peyton, Garland, XXIX, 919, 920
 Perry 1 (well 348), SBP, 292-335, 408
 Peyton Brothers, GAS, 679
 Pfeiffer, E., XXI, 1274
 Pfeiffer fault, XXVIII, 1628
 pH. (See Hydrogen-ion concentration)
 Phacodes, Reef, MSC, 39, 107, 108; XXVII, 1368
 Reef sandstone member, MSC, Fig. 6 (in pocket)
 Phalen, XI, 1284, 1302
 Phalen, William Clifton, SD, 224, V, 460; XXI, 1272
 science of petroleum geology, V, 674
 Phantograph model, X, 1300
 Pharrass, S., Survey, Texas (well 396), SBP, 292-335, 410
 Phaseolina mud, RMS, 448
 Phases of water, RMS, 66
 PHD field, XXIX, 746
 Phebus, Clayton, STRAT, 327
 Phelps, Robert W., XIX, 879
 Phelps, Robert W., and Lake, F. W., application of alignment chart to petroleum engineering, IX, 803
 petroleum engineering, review, IX, 1299
 Phelps Township, New York (well 410), SBP, 349-379, 410
 Phenomenal rise of water levels, relation of, to a defective gas well, Harris County, Texas, XXIX, 253
 Phi (notation in mechanical analyses), RMS, 186-193, 566-581
 Phi curve and its derivatives, RMS, 584, 587
 Phi kurtosis, RMS, 581
 Phi measures, interpretation of, RMS, 576
 Phi median, RMS, 187, 193, 581
 map of sands in Barataria Bay, RMS, 186
 Phi quartile deviation, RMS, 184, 189, 581
 map of Barataria Bay, RMS, 190
 Phi scales, RMS, 566, 580
 relation of, to Wentworth grade limits, RMS, 567
 relation of, to Zeta scale, RMS, 567, 571, 579, 581
 Phi skewness, RMS, 581
 Phi standard deviation, RMS, 576, 581
 Phi units, RMS, 585
 Philbrick, E. P., XVII, 838, 841
 Philby, H. St. J. B., the land of Sheba, review, XXII, 1606
 Philippi, E., RMS, 377, 400, 405, 410, (Philippi)
 412, 519
 Philippi, P. M., SBP, 356
 Philippine Islands, review, VI, 263, 387
 Philippine seas, foraminifera of, MSC, 12
 Phillips, D. McN., and Udden, J. A., STR II, 545, V, 154, XIII, 426
 Phillips, Eldridge Douglas, XVIII, 544
 memorial of, XVI, 327
 Phillips, Henry, XX, 302
 Phillips, J. A., RMS, 41; XII, 925
 Phillips, John, XIX, 1260
 Phillips, R. B., GAS, 609
 Phillips, W., and Conybeare, W. D., XXIX, 130
 Phillips, W. B., I, 23, 28
 Phillips Petroleum Company, GAS, 398, 456; XXI, 525, 997, 1013, 1023, 1031, 1072; XXII, 721, 755; XXIII, 831, 1527; XXVI, 1471; XXIX, 770, 797
 (Mattern 17) (well 273), SBP, 255-285, 407
 Phillips Ranch fauna, CAL, 212, 221, 303
 Phillips sand, GAS, 261
 Philpott, T. H., XXVIII, 579; XXIX, 1417
 Phinney, A. J., GAS, 844
 Phlogopite, RMS, 602
 Phosgene, V, 621
 Phosphate, RMS, 146, 147, 149, 150, 258, 429, 437
 cycle of, in sea, RMS, 147
 formation of, RMS, 4
 geologic reconnaissance of Uinta Mountains, northern Utah, with special reference to, XXIII, 82
 in Atlantic sediments, RMS, 384, 385, 392
 in basins, RMS, 98, 100, 102, 359
 in faecal pellets, RMS, 522, 523
 in fjords, RMS, 100, 359
 in Portlandian in well at Chocoy, MEX, 15
 in sea, RMS, 50, 143, 145
 in sediments of fjords, RMS, 360, 361, 431
 in shells, RMS, 288
 in tidal deposits, RMS, 200
 liberation of, by bacteria, RMS, 424
 relation of, to plant growth, RMS, 146
 Phosphate deposits, western, XXIII, 82
 Phosphate rock, V, 191
 Phosphates, PROB, 28
 Phosphatic chalk at Prairie Bluff, XXI, 806
 Phosphatic chert, MSC, Fig. 14 (in pocket)
 Phosphatic internal molds of mollusks, XXI, 806
 Phosphatic nature of Hale sandstone, XXIV, 426
 Phosphatic pellets or nodules, XXI, 806; XXVI, 43
 Phosphatic shale member of Phosphoria formation, XXIII, 87
 Phosphatized erosion surfaces, XXVI, 44
 Phosphoria and Dinwoody formations, XVIII, 1657, 1658, 1662, 1663, 1665
 Phosphoria and Dinwoody tongues in lower Chugwater of central and southeastern Wyoming, XVIII, 1655
 Phosphoria and Woodside formations, boundary between, XXIII, 96
 Phosphoria fauna of Park City formation, XXIV, 624
 Phosphoria formation, XXIII, 85, 482; XXV, 132
 fossils in, XXIII, 89
 in Wind River Mountains, XVIII, 1661
 Mackenzie redbeds tongue of, XXIII, 84, 91
 Permian, in northern Utah, southern Idaho, and Wyoming, XXIV, 311, 634
 phosphatic shale member of, XXIII, 84, 87
 productive in Dallas field, XXV, 150
 Rex member of, XXIII, 84, 89; XXIV, 634
 Woodside shale, and Weber formation in Uinta Mountains, sections of, XXIII, 97
 Phosphoria limestone, XXIII, 1463
 Phosphoric acid, RMS, 385, 392
 Phosphoric acid reagent for determination of reduction number, SBP, 50
 Phosphorus, RMS, 149, 429
 Photogeology, XXV, 1796
 Photogrammetry, American Society of, XXIII, 1599
 Photograph of modeled structural map, possibilities of, XXV, 2164
 Photographing a fossil, basic objectives in, XXIX, 1495
 Photographing megafossils ensemble, XXIX, 1503
 Photographing megafossils singly, XXIX, 1496
 Photographs, aerial, their use and interpretation, XXVI, 1849, XXVII, 95
 airplane, use of, in geologic mapping, XIV, 1049
 Photography, field, for geologists, XX, 186
 for geologists, discussion, XX, 827
 in X-ray studies, RMS, 617, 622
 of megafossils, XXIX, 1494
 use of, in mechanical analysis, RMS, 548, 553
 Photo-indexes, XXIX, 1762
 Photomicrographs of sections of cores of oolitic and coquina-type limestones from Patton zone, Lisbon field, Louisiana, XXIII, 306-313
 Photosynthesis, RMS, 81, 91-94, 144, 145, 147, 150, 357
 in basins, RMS, 97
 relation of, to physical conditions in water, RMS, 92
 Photosynthetic activity, RMS, 104
 Phototrophic zone in sea, RMS, 145
 Phthalate, potassium acid, SBP, 39
 Phyllites, XXV, 1791
 Phyllophora zone, RMS, 448
 Phylum, MSC, 184
 Phyllocrinus ventricosus zone, XXI, 1162
 Physical and historical geology, laboratory manual of, review, XIX, 418
 Physical aspects of well spacing, XXVI, 100
 Physical characteristics of Bartlesville and Burbank sands in northeastern Oklahoma and southeastern Kansas, XXI, 39, 246
 of oil and water in contact, PROB, 282
 Physical conditions of deposition of sediments, RMS, 592
 Physical geology, introduction to,

- (Physical)
 XXV, 2212
 laboratory exercises in, XXII, 501
 outlines of, review, XVIII, 960
 Physical processes in ocean, RMS, 48;
 references on, RMS, 136
 Physical properties in ocean, effect of
 temperature, salinity and hydro-
 static pressure on, RMS, 60
 mass, maps of, XXIX, 1255
 of Lake Pontchartrain sediments,
 XXIII, 21
 of petroleum in California, PROB, 177
 of pure water, RMS, 67, 68
 of rocks, fundamental, XXVII, 54
 of sea water, RMS, 53, 68, 70
 of sediments, RMS, 525
 variation in, PROB, 97
 Physical relationships in ocean, RMS, 60
 Physical states of matter, CD, 20
 Physical studies of sediments, RMS, 528
 Physico-chemical factors in calcium
 carbonate precipitation, RMS, 285, 291
 Physics of blown sand and desert dunes,
 XXVIII, 566
 of oil and gas behavior, XXII, 565
 of the earth—II, The figure of the
 earth, review, XV, 1117
 of the earth—VI, Seismology, re-
 view, XVIII, 1205
 Vol 2, No 3, review, XVI, 949
 Physiographic environmental factors,
 XXVI, 1749
 Physiographic history of Gulf Coastal
 Plain, XXIII, 209
 Physiographic provinces of Colombia,
 relief map, XXIX, 1072
 principal, of Mexico, XX, 1277
 principal, of Mexico, map, XXVIII,
 316
 Physiographic significance of loess near
 McPherson, Kansas, XXIII, 1232
 Physiography, importance in locating
 gas and oil in California, GAS, 204
 Los Angeles coastal belt, XI, 417
 state of Alagoas, Brazil, XXI, 301
 Victoria, XXVII, 652
 western United States, review, XV,
 558
 White Point and East Point area,
 XXV, 1973
 Wind River Mountains, XXV, 144
 Physiologists, RMS, 66
 Phytoplankton, PROB, 28; RMS, 50,
 437, 440
 Phytosterol, PROB, 452
 Pia, J. V., PTNM, 566, 598, 605, 606;
 XII, 1325; XXV, 401; XXVI, 566,
 598, 605, 606
 Piaggio, V, 599, 600
 Piassa limestone, XXIII, 1522; XXVI,
 1592
 Piauf Basin, XXIX, 539
 oil possibilities in, XXIX, 547
 Picado, T. C., Central American poi-
 sonous snakes, review, XXIV, 383
 Picard, L., and Salomana, P., XXI,
 531
 Piceance Creek structure, GAS, 367,
 371, 372; PROB, 728
 Pickens oil field, Mississippi, FOP, 152;
 XXV, 1584; XXVII, 994; XXVIII,
 801; XXIX, 828
 production of oil, 1940, XXV, 1019
 Pickens pool, XXVII, 905
 Pickens-Sharpsburg field, XXVII, 994
 (Pickens)
 Pickering, XXIII, 106
 Pickton field, Hopkins County, Texas,
 XXIX, 769, 1777
 Pico anticline, PROB, 191
 Pico beds, SC, 49; XX, 1595
 Pico Canyon oil field, PROB, 191,
 756; XXVI, 188
 Pico formation, California fields, GAS,
 176, 181, 203
 Los Angeles Basin, California, X,
 760
 lower, in Long Beach field, Califor-
 nia, STR II, 71
 (Pliocene) (Tlp, Tmp, Tup), SBP,
 91-93, 97-194, 415, 416
 unconformable on Repetto formation
 in Long Beach Harbor area, XXII,
 1056
 Ventura Avenue field, California,
 STR II, 30; XII, 729
 Ventura quadrangle, California, sedi-
 mentation of, XII, 235
 Pico group, CAL, 231, 236
 Pico groups of foraminifera, XXI, 628
 Picotte, XXIV, 642
 Pictou series, FOP, 121; XXV, 1553
 Pictured Cliff sand, GAS, 379
 Piedras Blancas Creek, CAL, 192
 Piedras Negras, MEX, 54
 Piedras Pintas dome, SD, 720, 735,
 736, 739; I, 49; IX, 538, 541, 543,
 553, 557
 Pier, H. H., XV, 1294; XX, 43
 Pierce, H. A., and Spencer, E. M.,
 XIX, 1229
 Pierce, H. R., and Rawlins, E. L.,
 GAS, 1021, 1026, 1113
 Pierce, William G., XIX, 1061; XXI,
 48; XXII, 100; XXVII, 1257,
 1261
 Heart Mountain and South Fork
 thrusts, Park County, Wyoming,
 XXV, 2021
 Pierce, William G., and Courtier,
 W. H., STRAT, 64
 Englevalle channel sandstone of
 Pennsylvanian age, southeastern
 Kansas, XIX, 1061
 Pierce, William G., and Dane, C. H.,
 XXIX, 1664
 Dawson and Laramie formations in
 southeastern part of Denver Basin,
 Colorado, XX, 1308
 fossil sink holes in Cretaceous beds
 in Prowers County, Colorado, XVIII,
 1493
 Pierce, William G., and Hunt, C. B.,
 STRAT, 277
 Pierce Canyon formation, Triassic,
 XXVIII, 1601
 Pierce Canyon redbeds, PTNM, 612;
 XXVI, 64, 612
 Pierce Estate sands, XXIII, 1634
 Pierce Junction, flank production at,
 GC, 8; XVIII, 507
 Pierce Junction oil field and salt dome,
 Texas, GAS, 700-702; I, 49
 notes on an occurrence of galena at,
 XVII, 438
 Piercement anticlines and domes,
 PROB, 646
 Piercement dome, a common structure
 in Gulf Coast, XXIV, 1091
 Piercement fold, SD, 179; IX, 1239
 Piercement salt anticlines, PROB, 644
 Piercement salt dome, pre-Miocene,
 XIX, 1336
 pre-Miocene, at Brenham dome, GC,
 786
 Piercement salt domes in Mississippi,
 XXVIII, 804
 Piercement trap reservoirs, XXIX,
 1574
 in diapiric anticlines, XXIX, 1577,
 1578
 in piercement type salt domes, sub-
 division of, XXIX, 1575, 1578
 Piercement traps, structural arrange-
 ment of, XXIX, 1576
 Piercement-type domes, XXVIII, 1305
 common to Louisiana-Texas Coastal
 Plain, XXII, 1416
 Piercement-type salt dome, Anse la
 Butte, XXVII, 1149
 Piercement type salt-dome structures
 of Gulf Coast, shallow, type of
 reservoirs in, XXIX, 1566
 Piercement-type salt domes in Gulf
 Coast embayment, fan method ap-
 plicable to search for, XXIV, 1406
 Fierre, Mex, 57, 61
 Pierre bentonitic marl in Pánuco field,
 Mexico, XII, 403
 Pierre epicontinental sea cycle of trans-
 gression and regression in Leth-
 bridge area, Alberta, ALTA, 112-
 114; XV, 1240-1242
 Pierre formation, XXV, 1857; XXVI,
 353
 in Florence field, Colorado, STR II,
 80
 Pierre group of Upper Cretaceous shales
 in Rocky Mountain area, XXI,
 911
 Pierre series in Alberta and Montana,
 ALTA, 9; XV, 1137
 Pierre shale at Florence-Canon City
 field, Colorado, production from
 fissures in, XXI, 1246
 Colorado, V., 90
 Colorado outcrop section m, SBP,
 243-255, 411
 Greasewood field, STRAT, 25
 Great Basin, V, 25
 Kansas, II, 73; VI, 70
 (Klp, Kup) (Cretaceous), SBP, 193-
 195, 197-255, 414, 415
 Lance Creek field, Wyoming, STR
 II, 605
 Logan County, Kansas, XII, 1016
 lower part of, in Rocky Mountain
 area, areal variation of properties
 in sediments in, SBP, 212
 Nebraska, isopach map, XXVI, 1528
 New Mexico, IV, 77, 97
 northeastern Colorado, XVII, 425
 possible origin of oil in, at Florence
 field, Colorado, STR II, 87
 Texas, V, 10
 Wyoming, V, 202
 Pierre shale beds in Rosencranz area,
 XIV, 1067
 Pierre time, shale deposition in, XXI,
 1264
 Pierson, C. H., XXIX, 25
 Piezometer for mechanical analyses,
 RMS, 546
 Piezometric surface, GC, 277; XVI,
 338; XIX, 323
 Piggot, C. S., RMS, 655, 656; XXIV,
 1531, 1539
 Piggot, C. S., and Urry, Wm., XXIX,
 1482, 1483, 1485, 1487
 Piggot coring apparatus, RMS, 655, 656
 Piggot gun, XXV, 1250
 Pigments, RMS, 435, 443
 Pijpers, P. J., XVII, 1387
 Pike, R. W., XXIV, 502, 1398
 Pike, R. W., et al., source rocks of pe-

- (Pike)
troleum—a symposium of opinion, discussion, XXIV, 496
- Pike, Sumner T., petroleum geologist and Securities and Exchange Commission, XXV, 1297
- Pike County, Kentucky (well 432), SBP, 349-379, 410; XXVI, 1132
- Pike County gas field, Illinois, XXIII, 820
- Pikes Peak granite, II, 85
- Pilarcitos fault, CAL, 35-37, 42
- Pilarcitos Lake, CAL, 35, 36, 313
- Pilcher, Ben L., XXIII, 1053
- Pile driver bottom sampler, RMS, 653, 654
- Pillow structure, XXVII, 146
- Pilot Butte field, Sweetwater County, Wyoming, PROB, 937; XXVII, 475, 856
- Frontier water in, XXIV, 1240
- Steele shale water in, XXIV, 1240 (well 230), SBP, 194-243, 390
- Pilot Knob, CAL, 44
- Pilot Oil Company, Ray 1 (well 308), SBP, 292-335, 408
- Pilot Point field, XXI, 1019
- Pilsbry, Henry A., XXIX, 886
- Pilsbry, Henry A., and Brown, A. P., VII, 519, 522
- Pilsbry, Henry A., and Olsson, Axel A., XXVI, 819; XXIX, 1099
- Pimple Mounds, GC, 218; XVII, 922
- Pinal Oil Company, GAS, 154
- Pinching sand, Clinton sand of Ohio, STR II, 697
- Pinchot, Gifford, VII, 617
- Pinchout trap reservoirs, XXIX, 1563, 1564, 1567
- Pine, W. B., III, 283
- Pine Canyon, Monterey County, California, section of Monterey (Salinas) shales in, VIII, 55
- Pine Creek, MSC, 23, 24, Fig. 14 (in pocket)
- Pine Creek syncline, XXII, 253
- Pine Island anticline at Pine Island field, Louisiana, STR II, 173
- Pine Island deep sands, Louisiana, STR II, 168
- Pine Island district, PROB, 607
- Pine Island dome, STR II, 174
- Pine Island field, Louisiana, PROB, 609; STR II, 168; IV, 131; VI, 184, 259, 477; VII, 381; XIV, 175; XXII, 1667
- Glen Rose Comanche from, STR II, 171
- Pine Island formation, XXII, 1667
- Pine Island gas, Louisiana, IX, 171
- Pine Island member, XXII, 722, 970; XXIII, 289
- of Glen Rose formation in Louisiana, XXII, 725
- Pine Island shale, XXIX, 1419
- upper Aptian in age, XXIX, 1447
- Pine Island uplift, XXIV, 1028
- Pine Mountain anticline in eastern coal field, Kentucky, STR I, 78
- Pine Mountain dome, PROB, 163
- helium in, GAS, 1059
- Pine Mountain fault, XI, 482
- correlation of, with Sequatchie Valley anticline, XVIII, 1595
- eastern coal field, Kentucky, STR I, 75, 78
- Pine Mountain fault and uplift, XI, 478; XVIII, 1587
- Pine Mountain fault zone in eastern Kentucky, GAS, 924, 925, 932
- Pine Mountain Ridge, SC, opp 98, 104, XX, opp. 1644, 1650
- Pine pool, III, 273
- Pine Prairie, SD, 12, 212, 220, 419
- Pine Prairie field, I, 52; XXVII, 737
- Pine Prairie salt dome, Louisiana, SD, 419; IX, 738
- effect of character of rim syncline on production at, XX, 1422
- Pine Ridge anticline, XXI, 1410
- Pine River formation, VI, 116
- Pine Valley, MSC, 238
- Pine Valley Mountains, XXIII, 123
- Pine Valley syncline, XXIII, 133
- Pineau, L., XXI, 131
- Pinecate formation, CAL, 149; MSC, 160
- Pinedale structure, XXIV, 1110
- Pinery limestone member, PTNM, 582, XXVI, 582
- Pinetop chert, XXV, 1644
- Piney Oil and Gas Company (well 431), SBP, 349-379, 410
- Pinfold, E. S., XVIII, 290, 294, 298
- Pinhorn field, waters in, XXVI, 1371
- Pink limestone, STRAT, 443; II, 119; V, 402
- Pinkley, George R., and Roth, Robert, an altered volcanic ash from Cretaceous of western Kansas, XII, 1015
- Pinnacles national monument, California, further evidence for age of volcanism, XXI, 1341
- Pinnacles rhyolite, XXI, 1341
- Pinnacles volcanic activity from lower Middle Miocene (Tembler) to uppermost Miocene, and possibly Pliocene, XXI, 1343
- Pinole, MSC, 129
- Pinole Creek, MSC, 65
- Pinole tuff, CAL, 243, 303, 313; MSC, 167
- Piñon Peak, MSC, 38, 101, Fig. 14 (in pocket)
- Piñon Peak-Canyon Segundo-Canyon Del Rey, MSC, Fig. 6 (in pocket)
- Piñon Valley, XXI, 854
- Pinto Canyon, XXIV, 180
- Pinto Canyon section of Permian sediments correlated with Leonard formation, XXIV, 188
- Pintura area, XXIII, 137
- Pioneer anticline, MSC, 56, 61, 111, 165
- Pioneer group, XXVII, 280; XXIX, 993
- Pioneer Oil Company, XXIV, 1807
- Pipe, capacity of, XI, 1231
- Pipe line constructed in Rocky Mountain region during 1939, XXIV, 1111
- from Barco Concession, XXIX, 1128
- from Baxter Basin field, XIX, 537
- from Boggy Creek salt dome, Texas, XIII, 613
- from De Mares Concession, XXIX, 1119
- from High Island, GC, 914; XX, 565
- from North Cowden field, XXV, 629
- from Oficina to Guanta on Caribbean, XXIII, 959
- from Salt Flat field, XIV, 1422
- from Tioga gas field, XV, 936
- from Wasson field, XXVII, 483
- from Winterfield field, XXVI, 1109
- proposed, from Monroe gas field to New Orleans, preliminary report on, review, VI, 382
- prospective, Bellingham area, Washington, GAS, 231
- (Pipe)
Sagoc, from Tibú field, XXIX, 1128
- to Tampico, MEX, 4
- Pipe-line activity in Kansas in 1939, XXIV, 997
- Pipe-line construction during 1938 in Rocky Mountain region, XXIII, 930
- in Rocky Mountain region, XXI, 998
- Pipe-line gas from Tierra Blanca pool, GAS, 1010
- Pipe-line outlets for Hoffman field, XXIV, 2141
- from Oklahoma fields, XXV, 1102
- Pipe-line proration in Indiana, XXIV, 968; XXV, 1123
- Pipe-line runs, cumulative total since 1921, and annual runs since 1932, XXIV, 1036
- West Texas and southeastern New Mexico, XXI, 1034
- in 1937, XXII, 695
- Pipe-line systems, XXV, 1287
- Pipe-line transmission system, nature and cost, GAS, 1109
- Pipe lines, GAS, 1089
- bamboo, XXVIII, 1434
- constructed in West Texas in 1941, XXVI, 1010
- crossing Diablo Plateau, FOP, 105, XXV, 1537
- from Alberta fields, GAS, 2, 3
- from Amarillo district, Texas, GAS, 390, 413, 415; XVII, 879
- from Amelia field, XXIII, 1664
- from Arkansas fields, GAS, 562
- from Ashley Creek, Utah, GAS, 369
- from Barbers Hill, XIV, 720, 737
- from Big Horn Basin fields, Wyoming and Montana, GAS, 291, 302
- from California fields, GAS, 117, 120, 148
- from Colorado, New Mexico, and Utah, GAS, 364
- from Conroe field, GC, 830; XX, 777
- from Darst Creek field, XVII, 35
- from Driscoll pool, GC, 627; XVII, 823
- from early wells in New York and Pennsylvania, GAS, 951
- from Eastern Interior fields, GAS, 833
- from eastern Kentucky fields, GAS, 915, 916, 921, 942-945
- from eastern Oklahoma fields, GAS, 512, 522, 523, 526, 527
- from Greta field, GC, 663; XIX, 559
- from Gulf Coast fields, GAS, 700, 703, 708, 727, 768-771, 773, 786, 893, 895
- from Hugoton field, XXIII, 1056, 1062
- from Indiana fields, GAS, 844
- from Kansas gas fields, GAS, 478, 481, 482, 485, 508; XXIV, 1782, 1787, 1791
- from Lisbon field, XXIII, 321
- from Lost Soldier district, Wyoming, GAS, 306
- from Michigan fields, GAS, 801, 804, 805, 810; XXIV, 989; XXV, 1134
- from Montana fields, GAS, 246, 262, 264, 268, 270
- from New Mexico fields, GAS, 381, 422, 429, 437
- from northeast Texas fields, GAS, 652, 671, 674, 678
- from Ontario fields, GAS, 78, 82, 86
- from Panhandle field, XVII, 897
- from Rattlesnake Hills field, Wash-

- (Pipe)
 ington, GAS, 229
 from Reed City field, XXVI, 1108
 from Richland and Monroe districts, XV, 952
 from Rocky Mountain region, XXVI, 860
 from Roumania fields, XVIII, 889
 from Salem pool, XXIII, 1372
 from shale gas fields of Ontario County, New York, GAS, 975
 from Shongaloo and Carterville-Sarepta fields, XXII, 1502
 from southeastern Illinois, southwestern Indiana, and western Kentucky, GAS, 820, 823, 830
 from southern Cincinnati Arch region, GAS, 865, 867, 868, 872, 877
 from southern Oklahoma pools, GAS, 576
 from Sugar Creek field, XXII, 1516
 from Texas Panhandle field, GAS, 401, 402, 405, 406
 from Wasson field, XXVII, 521
 from West Texas and southeast New Mexico, GAS, 419
 from West Texas fields, GAS, 422, 435, 448, 453-455
 from Wyoming and Colorado fields, GAS, 325, 344, 371
 from Wyoming fields, XXV, 1157
 in Arkansas Valley, GAS, 572
 in Colombia, importance of, XXIII, 962, 963
 in Middle East, XXVIII, 920
 in South America, GAS, 1091
 in United States, XXI, 172
 in United States, natural gas, GAS, 1110
 movement of crude petroleum by, in war time, XXVII, 978
 natural-gas, constructed in 1939 in Michigan, XXIV, 991
 natural gas trunk, and gas fields of Kansas, XXIV, 1784
 Pipe lines and gas fields in Bend Arch district of Texas, GAS, 611
 Pipe lines and oil fields in Near East, 1940, XXV, 361
 Piper, A. M., XXIV, 1642, 1660
 Piperine as mounting medium, RMS, 603
 Pipes, materials used for, GAS, 1108
 Pipette method of mechanical analyses, RMS, 182, 543, 547, 549
 Piqua gas field, map of, contours on top of Stanton lime, XXIV, 1780
 Piqua pool, Allen and Woodson counties, Kansas, XXIV, 1779
 Piracy of streams in Los Angeles region, XI, 422
 Pirin field, V, 603; XXIX, 512
 Pursagat field, Russia, production at, XXI, 1077
 Pirson, Sylvain J., XXIX, 1542
 critical survey of recent developments in geochemical prospecting, XXIV, 1464
 effect of anisotropy on apparent resistivity curves, XIX, 37, 1566
 oil possibilities of Belgium and Belgian Congo, XVIII, 1160
 Pirsson, Louis V., XII, 144
 Pirtle and Hudnall, STR II, 558
 Pirtle, George W., GAS, 787, 789, 847; PROB, 538, 542; STRAT, 557; XXIV, 1953
 Michigan structural basin and its relationship to surrounding areas, XVI, 145
 Pirtle, George W., and Wendlandt, E. A., developments in East Texas during 1938, XXIII, 889
 Piru, CAL, 288
 Piru Creek, MSC, 47, 119; SC, 98; XX, 1644
 Piru district, SC, 46; XX, 1592
 Piru system of drainage, XXIII, 554
 Piru unit, Tejon Quadrangle, XXI, 221
 Pishel, Max A., XXVII, 1571
 Pishny, Charles H., review, XX, 1258
 Pismo, MSC, 166
 Pismo formation, MSC, 165
Pisocrinus shales, XXVI, 11
Pisocrinus zone, XXVI, 10
 Pisolites, RMS, 526
 in Carlsbad limestone, XXVI, 78
 Pisolitic concretions from Carlsbad limestone, XXI, 869
 Pisolitic limestone in Bellevue field, Louisiana, STR II, 236
 Pisolitic tufa in Lower Reynosa, GC, 557; XVII, 495
 Pit formation, CAL, 67
 Pitch and plunge, XXV, 2183
 Pitchfork, Wyoming, geology and unit operation at, XVIII, 1480
 Pitching anticlines, PROB, 193, 196, 200, 203
 Pitching syncline, PROB, 206
Pithecanthropus erectus from Java, XXI, 555
 Pitkin formation, character of insoluble residues of, XXIV, 415
 in Adair County, Oklahoma, lithology of, XXIV, 412
 stratigraphic relations of, XXIV, 415
 Pitkin-Hale contact, disconformable, XXIV, 415, 416
 Pitkin limestone, III, 76, 272; V, 121, 152, 344, 404, 549, XXV, 1654
 Adair County, Oklahoma, zones in, XXIV, 413
 northwest Arkansas, XIV, 130
 Ozark Highland area, GAS, 543
 Pitot-tube method of measuring open flows, GAS, 784, 1002
 Pittman, E. F., XI, 65, 83
 Pittsburg, Texas (well 305), SBP, 292-335, 408
 Pittsburg Bluff formation, MSC, 161
 Pittsburg field, Camp County, Texas, XXIV, 2032
 Pittsburgh basin, XXIII, 1849; XXV, 785
 Pittsburgh coal, II, 131; V, 82, 366; XXV, 797
 Copley pool, West Virginia, STR, I, 444
 eastern Ohio, GAS, 899
 Pittsburgh coal bed in Scenery Hill gas field, Pennsylvania, STR II, 444, 448
 Pittsburgh district, PROB, 70
 Pittsburgh-Huntington basin, GAS, 992
 Pittsburgh-Huntington syncline, XXV, 794, 824
 Pittsfield anticline, XXII, 1533; XXIV, 770
 Pittsfield-Hadley anticline, Pike County, Illinois, XXI, 779; XXIII, 820; XXIV, 965
 Pittsfield-Hadley field, GAS, 831
 Pitzer, P. W., and West, C. K., XX, 1410
 Pivotal faults, movement on, XXV, 2193
 Pixlee area, Kansas, STR II, 157
 Pizanty, Milhall, GAS, 1094
 Placedo oil field, Victoria County, (Placedo)
 Texas, XIX, 1693; XXVII, 745
 Placerita fault, XVI, 782
 Placerville Folio, CAL, 35
 Placid Oil Company, XXII, 730
 Placid shale, XXIV, 88
 Plagioclase, XXVIII, 76
 in East Indies, RMS, 349
 Plaine shale, V, 259
 Plains of Canada, Devonian in, XXIX, 657
 Plains type of folding, XIII, 586
 Plaisancian, MSC, 174
 Plancus, Janus, XXV, 1212, 1214
 Plane projection for drill-bit course, to illustrate directional and deflection angles, XXVII, 89
 Plane table and speedometer, elevations with, XXVIII, 1534
 Planetable methods, VIII, 47
 Planetable survey underground, XI, 425
 Planes, problem of two tilts solved by, XXII, 1269
 Planetary rotations, directions of, CD, 171
 Planetesimal hypothesis of contraction of earth, CD, 9, 87
 Plankton as means of measuring currents, RMS, 104
 chemical composition of, RMS, 441-445; SBP, 19, 20
 conditions of growth of, RMS, 437, 438
 constituents of sediments, composition of, RMS, 443
 effect of upwelling on, RMS, 126
 relation to organic content of sediments, RMS, 381, 437, 438; XII, 1067
 Plankton and allied protozoa of Japan, MSC, 12
 Plankton organisms, RMS, 291, 397
 rate of settling, RMS, 60
 Plankton radiolaria, RMS, 145
 Plankton vegetation, RMS, 147
 Planktonic invasions into barred basins, XXI, 1129
 Planktonic life in La Luna seas, XXI, 1137
 Planned geologic field experience, discussion, XXIII, 1573
 Plano Trabuco area, MSC, 114
 Plant-bearing clays near Lamberts Station, Alabama, XXIII, 1554
 near Lamberts Station, Alabama, Pliocene age of, XXIII, 1555
 Plant fossils, XXIV, 263
 in Pottsville series, XXVII, 1203
 Upper Cretaceous, abundant in western interior, XXII, 1638
 value in correlation, VII, 186
 Plant fragments, XXII, 868; XXV, 135
 Plant growth and its effects, RMS, 144
 Plant material, PROB, 42, 82, 98, 452
 in lake sediments, XXV, 845
 Plant remains, XXV, 130
 below Noric shales in Western Borneo, XXII, 9
 in Franciscan sandstone, XXVII, 132
 Plant traces, MEX, 123
 Plants, age of Jackfork and Stanley formations of Ouachita geosyncline Arkansas and Oklahoma, as indicated by, XVIII, 1010
 Cretaceous, in Wind River Mountains, XXV, 138
 from Dawson arkose, XX, 1324
 from Stanley shale, XXI, 12
 in lakes, XXV, 834

(Plants)

- Middle Jurassic, XXVII, 1501
of Jackson formation, GC, 402;
XVII, 632
of Laramie formation, XX, 1319
Permian, of Autunian type, in Ap-
palachian area, XXIV, 317
terrestrial, MEX, 10-12, 83, 100
value in locating geologic structures,
XV, 77
Planulina harangensis zone in Louisi-
ana, XXIV, 444
key fossils of, XXIV, 444
Plaquemine Parish, Louisiana (well
409), SBP, 335-349, 410
Plaquemine-Terrebonne subdelta,
RMS, 159
Plaquemines and St. Bernard parishes,
reports on geology of, Lower Mis-
sissippi River Delta, XXI, 1213
Plaster of paris, RMS, 633
Plastic creep, CD, 38
Plastic flow, SD, 45
Plastic materials, defined, PROB, 613
Plasticity, definition, CD, 24
in clays, RMS, 479, 481, 482
Platanus, CAL, 209
Plate of photographs of fossils, number-
ing and scaling prints for, XXIX,
1510
Plateau, J., XV, 196
Plateau in New York oil fields, STR
II, 271
Plateau Central, XXVIII, 317
Plates of California Miocene foramini-
fera, list of, MSC, viii
showing anhydrite from Fletcher an-
hydrite member and La Huerta
siltstone member of Salado forma-
tion, XXVI, bet. 64 and 65
showing types of Franciscan rocks,
XXVII, bet. 140 and 141
Platón River, Chicontepec section on,
MEX, 99
Platón Sánchez (Veracruz), MEX, 99,
100, 111, 250
Platt, XXIX, 166
Platt, C. W., XIX, 1230
Platt, Franklin, PROB, 11, 71
Platt, Fred C., XIII, 781; XXIX, 1265
Platt, John L., and Challinor, John,
simple geological structures, re-
view, XIV, 1479
Platy crystals, RMS, 537
Plauchud, M. E., X, 1272
Playa del Rey, SC, 116; XX, 1662
Playa del Rey anticline, cross section of,
GAS, 194
Playa del Rey area, map showing, GAS,
193
Playa del Rey field, California, marine
oil shale, source of oil in, XIX, 172
waters in, PROB, 979
(wells 30-35), SBP, 87-153, 403
Playas Peak formation, XXII, 534
Playas Quadrangle, New Mexico,
XXII, 526
Plaza Huicuil field, XXIX, 502
Pleasant Grove field, gravity of oil in,
XXVI, 1052
Woodbine formation in, XXVII, 787
Pleasant Valley, SC, 53; XX, 1599
Pleasant Valley field, California,
XXVIII, 743; XXIX, 651
production at, XXVIII, 745
Pleasanton channel sandstone of north-
central Missouri correlated with
Knobtown sandstone, XXV, 32
Pleasanton conglomerate of Putnam
County, Missouri, correlation of

(Pleasanton)

- Chariton conglomerate of Appa-
noose County, Iowa, with, XXV,
70
Pleasanton group in Missouri series,
XXV, 30, 32, 38, 43, 46, 50, 56, 60,
66, 69
Pleasanton shale, XXV, 63
Pleasants sandstone member, XXVI,
175
Pleasantview sandstone, XXVI, 1590
Plectofrondicularia miocenica zone,
MSC, 68, 79, 116, Figs. 6, 14 (in
pocket)
Plectofrondicularia-Siphogenerina zo-
nule, MSC, 86
Plectofrondicularinae, MSC, 239
Pledger field, Texas, GAS, 726, 727
Pledger structure, GC, 179, 185; XIX,
365
Pleistocene, Alberta, STRAT, 274
Amelia field, Texas, XXIII, 1641
Antilean-Caribbean region, XXIV,
1578
Bellevue field, Louisiana, STR II, 242
Border-Red Coulee field, STRAT,
274
Buckeye area, XXIV, 1969
Buttonwillow field, GAS, 140
Caliente Range, California, XXV,
255
California, VI, 306; VII, 59; VIII,
793; XXII, 1053; XXIII, 532
Catahoula Parish, Louisiana, XIV,
436
Centralia-Sandoval area, Illinois,
STR II, 121
Coalinga district, SC, 64; XX, 1610
Colombia, XXVI, 821; XXIX, 1096
Corpus Christi area, GC, 285; XIX,
333
correlation of, CAL, 268
Dakota basin, XXVI, 1559
Delaware, XXIX, 900
East Africa, XXI, 114
east-central United States, XXII,
1519
Florida, XXV, 263
Georgia, XXII, 792
Gulf Coast, I, 35
Hitchcock field, STRAT, 643
Hockley dome, Texas, IX, 1045
Houston district, XXVII, 1085
Hugoton field, STRAT, 80, 84
ice, peat bogs, and arid regions, CD,
45
Illinois, STR II, 117; XXIII, 812
Iowa, XXIV, 1496
Kern Front field, STRAT, II, 12
Kettleman Hills, GAS, 129
Kevin-Sunburst field, Montana, STR
II, 257
Laredo district, Texas, STR I, 391;
XXI, 1423
Los Angeles Basin, California, SC,
124; X, 761; XX, 1670
Louisiana, V, 631; VI, 180; X, 227;
XVII, 653; XXII, 291, 1421
lower, MSC, 80
lower, in Tejon Quadrangle, XXI,
218
lower (Pedroian), in Ventura Basin,
XII, 123
Michigan fields, STRAT, 245
middle, orogeny, SC, 51; XX, 1597
middle (Sierran), in California, XII,
129
Minnesota, X, 196
Pleistocene, Miocene, and Pliocene for-
mations in, Rio Grande region,

(Pleistocene)

- Starr and Hidalgo counties, Texas,
XXI, 491
Mississippi, V, 491
Montana, STRAT, 274, 331
North Belridge field, GAS, 138
North Dakota, XXVI, 357
North Sea, RMS, 331, 335, 343
Pliocene in Idaho and Oregon, nitro-
gen in, GAS, 1059
Panama, IV, 263
Pleistocene, Pliocene, and Miocene,
West Ranch field, XXVIII, 201
Pleistocene, Ridge Basin, California,
XXIII, 544
Rio Grande region, XXI, 497
Saginaw field, Michigan, STR I, 108,
111
Santa Maria district, XXVII, 1342,
1360
Santa Maria oil field, California,
XXIII, 53
Santa Vnez region, SC, 92; XX, 1638
Saratoga field, Texas, IX, 167
Sierran interval of, XII, 130
southeastern Virginia, XXIX, 82
Pleistocene, southern California, VII,
418; discussion, XII, 559
divisions and duration of, XII, 111
Pleistocene, Spindletop dome, XXI, 478
Texas, STRAT, 643; V, 218, 384; IX,
19; XXII, 1194
Trinidad, XX, 1447
unconformable on folded Pliocene in
East Indies, XXI, 555
upper (glacial), in California, XII,
132
upper, in Tejon Quadrangle, XXI,
219
upper Magdalena Valley, XXIX,
1105
uppermost (Champlain subsidence),
in California, XII, 134
Ventura Basin, XIII, 755
Washington, XXVI, 1809
West Columbia field, Texas, STR II,
454
Wyoming, V, 210
Pleistocene and Pliocene fossils at Big
Hill dome, SD, 702
Pleistocene and Pliocene history of
Baldwin Hills, Los Angeles County,
California, X, 502
Pleistocene and Recent, Camp Polk,
Louisiana, XXIX, 1185
China, XXVIII, 1425
Gulf Coast, special features of,
XXIX, 1314
Louisiana, XXIX, 43
Mississippi, XXVIII, 62
Wind River Mountains, Wyoming,
XXV, 143
Pleistocene birds, climatic significance
of, CAL, 265
Pleistocene caliche in Texas, XXIX,
1719
Pleistocene changes in oceanic water,
RMS, 406, 407
Pleistocene climates and sea-levels in
South Texas, GC, 287; XIX, 334
Pleistocene degradation in California,
XXV, 257
Pleistocene deposits, Los Angeles
Basin, SC, 48; XX, 1594
Mississippi delta, XXIII, 7
of near-shore region between Rio
Grande and Mississippi, XXIX,
1311
of North Sea, RMS, 335
Ventura Basin, SC, 48; XX, 1594

- Pleistocene diastrophism in California, XXV, 258
- Pleistocene fan, XXV, bet. 224 and 225
- Pleistocene fault block, Brazil, XXI, 122
- Pleistocene fauna of Magdalena Bay, Lower California, XXI, 522
- Pleistocene faunas, MSC, 134
- Pleistocene folding, SC, 70; XX, 1616
- California fields, GAS, 181, 186
- Pleistocene fossils at Bryan Heights dome, SD, 684
- Pleistocene glaciation, RMS, 155, 333, 411
- date of, RMS, 411, 413
- in California, XII, 133
- influences of, RMS, 413
- Pleistocene gravels unconformable on Miocene in south Louisiana, XXVIII, 1251
- Pleistocene ice caps of North Sea, RMS, 343
- Pleistocene ice sheets, loading and unloading of parts of continents by, XXIX, 1641
- Pleistocene mammals and birds at Rancho La Brea, XII, 133
- Pleistocene maraunite, XXI, 121
- Pleistocene movements in flood areas, RMS, 361
- Pleistocene orogeny of California, XX, 867
- Pleistocene oscillations in sea level in Baltic, RMS, 312
- Pleistocene oyster beds, MEX, 6
- Pleistocene reef-limestones in Barbados, XXIV, 1550
- Pleistocene rivers in Soendaland, drowned parts of, XXII, 62
- Pleistocene sediments in Atlantic Ocean, calcium carbonate content of, RMS, 390
- Pleistocene series in Gulf Coastal Plain, XXIII, 188
- Pleistocene terraces, GAS, 745, 746; XXII, 1661
- in Louisiana, RMS, 157
- Pleistocene water sands of Corpus Christi area, Texas, disseminated oil in, XVI, 385
- regional isosalinity lines for, GC, 276; XIX, 325
- Pleito, MSC, Fig. 14 (in pocket)
- upper, MSC, 153
- upper, horizon of Clark, MSC, 160
- Pleito fault, XVI, 371
- Pleito formation, CAL, 148, 303, 313; MSC, 160
- Pleito horizon, upper, MSC, 56
- Plemons nose, XXIII, 1016, 1049
- Pleochroism, RMS, 604, 608
- Pleonaste, RMS, 602
- Pliocene, Amelia field, Texas, XXIII, 1641
- Antillean-Caribbean region, XXIV, 1578
- Borneo, V, 417
- Buena Vista field, PROB, 201
- Caliente Mountain region, SC, 82; XX, 1628; XXV, 253
- Carpathians, XVIII, 738
- Caspian oil fields, XVIII, 783
- Catahoula Parish, Louisiana, XIV, 437
- Coalinga area, PROB, 195; SC, 63; XX, 1609
- Colombia, X, 401; XXVI, 819, 821; XXIX, 1096
- (Pliocene)
- compression and shortening in California, XVI, 17
- Cuyama valley, XXV, 219
- Dominguez pool, PROB, 217
- East Indies, XXII, 45
- Ecuador, XIV, 287
- Elk Hills field, California, STR II, 49, 55
- Etchegoin, of middle California, MSC, 172
- Europe, VI, 426
- Georgia, XXII, 792
- Gulf Coast, VII, 59
- Gulf coastal domes, GAS, 694, 702, 706, 717, 730
- High Island dome, GC, 955; XX, 606
- Hitchcock field, STRAT, 643
- Hockley dome, Texas, IX, 1045
- Houston district, XXVII, 1085
- Hugoton field, STRAT, 84
- Huntington Beach field, California, PROB, 221; XVIII, 329
- ice, peat bogs, and arid regions, CD, 45
- in North Sea, RMS, 332, 343
- Inglewood field, PROB, 216
- Japan, MSC, 170; XVIII, 909
- Kern Front field, STRAT, 11, 12
- Laredo district, XXI, 1423
- Long Beach field, California, STR II, 70; PROB, 218
- Los Angeles Basin, California, SC, 124; X, 760, XX, 1670
- Louisiana, V, 631; VI, 180; XXII, 743, 1421; XXVII, 1104, 1141
- lower, MSC, 28, 71, 72, 87, 97, 136, 157, 158, 160, 166-168, 172, 239, 281, 317, 319, 332, Fig. 14 (in pocket)
- lower, faunules, MSC, 136
- lower, foraminifera, MSC, 79
- lower, invertebrates, MSC, 67
- lower, Santa Maria district, California, XVI, 135; XVII, 201
- lower, Spindletop field, XXI, 480
- lower, Wilmington oil field, XXII, 1063
- McKittrick field, PROB, 197, 198; XI, 618; XVII, 9
- middle, MSC, 174
- middle, California, XXIV, 1118
- Midway dome, XXII, 819
- Midway-Sunset field, PROB, 199
- Montebello field, PROB, 214
- Nevada, XXVI, 1803
- Pliocene or Miocene fauna from Burkeville, Texas, XXVIII, 979
- Pliocene or Pleistocene in Idaho and Oregon, nitrogen in, GAS, 1059
- Pliocene, Pacific geosyncline province, XIII, 434
- Panama and Costa Rica, III, 366
- Pliocene, Pleistocene, and Miocene formations in Rio Grande region, Starr and Hidalgo counties, Texas, XXI, 491
- Pliocene, Pleistocene, and Recent in Santa Maria oil field, XXIII, 79
- Pliocene, Ponto Caspian oil fields, XVIII, 763
- post-Mesozoic folding, XXI, 550
- Potrero field, PROB, 216
- Rincon field, PROB, 211
- Rocky Mountains, XXIII, 1151
- Roumania, SD, 180; IX, 1171
- Russia, XI, 501; XXI, 1077; XXIII, 950
- San Jose Hills, MSC, Fig. 14 (in pocket)
- (Pliocene)
- Santa Maria district, California, XXIII, 53; XXVII, 1339, 1358
- Saratoga field, Texas, IX, 267
- Seal Beach field, PROB, 219
- South Mountain, California, XII, 744
- southern California, SC, 46, 48-50, 61, 63, 64, 66-70, 74, 82, 91, 92, 112, 113, 121, 124, 125, 131, 135, 137; VII, 418; XXVI, 189
- southwestern part of Blue Mountains, XXIX, 1386
- spread of fresh-water conditions during, SC, 66; XX, 1612
- sub-Carpathian zone, IX, 1240
- Summerland field, PROB, 209
- Tejon Quadrangle, XXI, 218
- Texas, STRAT, 643, 728; V, 223; IX, 21; XXII, 1194
- Texas and Louisiana, IX, 80
- Texas coast region, VIII, 437
- thin in Santa Ynez region, SC, 92; XX, 1638
- Torrance field, PROB, 222
- Trinidad, XX, 1447; XXIV, 2103
- unconformities within and at base of, GAS, 126
- upper, at Spindletop field, XXI, 480
- upper, oil zone, XXI, 981
- upper, sandy zone productive in Oxnard field, California, XXII, 706
- upper Magdalena Valley, XXIX, 1104
- Venezuela, XXIII, 959; XXVIII, 23
- Venice field, PROB, 223
- Ventura area, California, XII, 756
- Ventura Avenue field, California, STR II, 30; XII, 235, 729
- Ventura Basin, SC, 98; XIII, 755; XX, 1644
- Ventura Basin, California, magnetic iron sulphide of, XXI, 627
- Wheeler Ridge, California, X, 497
- Whittier field, California, PROB, 214
- Pliocene and lower Pleistocene basins and deposits, SC, 46; XX, 1592
- Pliocene and Miocene series in Gulf Coastal Plain, XXIII, 185
- Pliocene and Pleistocene, Houston area, XXIX, 269
- Los Angeles Basin, SC, 125; XX, 1671
- Louisiana, GC, 417; XVII, 648
- Ventura Basin, SC, 102; XX, 1648
- Pliocene and Pleistocene fossils, Big Hill dome, SD, 702
- California gas fields, GAS, 140
- Pliocene and Pleistocene history of Baldwin Hills, Los Angeles County, California, X, 502
- Pliocene and Quaternary, Magdalena basin, XXIX, 1102
- Pliocene age of Citronelle formation, Alabama, XXIII, 1553
- of plant-bearing clays near Lamberts Station, Alabama, XXIII, 1555
- Pliocene andesitic sands at Kettleman Hills, XVIII, 1570
- Pliocene columnar sections, SC, 47; XX, 1593
- Pliocene conglomerates of Los Angeles Basin, and their paleogeographic significance, XVIII, 786
- Pliocene correlations, CAL, 249
- Pliocene crude oils, PROB, 139
- Pliocene dome, effect on East and West Montebello fields, XXIV, 1123
- Pliocene faunas, MSC, 84, 134
- Pliocene folding in East Indies, XXI, 555

- Pliocene foraminiferal faunas, MSC, 169
- Pliocene formations of Santa Maria region, CAL, 232
- Pliocene formations and faunas of southern California, classification of, CAL, 230
- Pliocene gas-producing horizons in Russia, XXVIII, 757
- Pliocene geosynclines in East Indies, XXII, 45
- Pliocene horizons in California, CAL, 248
- Pliocene lagenas, MSC, 79
- Pliocene lenticular sands, PROB, 225
- Pliocene-lower Pleistocene paleogeography, SC, 45; XX, 1591
- Pliocene mammalian faunas, MSC, 167; SC, 64; XX, 1610
- succession of, MSC, 174
- Pliocene marine sands, PROB, 746
- Pliocene mastodon from Goliad beds, XXIX, 1730
- Pliocene-Miocene, Florida, XXV, 263
- Pliocene-Miocene contact, XXVI, 189
- Pliocene-Miocene series in Orange field, GC, 890; XX, 541
- Pliocene-Miocene transition beds, MSC, 32
- Pliocene-Pleistocene fossils in California, XII, 125
- Pliocene-Pleistocene transition zone in Ventura Basin, XII, 121
- Pliocene San Joaquin Valley sea; SC, 63; XX, 1609
- Pliocene sediments, carbon content of, SBP, 27-31
- carbon-nitrogen ratio, SBP, 34, 35
- Fleming formation (TI), SBP, 336
- Lagarto clay (TI), SBP, 335-349
- outcrop sections B, C, U, SBP, 167-194, 411
- Pico formation (Tlp, Tup, Tmp), SBP, 87-194
- Repetto formation (Tra, Tib, Trc, Trd, Tre, Tru), SBP, 87-194
- Reynosa formation (Trn), SBP, 335-349
- Ricardo formation (Tr) (outcrop section V), SBP, 167-194
- undifferentiated beds (Tp), SBP, 92, 93, 136-154, 168-194, 336, 338-349, 416
- Pliocene series in Gulf Coastal Plain, XXIII, 187
- Pliocene Stage, lower, MSC, 135, 174, 175
- Pliocene strata, XXI, 553
- Pliocene unconformities, Prob, 794
- in San Joaquin basin, PROB, 804
- Pliocene volcanic activity in Central Cordilleras, XXIX, 1106
- Plio-Pleistocene folding in East Indies, XXII, 51
- Plug, basaltic, MEX, 143, 148, 150, 193, Figs. 12, 22, 32 (in pocket)
- Plug-type domes in Emba salt-dome region, XXIII, 503
- Plugging in sandy limestones, XXI, 625
- Plummer, Frederick Byron, GAS, 609; GC, 435, 437, 486; SD, 36, 266; SBP, 297; XXV, 1250
- crude oils of Borneo, V, 417
- new compass for geologists, V, 511
- preliminary paper on stratigraphy of Pennsylvanian formations of north-central Texas, III, 132
- progress in petroleum geology, V, 413
- review, XXIII, 1860
- Plummer, Frederick Byron, and Hornberger, J., Jr., XXIV, 87
- Plummer, Frederick Byron, and Livingston, H. K., XXV, 1875
- water cones and water sheaths in experimental oil wells, XXIV, 2163
- Plummer, Frederick Byron, and Moore, R. C., GAS, 613, 627, 631
- Plummer, Frederick Byron, and Sargent, E. C., GC, 273; PROB, 276, 315, 999; STRAT, 607; XIX, 321, 895; XXVIII, 1635, 1638, 1640; XXIX, 1256
- Plummer, Frederick Byron, and Tapp, P. F., technique of testing large cores of oil sands, XXVII, 64
- Plummer, Frederick Byron, Hunter, J. C., and Timmerman, E. H., XXIV, 2164
- Plummer, Frederick Byron, Scott, Gayle, Dunbar, Carl O., and Skinner, John W., geology of Texas, review, XXI, 1359
- Plummer, Frederick Byron, Sellards, E. H., and Adkins, W. S., GAS, 653
- Plummer, Frederick Byron, Sellards, E. H., and Adkins, W. S., geology of Texas, Volume I, stratigraphy, review, XVIII, 554
- Plummer, G. A., GAS, 609
- Plummer, Helen Jeanne, GAS, 654; GC, 378
- review, VII, 579
- Plunge, overturned, on overturned folds in Sespe-Piru Creek district, California, XVI, 209
- Plunge and pitch, solution for, XXV, 2192
- Plunging anticline, PROB, 716
- Plunging fields, domal or anticlinal, STR II, 677
- Plunging folds of Black Knob Ridge, XXI, 21
- Plunging synclinal environments of reservoirs, XXIX, 1556
- Plunkett field, III, 358; XXVII, 464
- Plutonic rocks in Whittier conglomerates, XXIV, 665
- Plymouth, CAL, 43
- Plymouth, England, RMS, 51, 142
- Plymouth Oil Company, XXV, 1975
- Pneumatolytic metamorphism, XXVII, 170, 177
- Pocahontas coal No. 3, analyses of, XXVII, 1208
- Pocahontas No. 3 and Sewell coals, regional variations in fixed-carbon content of, XXVII, 1211
- Pocahontas series, XXIX, 142
- Pocono, fossiliferous Mississippian beds in base of, XXV, 162
- Pocono (Sunbury and Cuyahoga) shales, GAS, 972
- Pocono formation, PROB, 454, 457
- Pocono group (Cpc) (Mississippian), SBP, 351, 353, 357-379, 413
- Pocono sands in Copley pool, XI, 589
- Pocono series, XXV, 802
- Cabin Creek field, West Virginia, STR I, 466
- Copley pool, West Virginia, STR I, 449
- Podbielniak analysis, Yates gas, XXV, 1891
- Podbielniak low temperature distillation analysis, XXII, 1158
- Pogue, Joseph E., SD, 3; IX, 833; XXII, 109, 1441
- economic aspects of drilling, XXII, 633
- (Pogue)
- economic structure of American petroleum industry, XXI, 149
- price of crude oil in perspective, XX, 810
- Pogue, Joseph E., and Gilbert, Chester G., IV, 143; XXVIII, 1457
- Pohl, Edwin R., PROB, 533, 547, XXIV, 1964; XXVII, 573, 580
- Point a la Hache, RMS, 161
- Point of Guadalupe, XXI, 865
- diagram of, XXI, 875
- Point Arena, CAL, 14, 313; MSC, 76, 77, 109, 111, 184, 185, 187, 188, 191, 193, 197, 203, 205, 210, 215-218, 220, 222, 224, 226, 229, 239, 240, 242, 244, 246, 252, 253, 256, 259, 260, 276, 292-295, 302, 317-319, 321, 322, 329, 332, 338, 343, 344, 346, 352, 355
- Point Arguello, RMS, 280
- Point Bonita, CAL, 82
- Point Conception, California, CAL, 118, 313; MSC, 32, 109; RMS, 117, 246, 255
- outcrop section M, SBP, 167-194, 411
- (weil 26), SBP, 130-153, 403
- Point Delgada, CAL, 269, 313
- Point Dumé, CAL, 270
- Point Fermin, CAL, 199; MSC, 128
- Point Fortin-Los Bajos structure in Trinidad, XX, 1450
- Point Fortin structure, XXIV, 2103
- Point Gorda, CAL, 269
- Point Hueneme, RMS, 255
- Point Mugu, CAL, 270
- Point Reyes, CAL, 13, 292, 313; MSC, 127
- Point Reyes Hill, MSC, 119
- Point Reyes peninsula, MSC, 128
- Point Sal area, MSC, 102, 119
- Franciscan igneous rocks in, XXVII, 1338
- Point Sal formation, XXVII, 1339
- diabase sills in, XXVII, 1344
- Point streams, XXIII, 1224
- Point Sur, CAL, 30, 38, 41, 44, 59, 173, 184, 313
- Point Sur district, breccia of, CAL, 173
- Point Sur Quadrangle, MSC, 38
- redbeds of, CAL, 174
- Poirier, O. A., and Thiel, George A., deposition of free oil by sediments settling in sea water, XXV, 2170
- Poiseuille, J., XII, 1097
- discoverer of Darcy's law of capillary movement of water, XX, 705
- Poiseuille J., and Darcy, XV, 195
- Poiseuille, J., and Meyer, XVI, 382
- Poison Spider, Wyoming, water analyses in oil production and some analyses from, IX, 927
- Poison Spider area, analyses of waters in, XXIV, 1326
- character of waters, XXIV, 1245, 1263, 1279, 1298
- Dakota group waters in, XXIV, 1262
- Frontier waters in, XXIV, 1244
- Sundance waters in, XXIV, 1278
- Tensleep waters in, XXIV, 1294
- Poison Spider Creek, Wyoming, outcrop section G, SBP, 243-255, 411
- Poison Spider field, PROB, 911
- Dakota water in, XXIV, 1265
- Sundance and Chugwater waters in, XXIV, 1281
- Pojo V in Baltic, RMS, 316
- Poland, J. F., XXII, 491
- Poland, RMS, 496

- (Poland)
 Carpathian Oil Geological Institute of, review, XIX, 1555
 Cretaceous in, XXI, 1186, 1188
 electrical investigations in, XIV, 1171
 Eocene in, XXI, 1187, 1189
 geological and statistical summary of oil fields of, XVII, 1084
 geology of oil fields of, review, XV, 557
 geology and mining of petroleum in, XVI, 1061
 good results from repressuring in older fields, XXIII, 965
 natural gas in, XVIII, 892, 1218
 oil fields of, XXI, 1184
 Oligocene in, XXI, 1184
 productive fields in, XXI, 1189
 review, VI, 384
 variation in gravity of crude oils of, XXI, 1192
- Polar (equatorial) stereographic net, XXII, 1264
- Polar Basin, RMS, 117
- Polar control and pulsation theories, earth history in the light of Rhythm of the ages, XXV, 1421
- Polar coordinate net, XXIII, 670
- Polar ice masses, RMS, 413
- Polar regions, RMS, 396
- Polar surface water, RMS, 406
- Polar wandering, CD, 53, 61
 not necessarily result of continental drift, CD, 190
 Wegener's sea movements as proof of CD, 116
- Polar water, RMS, 54, 403
- Polarity and susceptibility, magnetic, relation between, XXI, 596
- Polarized light observations, RMS, 604
- Pole, north, locations during Miocene, Pliocene, and Pleistocene, CD, 65
- Polecat field, GAS, 292
- Poles, crustal movements from, CD, 168
 movements during Tertiary and Pleistocene, CD, 61
- Polesian Anticline, XI, 495
- Polevoy, P. I., X, 1164
- Polgradi, MSC, 173
- Polhamus-Marshall pool, Kansas, dome, STR II, 157
- Polish Carpathian Flysch, XVI, 1080
- Polish Carpathian Mountains, geology of oil fields of, XV, 1
 oil fields of, XVII, 1086; XXI, 1183
 Polish crude oils, character of, XXI, 1184
 stratigraphic comparison of, XXI, 1182
- Polish oil pools, different types of crude oils from, XXI, 1191
- Polished surfaces on grains, RMS, 44, 241
- Polk, J. V., XIX, 68
- Polk and Liberty counties, Texas, electrical-log profile showing Cockfield section through, XXV, 2014
- Polk Creek shale in Black Knob Ridge, XXI, 8, 19
 in Black Knob Ridge, fossils of, XXI, 8
- Polk Creek shale in Mid-continent, XXV, 1638
- Pollacek, F., XIV, 1209
- Pollard and Strahn, XI, 291
- Pollok, Rudolf R., memorial of, XIII, 1237
- Polo, Marco, XIX, 473
- Polo field, XXI, 1013
- Polutoff, N., XXII, 1284
- Polyani, M., and Wigner, E., XVII, 1255
- Polychaete worms, faecal pellets of, RMS, 518, 521
 in tidal flat deposits, RMS, 197, 201
- Polydiodina* zone in Persia and Afghanistan, XXIV, 273
 in Texas, New Mexico, and Mexico, XXIV, 272
- Polygeosyncline of Umbgrove, XXI, 554
- Polyhalite, XXIII, 1690
 in Salado formation, XXVI, 65
- Polyhemeral system, MSC, 80
- Polymerization, PROB, 143, 144, 452; XXI, 179
 of gaseous unsaturates into liquids and solids, XXIX, 11
 of gases, XIII, 80
 of water, RMS, 66, 67
- Polymerizing action of sedimentary rocks, XV, 624
- Polymorphinidae and polymorphininae, MSC, 227
- Polythalamia and infusoria in Tertiary, MSC, 21
- Pomeroy, Richard A., SD, 396; XXIV, 1447, XXVII, 1190
- Pomeroy 8A coal in Meigs County, Ohio, map, STR I, 129
- Pomeyrol, R., XXII, 1219
- "Pommerania," Expedition of 1871, RMS, 298
- Pomo basin, RMS, 366
- Pomona, MSC, 127, 328
- Pompeckj, M., XV, 174; XXI, 1144; XXIV, 1197
- Ponca, Blackwell, South Blackwell, and Mervine fields, Oklahoma, STR I, 158
- Ponca City field, IV, 176; V, 118, opp. 128, 138, 325, 568
- Ponca field, Oklahoma, STR I, 163; PROB, 775
 buried hills an important accumulation factor in Mississippi lime sand of, STR II, 679
- Ponca sand in Ponca City field, Oklahoma, STR I, 163
- Poncho Rico formation, CAL, 231, 235, 236, 313; XXI, 1343
- Pond, Peter, XXII, 1133
- Pond, Walter F., XXVI, 18; XXVII, 1040
- Pondera field, Montana, PROB, 691, 703, 710; XIII, 782; XXVII, 461, 465, 471; XXIX, 1281
 gravity of oil, PROB, 160
 helium in, GAS, 1057
 section, XXIX, 1299
- Pondera structural terrace, XXVII, 461
- Pongo-Agua Caliente-Môa sandstone, XXI, 1347
- Pongo de Manseriche, XXI, 1347, 1350
- Pongo sandstone, XXIX, 521
- Pons, E. H., GAS, 1006
- Ponta area, Cherokee County, XXIII, 891
- Ponta Grossa formation in Paraná, XX, 1219
- Pontecorvo, Bruno, XXIX, 1480, 1485
- Pontian, deposits in Europe, MSC, 173, Fig. 14 (in pocket)
- Hipparion*-bearing, MSC, 181
- Pontian-lower Pliocene correlation, MSC, 174
- Pontic, CAL, 223
- Pontic Europe, VI, 526
- Ponto-Caspian and Mediterranean type (Ponto-Caspian)
 of oil deposits, XVIII, 760
- Ponto-Caspian countries, paleogeography of oil-bearing deposits in, XVIII, 777
 stratigraphy, XVIII, 778
- Ponton, Gerald M., XII, 1107
- Ponton, Gerald M., and Cushman, Joseph A., MSC, 176; XVII, 641, 647; XIX, 1156; XXV, 264, 269, 272, 273, 275, 738
- Ponton, Gerald M., and Whitehurst, John W., XXII, 1474, 1484
- Spring Hill-Sarepta gas field, Louisiana, VII, 546
- Pontonié, Robert, XX, 1479
- Allgemeine Petrographie der "Oelschiefer" und ihrer Verwandten mit Ausblicken auf die Erdolenstehung (Petrographie der Sapropelite)*, review, XII, 564
- Pontotoc and Coal counties, Oklahoma, Jesse pool, XXII, 1560
- Pontotoc and Garber-Wellington sections from Seminole to Caddo counties, Oklahoma, XX, 1464
- Pontotoc axis, XXIV, 105
- Pontotoc conglomerates, XXIX, 188, 195
- Pontotoc formation, FOP, 89; XXV, 1521
 productive in Hobart field, XXIV, 1029
- Pontotoc overlap, XXIX, 197
 outliers of, XXIX, 201
- Pontotoc series, GAS, 589; VI, 161
 extension of portion of, around western end of Arbuckle Mountains, IX, 983
- Hewitt field, Oklahoma, STR II, 293
- Pontotoc terrane, XXI, 1518
 in Seminole County, Oklahoma, XX, 1460
- Pony Express limestone, XXV, 1759; XXV, 1750
- Pool, definition, XXVIII, 703
- Pool discoveries in southern counties of West Virginia in 1944, XXIX, 681
- Poole, CD, 43
- Poole, G. A., and Kemler, Emory, XXV, 1313
- Poole, J. C., Saxet oil and gas field, Nueces County, Texas, XXIV, 1805
- Poole, M. P., X, 1258
- Poole field, XXVIII, 753
- Pooling of information, need of, XXVII, 936
- Pools discovered prior to 1938 and pools discovered during 1938 and part of 1939, map of south Texas showing, XXIII, 862-863
- Pools discovered in Eastern Interior basin in 1943, XXVIII, 754
 in 1944, XXIX, 688
- Pools discovered in Kansas in 1939, XXIV, 997
 in 1940, XXV, 1107
 in 1944, XXIX, 704
- Pools, new, and extensions in California in 1943, XXVIII, 746
- Pools, new, and wildcats discovered in 1938, map of Oklahoma showing, XXIII, 828-829
- Pools, new, discovery of, XIII, 849
- Pools, new, extensions, and new formations discovered in Oklahoma in 1943, XXVIII, 778
- Pools, new, extensions, and new producing formations or zones discovered

(Pools)

- in north and west-central Texas in 1943, XXVIII, 838
- Pools, new, extensions, and new zones discovered in Oklahoma in 1939, XXIV, 1015, 1016
- in Oklahoma in 1940, XXV, 1094
- Poor Farm anticline in Dewey area, Oklahoma, STR II, 365, 368
- Pope, John, XXI, 834, 840
- Popenoe, Willis Parkinson, XXVII, 303; XXVIII, 485, 503, 510, 512; XXIX, 956, 958, 959, 992
- Cretaceous: east side Sacramento Valley, Shasta and Butte counties, California, XXVII, 306
- Upper Cretaceous formations and faunas of southern California, XXVI, 162
- Popescu, Ilie, SD, 141
- Popescu-Voitești, Ion, XVIII, 773
- memorial of, XXIX, 1221
- Popele formation in Polish fields, XV, 21
- Popo Agie formation, XXV, 135
- Popo Agie River, character of water, XXIV, 1223
- Popocatepetl, Mount, view across crater of, XX, 393
- Popoff, S., PROB, 39; XXIII, 589
- Porcelain fracture, MEX, 22
- Porcelanite, V, 92
- Porcellaneous limestone, MEX, 34
- Porch, E. L., Jr., XXVIII, 1613; XXIX, 1417
- Porcupine dome, PROB, 715; V, 269; XXIII, 468
- Porcupine Hills area, relation to Alberta syncline, XV, 502
- Porcupine Hills syncline, GAS, 40
- Pore space, elimination of, X, 1039, 1043
- methods for determination of, VIII, 727
- Pore studies, method of impregnating porous materials to facilitate, XXI, 259
- Pore type of reservoir rock, GAS, 1084
- Pore volume, results of determination of, XXVII, 79
- Porfiriev, V. B., XXIX, 1743, 1744
- Porges, Nandor, PROB, 41
- Porosimeter, Stevens modified, XXV, 854
- Porosities, STRAT, 625
- Melcher's method of determining, XXV, 1842
- of producing Sparta sands, XXIV, 711
- of sandstones, map of physiographic provinces of Paleozoic area in Arkansas, showing, XXI, 70
- of shales from Kansas wells, comparison between observed and computed, XI, 627
- of Wilcox producing sands, XXIV, 711
- sandstone, in Paleozoic region in Arkansas, XXI, 67
- Porosities and densities, determination of, XVI, 915
- Porosities and permeability of pay sands in north-central Texas, XXIV, 117
- Porosity, abnormal types of, STR II, 701
- an important accumulation factor in Artesia field, New Mexico, STR II, 678
- an important accumulation factor in

(Porosity)

- Westbrook field, Texas, STR II, 678
- an index of pressure metamorphism, X, 1071
- causes of, PROB, 250, 553
- cavernous type of, in Ellenburger dolomite, XXIV, 130
- cellular, MEX, 51
- change in, as an index of vertical shortening, X, 1047
- conditions affecting, MEX, 165, 167, 169, 170, 172, 180, 206
- decreased by interlocking grains and precipitation of quartz in sandstone sections, XXV, 1860
- Porosity, density, and compaction of sedimentary rocks, XIV, 1
- Porosity, effective, XXVII, 80
- effective, in gas fields in Jackson County, Missouri, XXV, 1405
- effective, in various rock types, XXVI, 328
- erratic, XXIX, 1162
- horizontal, XXI, 620
- intercommunication of wells due to, STR II, 708
- lack of, brought about by excessive compression, cause of relatively low recovery in oil fields in Arkansas valley and Anadarko-Ardmore geosyncline, XXV, 20
- multiple-type, in limestone reservoirs, XXIX, 1541
- of Benoist sand, XXIII, 1368
- of Bradford sand in Bradford field, Pennsylvania and New York, STR II, 428, 430
- of Caddo limestone, XXVI, 211
- of core, specific-gravity method of determination of, XXVII, 78
- of crinoidal sediment, XXVI, 1722
- of each formation of Whitehorse group favorable for production, XXIV, 26
- of Ellenburger formation, XXV, 1057
- of gas-bearing formations in Hugoton field, XXIII, 1061
- of gas sand at Raccoon Bend field, GC, 687; XVII, 1470
- of Jones sand, XXVIII, 223
- of Langham sand, XXIII, 1652
- of Lea-Winkler County area, Texas, XIII, 1040
- of lenticular sands an important accumulation factor in Bradford field, Pennsylvania and New York, STR II, 679
- of limestone in Southern fields, percentage of, MEX, 207
- of limestone, stages of, XX, 1400
- of limestone oil reservoir, XXI, 617
- of limestone reservoirs, various theories of origin of, XXIII, 1541
- of limestones, STR II, 697
- of limestones, development of, STR II, 693; XX, 1389
- of limestones underlying Custer in Permian basin of West Texas, XXI, 445
- of limestones and dolomites in western Kentucky, origin of, XVI, 251
- of Martynian limestone, XXIII, 957
- of McClosky along anticlinal belt, XXIII, 1505
- of McClosky limestone, XXIII, 1369
- of Medina sand, variable, XXII, 82
- of Mississippian limestone in Martinsville field, Illinois, STR II, 132
- of Niagaran in Martinsville field, II-

(Porosity)

- Illinois, STR II, 133
- of oil and gas sands, VIII, 772
- of oil and gas sands, Wyoming, VIII, 739
- of oil sands, V, 18, 211, 319; VI, 143
- of oil sands, New York oil fields, STR II, 280
- of oil sands, Oklahoma, VIII, 762
- of oil sands, Pennsylvania, VIII, 738
- of oil sands, review, VI, 386
- of oil sands, Sugarland field, GC, 727; XVII, 1380
- of Oriskany sandstone, XXI, 1585
- of Oswald limestone in Fairport field, Kansas, STR I, 41
- of pay sand in Government Wells field, GC, 646, XIX, 1146
- of producing dolomite in Artesia field, New Mexico, STR I, 119
- of producing formation in Hendrick field, XIV, 931
- of producing formations of Hugoton field, XXIV, 1802
- of producing sand in Elk Hills field, California, STR II, 55
- of producing sand in Francisco pool, Indiana, STR II, 140
- of producing sand in Stephens field, Arkansas, STR II, 8
- of producing sands in Powder Wash field, XXII, 1031
- of producing zone in Virgil pool, Kansas, STR II, 143, 149
- of producing zones in Artesia field, New Mexico, STR I, 120
- of quartz sandstone, relation of, to carbon ratio of associated coals, XXI, 76
- of reservoir rock, XI, 693
- of reservoir rock, anticlinal occurrence influenced by, STR II, 678, 680
- of reservoir rock, Burbank field, Oklahoma, STR I, 229; XI, 1053
- of reservoir rock, Cromwell field, Oklahoma, STR II, 313
- of reservoir rock, eastern coal field, Kentucky, STR I, 88
- of reservoir rock, Illinois oil field region, STR II, 120
- of reservoir rock, influence on production in Owsley County gas field, Kentucky, Str I, 82
- of reservoir rock, Kevin-Sunburst field, Montana, STR II, 263
- of reservoir rock, Lance Creek field, Wyoming, STR II, 609
- of reservoir rock, main cause of oil accumulation at Smith-Ellis field, Texas, STR II, 567
- of reservoir rock, Nemaha Mountains region, Kansas, STR I, 72
- of reservoir rock, Osage County field, Oklahoma, STR II, 382
- of reservoir rock, Pine Island field, Louisiana, STR II, 171
- of reservoir rock, relation to reserves, XXV, 1311
- of reservoir rock, Scenery Hill gas field, Pennsylvania, STR II, 450
- of reservoir rock, Yates field, Texas, STR II, 490, 496
- Porosity of rock, Lytton Springs field, Texas, X, 965
- of rocks, Buckeye field, XXIV, 1969
- of St. Louis limestone, XXIII, 816
- of San Andres formation, XXVII, 496
- of San Andres limestone favorable for

(Porosity)

production of oil, XXIV, 24
of sand, an important factor in causing oil accumulation in Pennsylvanian in Martinsville field, Illinois, STR II, 137
of sand at Burbank, Oklahoma, STR I, 225
of sand, Griffithsville field, West Virginia, STR II, 573
of sands, measurement of, XIV, 1345
of sands, North Noble field, XXIII, 1499
of sands, Trout Creek field, XXVI, 1274
of sands and sandstones, STR II, 696
of sediments, X, 1039, 1050-1052; XXVI, 1722
of Simpson formation, XXIV, 130
of Strawn limestone in Page field, XXV, 631
of Texon oil zone in Big Lake field, Texas, STR II, 524
of Traverse group, XXII, 414
of Tubb pay at Tubb pool, XXIV, 128
of Wall Creek sands in Elk Basin field, Wyoming and Montana, STR II, 584
of White Crystalline dolomite, XXIII, 1531
of White lime at Hobbs field, relation to structure, XVI, 76
of Wilcox sand, XXIV, 1919; XXV, 1379
of Woodbine sands in Caddo field, Louisiana, STR II, 193
Oklahoma City field, XVI, 998
origin of, in reef limestone or dolomite, discussion, XIII, 1219
original, in Patton limestones, XXIII, 314
Porosity, permeability, compaction, PROB, 807
Porosity, primary, XXIX, 1539
quick method for determining, X, 931
relation of accumulation of oil to, in Lima-Indiana field, PROB, 521
relation of producing territory to, PROB, 528
relation to oil migration, PROB, 249
reservoirs closed by change of, PROB, 444
reservoirs due to changes in, XXIX, 1748
sand, variations in, in Michigan gas fields, XXII, 152
sedimentary wedges of, in Anadarko-Panhandle region, FOP, 89; XXV, 1521
type of, in oil-bearing rocks, MEX, 41, 42, 51, 165-167, 206-208
up-dip wedge-edge, XX, 528
vertical, XXI, 620
wedge belts of, FOP, 4, XXV, 1436; XXVII, 895, 896
wedge belts of, in North and South Dakota, FOP, 76; XXV, 1508
zone of secondary, in Porter field, XXVIII, 193
Porosity and crushing strength, as indices of regional alteration, X, 939
value of average regional, in predicting oil, gas, and ground-water possibilities, X, 950
Porosity and fluids, chart showing relative depths and stratigraphic position of, in Wasson field, XXVII, 505
Porosity and permeability, distinction

(Porosity)

between, XVI, 373
estimating from radioactivity logs, XXV, 1776
influence of cementing minerals on, XXV, 1869
of aggregates of grains, factors affecting, XXII, 1272
of Madison beds, XXVI, 326
of Oriskany sandstone, XXII, 253
of producing zones in Buckeye field, XXIV, 1970
of sands in Saxet field, XXIV, 1831
of unconsolidated sands, effect of angularity of grain on, XXII, 1272
of Wilcox deposits, XXIV, 1920
relative, of producing formations of Hugoton field as indicated by gas withdrawals and pressure decline, XXIV, 1798
systematic packing of spheres—with particular relation to, review, XX, 324
variation in, effect in preventing accurate appraisal of production until field is developed, XXII, 570
Porosity and saturation of cores from Patton zone, Lisbon field, XXIII, 317
relation to recovery problems, XVIII, 348
Porosity and structure in West Texas Permian basin, relation of water analyses to, PROB, 869
relationship between, XIII, 1010
Porosity and temperature, XVIII, 18
Porosity and thickness variable in Cunningham pool, XXIV, 1788
Porosity analyses, STRAT, 504, 524, 528, 729, 730
Porosity decrease, a factor inhibiting oil and gas production, PROB, 79
Porosity-depth curve, PROB, 620
Porosity determinations, XXV, 853
a Soxhlet extractor for, X, 998
apparatus, X, 931
of St. Peter sandstone, XXI, 69
Porosity lens type storage pool, XXVIII, 1568
Porosity measurements in Turner Valley field, XXIV, 1633
Porosity-pressure method of estimating gas reserves, GAS, 1017
Porosity traps, XXVIII, 1512
Porosity variations, accumulation related to, PROB, 256, 505, 526
relation to intensity of folding, XXI, 78
Porous and dolomitic limestone in Michigan, GAS, 793, 798
Porous bed overlain by an impervious bed, essential to oil and gas accumulation, PROB, 254
Porous dolomite in Borger pool, XXIII, 1025
Porous dolomitic zone productive in Temple field, Clare County, Michigan, XXIV, 980
Porous formations and surfaces formed by gas, oil, and water, relationship between, XXIII, 990
Porous lenticular beds productive in Buckeye field, XXIV, 4962
Porous limestone, Eldorado field, Kansas, STR II, 166
Hewitt field, Oklahoma, STR II, 294
Porous media, flow of homogeneous fluids through, XXII, 1282
measurement of permeability of, XVIII, 161

Porous nature of oil sands, XX, 1480
Porous petroliferous dolomites in St. Louis formation, XXIV, 231
Porous sand, Brown pool, Illinois, STR II, 130
Junction City pool, Illinois, STR II, 130
Langewisch-Kuester pool, Illinois, STR II, 130
Lost Soldier district, Wyoming, STR II, 638
South Burbank pool, XXI, 565
Porous sandy limestone, PROB, 688
Porous zones in limestone, XXVI, 49
in limestone in Turner Valley, XXIV, 1626
Porphyrin content of petroleum, XXVIII, 927, 930; XXIX, 1743
Porphyritic diorite, MEX, 144
Porphyry at Amarillo, VII, 434
Porphyry sills, XXVI, 1384
Port Barre field, Louisiana, GAS, 718; PROB, 637, 675; XXIX, 799, 800
Port Hudson formation, VI, 180
Port Lavaca, Texas, to Caddo County, Oklahoma, section, XXI, 1085
(well 402), SBP, 335-349, 410
Port Neches dome, Texas, GAS, 730; PROB, 115
Portable sedimentary laboratory, XVIII, 1705
Porridge formation, Bradford field, Pennsylvania and New York, STR II, 416
(Dua, etc.), SBP, 351, 354
in Pennsylvania, PROB, 457
Porridge group, XXIV, 1991
Keuka-Seneca Lake area, XVI, 689
New York-Pennsylvania region, GAS, 954
Porter, Earl Sellers, MEX, 42
Porter, L., SD, 529; IX, 1282
Porter, M. E., XXIX, 1265
Porter II, William W., MSC, 79; XXII, 1445; XXIII, 61, 1858; XXIX, 956
geological limitations to oil law, XXII, 565
geologist and the well-spacing problem, discussion, XXIII, 1855
influence of speed of migration of oil on water encroachment at Casamalia, California, XVII, 1133
lower Pliocene in Santa Maria district, California, XVI, 135; XVII, 201
review, XXIV, 383
Porter II, William W., and Goudkoff, Paul P., Amoura shale, Costa Rica, XXVI, 1647
Porter II, William W., and Gregersen, Albert I., developments in California in 1943, XXVIII, 743
Porter anticline, XXVIII, 191
Porter oil field, Midland County, Michigan, XXII, 407; XXVIII, 173
accumulation of oil in, XXVIII, 191
columnar section, XXVIII, 180
deep drilling in, XXIV, 989
geology of, XXVIII, 178
pay zone in, at top of Dundee formation, XXVIII, 179
sections, XXVIII, 176, 177
stratigraphy of, XXVIII, 178
structure map, XXVIII, 192
Porter oil field, Texas, XXVIII, 862
Porter pool, Michigan, GAS, 796
Porters Creek formation, in Kentucky, XIV, 853
in Mississippi, XXVIII, 47
in Tennessee, V, 654

- Portersville, Pennsylvania (well 416), SBP, 349-379, 410
- Portland formation in Mexico, PROB, 380, 381
- Portlandian stage, CAL, 112; SC, 6; MEX, 11, 14, 16, 33, Fig. 9 (in pocket); XX, 1552; XXVII, 1420
- Porto Rucó, Recent foraminifera from, MSC, 12
- Tertiary foraminifera of, XXV, 1810
- Portugal, RMS, 227
- Portuguese Angola, oil seeps in, XVIII, 1168
- Portuguese West Africa, unconformities, VII, 479
- Portville cross syncline at Bradford field, Pennsylvania and New York, STR II, 420
- Poseidon, CD, 121
- Poseidon expedition, RMS, 298, 300
- Posepny, SD, 111
- Posey County, Indiana, XXVII, 819
- Posideon shale, XXIV, 88
- Posidonia beds, XXVI, 789
- Position of San Andres group, West Texas and New Mexico, XXV, 73
- Posnjak, Eugen, XXVIII, 1020
- Posnjak, Eugen, and Merwin, H. E., XII, 906
- Poso Creek, MSC, 28
- Poso series, XXIX, 1093
- Pospishell pool, XXIV, 999
- Possibilities of heavy-mineral correlation of some Permian sedimentary rocks, New South Wales, XXIV, 636; discussion, XXIV, 1682
- Possibility of distant source of oil in Granite Ridge pools, XV, 1445
- of oil and gas in Montana, IV, 313
- Possible criterion for distinguishing marine and non-marine sediments, XXIII, 1716
- Possible future oil provinces of Alaska, FOP, 9; XXV, 1440
- of eastern Canada, FOP, 107; XXV, 1539, 2194
- of eastern United States, FOP, 131; XXV, 1563
- of northern Mid-Continent states, FOP, 76; XXV, 1508
- of Pacific Coast states, FOP, 25; XXV, 1457
- of Rocky Mountain region, FOP, 37; XXV, 1469
- of southeastern United States, FOP, 143; XXV, 1575
- of United States and Canada, FOP, 1; XXV, 1433
- of West Texas, FOP, 95; XXV, 1527
- of western Canada, FOP, 15; XXV, 1447
- Possible nature of limestone reservoirs in the Permian basin, XXII, 915
- Post, E. S., XXIII, 217
- Post-Appalachian faulting in western Kentucky, XXV, 2046
- Post-Arbutle deformation of Billings dome; inferred amount of uplift, warping, and depth of erosion indicated, XXIV, 2012
- Post-Canyon deposits, XXIV, 110
- Post-Comanche—pre-Woodbine unconformity, XXIX, 178
- Post-Cook Mountain formations of Texas Gulf Coast between Colorado and Nueces rivers, correlation table, XXIII, 1633
- Post-Cretaceous pre-Tertiary erosion along crest of Chadron-Cambridge (Post-Cretaceous) axis, XXVI, 1534
- Post-Delaware Mountain formations in Pecos Valley, XXI, 876
- Post-Delmontian beds, MSC, 167
- Post-Delmontian California Lower Pliocene stage, MSC, 181
- Post-Delmontian vertebrate fauna, MSC, 167
- Post-Dundee folding, XXVIII, 191
- Post-Eocene, PROB, 237
- South Texas, XXV, 1037
- Post-Eocene beds, occurrence in, of gas reserves processed for condensate, XXV, 1042
- Post-Eocene disturbance in southeastern Virginia, XXIX, 91
- Post-Eocene fauna, MSC, 85, 180
- Post-Eocene marine invertebrate faunas, MSC, 173
- Post-Eocene production in Corpus Christi district, XXIV, 1077
- Post-Eocene section, MSC, 50
- of Chico Martinez Creek, MSC, Fig. 14 (in pocket)
- Post-Eocene warping and faulting, XXIII, 1486
- Post-Fleming beds in Texas Gulf Coast, XXIII, 1621
- Post-Fleming formations in Texas, sectional profiles, GC, 440; XIX, 666
- Post-Fleming surface formations of coastal southeast Texas and south Louisiana, GC, 432; XIX, 651
- Post-Franciscan history of Southern California, SC, 142; XX, 1688
- Post-Franciscan Mesozoic epeirogeny, SC, 8; XX, 1554
- Post-Franciscan orogeny, SC, 8; XX, 1554
- Post-Franciscan stage, SC, 5; XX, 1551
- Post-glacial alluvium in North Sea, RMS, 332
- Post-glacial Globigerina ooze, RMS, 413
- Post-glacial muds, stratified, RMS, 311
- Post-glacial sediments in Baltic, RMS, 303-319
- Post-glacial time, RMS, 390, 392
- Post-glacial uplift, beach profiles of glacial Lakes Algonquin and Nipissing showing, XXIX, 1642
- in Scandinavia, XXIX, 1644
- Post-Glen Rose beds, XXII, 1509
- Post-Gould shale Monterey sequence, MSC, Fig. 6 (in pocket)
- Posthumous folding, CD, 84
- more pronounced along Pacific coasts than Atlantic, CD, 204
- Post-Jurassic transgressions, SC, 75; XX, 1621
- Post-Knoxville erosion interval, SC, 65; XX, 1611
- Post-Laramide deformation in Wind River Canyon area, XXIII, 1486
- Post-Laramie formation (Eocene ?), XXII, 1029
- Post-Laramie fossil leaves, XX, 1311
- Postley, Olive C., SBP, 352; XXVIII, 1676; XXIX, 887, 926
- bibliography of geologic structure maps and cross sections of areas in oil and gas states east of Mississippi River, and some producing states in Mid-Continent region, XXII, 431
- natural gas developments and possibilities east of the main oil and gas fields of Appalachian region, XIX, 853
- (Postley) oil and gas possibilities in Atlantic Coastal Plain from New Jersey to Florida, XXII, 799
- Post-Luisian orogeny, MSC, 180
- Post-Madison and pre-Hilliard succession, XXV, 1735
- Post-Miocene, MSC, 132
- Anse la Butte dome, XXVII, 1135
- Anzoategui, XXI, 239
- Post-Miocene Tertiary, MSC, 135
- Post-Miocene thrust faulting in St. George district, Utah, XXIII, 131
- Post-Mississippian deformation of Billings dome, XXIV, 2015
- of Eastern Interior basin, XXIV, 851
- Post-Miocene disturbance in Salinas Valley, MSC, 9, 88
- Post-Morrow, pre-Des Moines orogeny, FOP, 80; XXV, 1512
- Post-Oligocene in Texas Gulf Coast, XXIII, 1620
- Wind River Mountains, Wyoming, XXV, 142
- Post-Oligocene sediments at Eola field, XXV, 1370
- Post-Ortiz zones of central Venezuela, XXII, 1229
- Post-Paleocene pre-Eocene folding, SC, 15; XX, 1561
- Post-Paleozoic in Urals, XXI, 1451
- Post-Pennsylvanian accumulation of oil in Granite Ridge pools, XV, 1440
- Post-Permian, Oklahoma, I, 136
- Post-Permian movement in Wasson area, XXVII, 507
- Post-Pleistocene, Post-Upper San Pedro disturbances, SC, 50; XX, 1596
- Post-Pliocene faulting in central Texas, XX, 1366
- Post-Ricardo gravels, SC, 74; XX, 1620
- Post-Rustler formations, XXIV, 35
- Post-Rustler movement at North Cowden field, XXV, 617
- Post-Saucesian foraminifera, MSC, 154
- Post-Saucesian Miocene, MSC, 117
- Post-Sespe cross folds, SC, 46; XX, 1592
- Post-Tertiary volcanics in Washington and Oregon, FOP, 27; XXV, 1459
- Post-Tertiary volcanoes, RMS, 350
- Post-Triassic disturbances in China, XXVIII, 1424
- Post-Triassic sediments in West Texas-New Mexico Permian basin, XXIV, 51
- Post-Vicksburg flexing, line of, a prominent structural feature of part of Gulf Coast, XXIII, 1627
- Post-Viola deformation at Billings dome; "Dense" limestone, and part of "Dolomite" removed from crest of arch, XXIV, 2014
- Post-Yates folding at North Cowden field, XXV, 615
- Potamides maisonii* Dall zone near Burkeville, Texas, correlated with Fleming formation of Louisiana, XXVIII, 983
- Potamides maisonii* zone, XXVII, 1145; XXVIII, 981
- High Island dome, GC, 917; XX, 568
- Hitchcock field, STRAT, 644
- Louisiana, XXIV, 438
- of Gulf Coast section, XXII, 295
- Texas (Burkeville beds), XX, 494
- Potamides* zone (Miocene) (To), SBP, 336, 338, 339-349, 416
- Potash, RMS, 511, 512; SD, 169
- Delaware basin, XXIII, 1689

- (Potaash)
from upper Castile formation, XXIV, 35
in glauconite, RMS, 504
in Permian of Texas, I, 106; VI, 110
Louisiana, XXII, 744
Potash, salt, and anhydrite in Castile formation of southeast New Mexico, XXIII, 1682
soluble, deposition of, XXIII, 1690
Potash-bearing minerals in Salado formation, XXVIII, 1608
Potash beds of McNutt zone, XXIII, 1691
Potash Company of America mine, XXIII, 1692
Potash deposition, soluble, XXIII, 1693
Potash deposits, RMS, 4
of upper Salado halite most economically important features of Ochoa series, XXVIII, 1625
Potash field, Plaquemines Parish, Louisiana, XXIV, 1090
Potash mines in northern Germany, normal temperature gradient, XXI, 1204
Potash salt deposits of Kungurian series, XXIV, 262
Potash salts in Gulf Coast salt plugs, XXI, 1272
New Mexico, XXV, 152
Potash salts and fossil algae, Texas salt dome, discovery of, SD, 781; IX, 348
Potash salts and rock salt, XXII, 1284
geology, XXIII, 254
Potash-soda ratio, in Atlantic sediments, RMS, 386
Potassium, RMS, 429, 455, 511
in clay minerals, RMS, 458, 467, 471, 476, 485
in clays and shales, XXIX, 2
in La Plata sandstone, XXV, 1749
in sea water, RMS, 65, 143, 144
in shale, RMS, 509
in tidal deposits, RMS, 200
quantity of, in muds, RMS, 510
relative exchange power of, RMS, 535
Potassium acid phthalate, SBP, 39
Potassium beta activity, XXIX, 6
Potassium chloride treated with sodium sulphate to make potassium sulphate fertilizer, XXV, 152
Potassium clay, RMS, 538
Potassium content of clays, XXIX, 16
Potassium hydroxide, RMS, 594
Potassium minerals, two classes, XXIII, 1690
Potassium oxide in Black River group in Ohio, XXIV, 684
Potassium permanganate, SBP, 37
reagent for determination of reduction number, SBP, 50, 51
Potassium salts, PROB, 639
Potassium sulfide, SBP, 38
Potassium sulphate, RMS, 594
Potassium sulphate fertilizer, potassium chloride treated with sodium sulphate to make, XXV, 152
Potato Hills, Oklahoma, novaculite in, XXI, 10
radiolaria in, XXI, 10
type locality of Tahihina chert, XXI, 5
Poteau anticline, GAS, 518
Poteau-Gilmore field, Oklahoma, GAS, 512, 517, 569
Poteau syndine, GAS, 568
in Arkansas and Oklahoma, XVII, (Poter)
1053
subsurface geologic map of, XXIII, 1051
Potter Creek Cave, CAL, 266, 303
Potter farm formation, section, XXVII, 590
Potts, H. F., XXVII, 803
Pottsville, Appalachian region, XXIX, 144
Big Sinking field, STRAT, 181
lower, XXIX, 142
middle, XXIX, 144
Pottsville and Alleghany, boundary between, XXIX, 147, 149
Pottsville beds in eastern coal field, Kentucky, STR I, 78
Pottsville brines of Kanawha, Boone, and Logan counties, West Virginia, barium in, XXIV, 493
Pottsville conglomerate in Elliot County field, Kentucky, STR I, 86
Pottsville formation, PROB, 454; STRAT, 173; XV, 137
Gay - Spencer - Richardson trend, STRAT, 810
Pottsville group in Fayette field, GAS, 872
in Ohio, GAS, 902
Pottsville sand zone, XXIII, 1367
Pottsville sands, XXVI, 1095
Pottsville sandstone, II, 40; III, 148; IV, 308; V, 38, 169, 522, 543, 553, 556
Pottsville sandstones productive in Ohio and West Virginia, XXII, 416
Pottsville sediments, XXV, 782
map of West Virginia showing oil fields in, XXIV, 492
map of western part of West Virginia showing percentage of barium in salt brines from, XXIV, 489
Pottsville series, XXIII, 1355; XXV, 797
Copley pool, West Virginia, STR I, 447
flanking Nashville dome, XX, 1077
map of West Virginia showing thickness of, XXVII, 1203
Music Mountain pool, STRAT, 494
plant fossils in, XXVII, 1203
Potwin field, V, 422
Poudras crevasse, RMS, 169
Poulsen, C., XXVII, 262
Poulsen, F. E., XIII, 1347
Pourtales, L. F., RMS, 230, 231
Poway conglomerate, SC, 24; XX, 1570
Powder diagram in X-ray studies, RMS, 624
Powder method of crystal analysis by X-ray diffraction, XXI, 1333
Powder River basin, Wyoming, analyses of waters in, XXIV, 1327-1329
character of water, XXIV, 1226, 1247, 1266, 1281, 1299
Dakota group waters in, XXIV, 1264, 1270
Frontier waters in, XXIV, 1246, 1248
Madison waters in, XXIV, 1306
Shannon sandstone waters in, XXIV, 1229
Sundance waters in, XXIV, 1280
Tensleep waters in, XXIV, 1300
Powder River Basin, Wyoming and Montana, FOP, 50; STR II, 591; PROB, 680, 705, 929, 930; XXII, 683; XXV, 1482; XXVI, 1559; XXVII, 427
map, FOP, 48; XXV, 1480

- (Powder)
 structure section, FOP, 49; XXV, 1481
 Powder River field, Wyoming, V, 194
 Wyoming (well 218), SBP, 194-243, 406
 Powder River syncline, GAS, 299
 Powder Wash, analyses of gases in Hiawatha member of non-marine Wasatch formation at, XXII, 1039
 assumption of vertical or lateral migration of petroleum into lower Wasatch sands at, untenable, XXII, 1042
 gas in different horizons at, XXII, 1039
 origin of hydrocarbon at, XXII, 1043
 saline waters associated with petroleum producing horizons at, XXII, 1036
 Powder Wash anticline in Moffat County, Colorado, GAS, 367; XIX, 542; XXI, 989
 Powder Wash basin, XXVI, 1567
 Powder Wash discovery, XXI, 996
 Powder Wash dome, Moffat County, Colorado, FOP, 58; XXI, 988; XXII, 1036; XXV, 1490
 Powder Wash field, Colorado, XXI, 687; XXVII, 857
 development of, XXII, 1022
 fossils in Hiawatha member at, XXII, 1031
 in northwest Colorado, petroleum and natural gas in non-marine sediments of, XXII, 1020, 1604
 Powder Wash field and adjacent parts of northwestern Colorado and southwestern Wyoming, map, XXII, 1021
 Powder Wash field water, analyses of, XXII, 1037
 Powder Wash structure, geological map of, XXII, 1035
 Powell, PROB, 144, 276, 302; IX, 1154; XVI, 2, 15
 Powell and Cotter, XX, 1092
 Powell, Arthur Richard, SD, 469
 Powell, J. W., GAS, 341; XIV, 1015, 1026, 1027, 1030, 1031, 1072; XXI, 721
 Powell and Corsicana district, Texas, production, STR I, 358
 Powell district, Texas, shallow pools in, STR I, 360
 Powell field, Texas, PROB, 144, 276, 302, 423, 779, 999, 1006; SD, 38; STR I, 317; III, 96
 (wells 384-386), SBP, 292-335, 409, 410
 Powell field fault, XXVIII, 1638
 Powell-Mexia fault fields, PROB, 140, 893
 water analyses, PROB, 901
 Powell-Mexia fault line, fault structure along, XXI, 111
 Powell pool, PROB, 295, 404, 881
 Powell structure in Mexia fault zone, Texas, STR I, 347
 Powell Valley, stratigraphic section, XI, 758
 Power, Frederick B., XVII, 1253
 Power, Harry H., XXVII, 83
 review, XVI, 105; XXI, 811; XXII, 1457
 Power, James, XXII, 1189
 Powers, XIII, 570
 Powers, Delmer L., XVIII, 1388
 subsurface study of Pale beds and Foremost formation in Lethbridge-
 (Powers)
 Brooks area of southern Alberta, ALTA, 69; XV, 1197
 Powers, Elliot H., XXIV, 5, 13; XXV, 1057
 abstract, XXII, 1704
 Sand Hills area, Crane County, Texas, XXIV, 119
 Powers, Sidney, GAS, ix, 610, 621, 628, 630, 1069, 1073; GC, 44; PROB, v, 25, 383, 431, 618, 666, 775, 776, 812; SD, 27, 29, 44, 209, 211, 220, 223, 273, 297; XXIV, 2147; XXV, 20, 1229
 buried ridges in West Texas, XI, 1109
 cap rocks of oil sands, discussion, XIII, 688
 Cotton Valley oil and gas field, Webster Parish, Louisiana, VIII, 244
 Crinerville oil field, Carter County, Oklahoma, STR I, 192; XI, 1067
 dedication of Problems of Petroleum Geology to, PROB, v
 Division of Geology and Geography, National Research Council, XVI, 620
 drilling for geophysical data in Yellowstone National Park, XV, 469
 editorial on estimates of petroleum reserves of United States, V, 411
 explanation of domes in Amarillo field, VII, 239
 first memorial medal award, presentation of, XXIX, 477
 foreword to symposium on occurrence of petroleum in igneous and metamorphic rocks, XVI, 717
 history of American Association of Petroleum Geologists, XIII, 153
 interior salt domes of Texas, SD, 209; X, 1
 Masjid-i-Sulaiman oil field, Persia, gypsum flowage in Persia, discussion, XIII, 685
 measuring meter for drilling wells, V, 518
 memorial of, XVII, 325, 328
 memorial medal, XXIX, 603
 memorial medal award of American Association of Petroleum Geologists, rules for, XXVII, 879
 memorial medal fund, XXVII, 1277, 1651; XXVIII, 289
 minor occurrences of oil, gas, and bitumen with igneous and metamorphic rocks, XVI, 837
 number of American geologists, V, 499
 oil well in Scotland, VI, 376
 oil well in southern France, IX, 346
 Oklahoma geological map, VIII, 240; IX, 920
 Ordovician oil at Healdton, VI, 476
 petroleum geology in Oklahoma, review, XI, 311
 petroleum geology—its past and its future—foreword, V, 445
 portrait, PROB, opp. v
 reflected buried hills in oil fields of Persia, Egypt, and Mexico, X, 422
 report of president for 1930, XV, 573
 report on Oklahoma geological map, XI, 433
 reviews, V, 425, 426, 524, 687; VI, 381, 382, 488, 554; VII, 302, 303; XI, 429, 766; XII, 956, 1171; XIII, 694, 1487; XIV, 1231; XV, 976; XVI, 103, 267, 268, 424, 425
 Sabine uplift, Louisiana, IV, 117
 (Powers)
 Seminole uplift, Oklahoma, XI, 1097, 1236
 structure of typical American oil fields, XIV, 628
 Wallace Everett Pratt first memorial medalist, an appreciation, XXIX, 478
 Powers, Sidney, and Clapp, Frederick G., nature and origin of occurrences of oil, gas, and bitumen in igneous and metamorphic rocks, XVI, 719
 Powers, Sidney, and Hopkins, Oliver B., IX, 859; XXI, 1272, 1274
 theory of origin of salt domes, IX, 859
 Powers, Sidney, Hopkins, O. B., and Robinson, H. M., PROB, 779, XV, 816
 Poydras, RMS, 169
 Poza Rica field, Mexico, reserves in, XXIII, 962
 mixed facies, El Abra and Tamalipas limestone, MEX, 43
 Pozo de la Piedra, quartz-dolerite at, MEX, 148
 Practical oil geology, XXIII, 105
 Practical repressuring, XXII, 189
 Practical seismology and seismic prospecting, XXII, 1607
 Prague pool, XXV, 1100
 Prahova type of oil field, XXVIII, 773
 Prairie Bluff beds, XXVIII, 45
 Prairie Bluff chalk, XXII, 1632, 1645, 1647, 1652
 fauna of, XXI, 807; XXII, 1655
 Prairie Bluff chalk, Owl Creek formation, and Corsicana marl of Texas, faunal relationship between, XXI, 809
 Prane Bluff chalk, phosphatic molds in, XXII, 1654
 Ripley formation unconformably overlain by, XXII, 1647
 unconformably overlain by Midway group, XXI, 807
 Prairie Bluff limestone, XXI, 807
 Prairie Mountain, map of, XXII, 873
 Prairie Mountain formation, XXII, 880
 fossil plant (*Lepidodendron*) of, XXII, 883
 Prairie Mountain sandstone, weathering phenomena of, XXII, 882
 Prairie Mountain siliceous shale, XXII, 881
 Prairie Mountain time, geosynclinal development at end of, XXII, 862
 Prairie Oil and Gas Company, GAS, 306; XXII, 686
 Mortier 1 (well 239), SBP, 194-243, 406
 Rogers 1 (well 293), SBP, 255-285, 407
 Waymire 1 (well 264), SBP, 255-285, 407
 Prairie Plains homocline, GAS, 486, 514; XI, 1101
 Prairie Plains monocline, STR II, 335; XII, 423
 Prairie River Syndicate, XXII, 1666
 Pralow, W., RMS, 385
 Prandtl, RMS, 79
 Pratz, Otto, RMS, 1, 178, 298, 305, 311, 317, 319, 327
 sediments of South Atlantic Ocean, XXIII, 1666
 Pratlery, Fred, memorial of Henry Hart Pratlery, XXV, 1962
 Pratlery, Henry Hart, memorial of,

- (Pratley)
 XXV, 1962
 Pratt, XVIII, 16
 Pratt, J. H., XII, 895; XXIX, 1632
 theory of isostasy, CD, 12
 Pratt, Wallace Everett, PROB, 99, 145;
 SD, 23, 211, 358, 401, 468; SBP, 2;
 XXIV, 1389, 1544; XXV, 562,
 1222, 1233
 basis of proration in Texas, XXIII,
 1314
 bibliography, XXIX, 487
 discovery rates in oil finding, XXI,
 697
 distribution of petroleum in earth's
 crust, XXVIII, 1506
 editorial, XXII, 1698
 El Dorado, Arkansas, V, 90
 first Sidney Powers memorial medal-
 ist, an appreciation, XXIX, 478
 Fort Stockton, Texas, V, 88
 geologic structure and producing
 areas in north Texas petroleum
 fields, III, 44-70
 geology in petroleum industry,
 XXIV, 1209
 geology is a way of life, XXIX, 491
 good geologists make good neighbors,
 XXVI, 1207
 hydrogenation and origin of oil,
 PROB, 235
 memorial of Donald Clinton Barton,
 XXIII, 1888
 memorial of William McCormick
 Reid, XXVII, 1031
 new Gulf Coast salt dome, VI, 252
 note on supposed evidence of vol-
 canic origin of Gulf Coast salt
 domes, V, 91
 oil at Luling, Caldwell County, Tex-
 as, VII, 182
 oil in the earth, review, XXVI, 1294
 oil and gas in Texas Panhandle, VII,
 237
 reviews, XX, 1501; XXV, 904;
 XXVI, 1537
 some questions on cause of subsidence
 of surface in Goose Creek field,
 Texas, discussion, XI, 887
 two new salt domes in Texas, X, 1171
 Pratt, Wallace E., and Johnson, Doug-
 las W., XI, 730, 887; XIX, 823
 Pratt, Wallace E., and Lahee, F. H.,
 faulting and petroleum accumula-
 tion at Meria, Texas, VII, 226
 Pratt and Kingman counties, Kansas,
 Cunningham field, XXI, 500
 Pratt Company, GC, 781; XIX, 1331
 Pratt County, Kansas, Carmi pool,
 XXVIII, 125
 Pratt-Hewitt Oil Corporation, XXII,
 1191
 Pratt hypothesis of gravity distortions
 of earth, XXIX, 1633
 Pre-Appalachian paleogeography, pal-
 inostatic outline map for, XXIX,
 445
 Pre-Barnett correlations based on char-
 acter and percentages of insoluble
 residues (excepting shale), XXIV,
 72
 Pre-Boggy Pennsylvanian formations,
 Dora pool, STRAT, 414
 Pre-Cambrian, MEX, 8
 Amarillo uplift, XXV, 1626
 Arbuckle Mountains, XXV, 1624
 Arizona, VI, 47
 Belgian Congo, V, 672
 Bowers field, Texas, XXVII, 25
 California, XXVI, 1816
 (Pre-Cambrian)
 Chanute pool, STRAT, 63, 65
 Florence field, Colorado, STR II, 78
 Franklin Mountains, Texas, XXIV,
 160
 Grass Creek field, Wyoming, STR II,
 627
 Kansas, V, 146; XXV, 1626
 Kansas, petrographic study of, XI,
 821
 Llano uplift, Texas, XXV, 1624
 Lost Soldier district, Wyoming, STR
 II, 641
 Mid-Continent, references on, XXV,
 1698
 Nebraska, XVIII, 1600
 Nebraska, Iowa, and South Dakota,
 XXV, 1626
 Nevada, XXVI, 1803
 New Mexico, IV, 74, 96; V, 605
 North Dakota, XXVI, 336, 1423
 North Sea, RMS, 331
 north-central Texas, XXIV, 99
 Ohio, XXIV, 687
 Oklahoma, III, 255; V, 33; VI, 6, 413
 Roberson field, Oklahoma, VII, 635
 St. Francois Mountains, Missouri,
 XXV, 1625
 Sand Hills area, Crane County,
 Texas, XXIV, 19
 Sioux Falls district, South Dakota,
 XXV, 1625
 South Dakota, VI, 552
 Spavinaw district, Oklahoma, XXV,
 6125
 Texas, IV, 121; V, 374
 Texas Panhandle, XXIII, 997
 trans-Pecos Texas, XIX, 223
 Van Horn region, Texas, XXIV, 147
 Washington County, Arkansas,
 XXV, 1626
 western Iowa, XVIII, 1602
 Wichita Mountains, Oklahoma,
 XXV, 1624
 Wind River Canyon, schistosity of
 rocks, XXIII, 479
 Wind River Canyon area, XXIII,
 1446
 Wind River Mountains, XXV, 125
 Wyoming, V, 51, 208; XXIII, 927,
 1447
 Zenith pool, STRAT, 153
 Pre-Cambrian and Cambrian relations
 in east-central Minnesota, XXIV,
 744
 Pre-Cambrian and Paleozoic forma-
 tions, heavy minerals of, XXVIII,
 114
 Pre-Cambrian and Paleozoic rocks of
 Vance well, Delaware County,
 Ohio, XXIV, 672
 Pre-Cambrian basement in West Texas,
 XXIV, 1037
 Pre-Cambrian gneiss complex in Vance
 well, XXIV, 691
 Pre-Cambrian rhyolite in northwestern
 Arkansas, IX, 1115
 Pre-Cambrian rocks (Ar), SBP, 194,
 413
 Dakota basin, XXVI, 1567
 at Edwards, New York, natural gas,
 salt, and gypsum in, XVI, 727
 China, XXVIII, 1420
 exposed in Laramie Range, XXVIII,
 1200
 in Mid-Continent region, distribution
 of, XXV, 1622
 in New York, XXII, 95
 subdivisions and nomenclature of,
 XXV, 1623
 Pre-Cambrian schists in Luling field,
 Texas, STR I, 274
 Pre-Cambrian section of Vance well,
 XXIV, 688
 Pre-Cambrian shield, FOP, 19, 112;
 XXV, 1451, 1544
 Pre-Cambrian shields, strongest rocks
 on earth, XXIX, 1648
 Pre-Cambrian surface in Ozarks, XVI,
 631
 Pre-Cambrian trends, useless for cor-
 relation, CD, 125
 Pre-Cambrian Zeolite-Opal sediments
 in Wichita Mountains, Oklahoma,
 XXV, 287
 Pre-Canyon time, XXIV, 101
 Pre-Carboniferous exotic boulders in so-
 called "Caney shale" in Oklahoma,
 review, XVI, 495
 Pre-Carboniferous stratigraphy of Mar-
 athon uplift, West Texas, XV, 1059
 Precipitated salt cycle, XVIII, 1233
 Precipitates, chemical, from Great Salt
 Lake water, XXII, 1341
 Precipitation, RMS, 124, 179
 annual in California, RMS, 271
 as a cause of dynamic equilibrium,
 RMS, 125
 bacterial, of calcium carbonate,
 RMS, 291
 effect of, on currents, RMS, 118
 in sea water, RMS, 88, 89, 292; XXI,
 1126
 of calcium carbonate, RMS, 283
 of minerals by bacteria, RMS, 423
 of organic colloidal material, PROB,
 57
 of salts from sea water, PROB, 874;
 RMS, 144
 of salts in reservoir sand, PROB, 482
 of silica, RMS, 147
 Precision, ultimate, of barometric sur-
 veying, XXI, 1168
 Precision pendulum, XXV, 1261
 Pre-Comanche beds in south Arkansas,
 XXII, 964
 Pre-Cretaceous, Colombia, XXIX, 1073
 Edison field, STRAT, 4
 Edwards Plateau, bibliography on,
 XXVI, 386
 Edwards Plateau, contour map based
 on well logs in Crane, Pecos, Crock-
 ett, Upton, Irion, Sterling, Glass-
 cock, and Terrell counties, Texas,
 XXVI, 381
 Kern Front field, STRAT, 12
 southern Alberta, ALTA, 2; XV, 1130
 Pre-Cretaceous areal geology of Dakota
 basin, XXVI, 1579
 Pre-Cretaceous crystalline rocks in
 Tumbler Range, XXV, 1331
 Pre-Cretaceous floor of Gulf Coastal
 Plain, XVIII, 1253
 Pre-Cretaceous orogeny, SC, 7; XX,
 1553
 Pre-Cretaceous paleogeologic map of
 Dakota basin, XXVI, 1580
 Pre-Cretaceous rocks found in wells in
 Gulf Coastal Plain South of Ou-
 achita Mountains, XV, 801
 of Santa Lucia Range, XXVIII, 455
 Pre-Cretaceous sediments in Colombia,
 bibliography on, XXV, 1795
 in Cordillera Oriental of Colombia,
 XXV, 1789
 Pre-Cretaceous topography of western
 Edwards Plateau, Texas, XXVI,
 380
 Preda, D. M., SD, 141
 Pre-Dakota formations, Greasewood

- (Pre-Dakota)
field, STRAT, 28
Pre-Devonian rocks in Michigan, XXII, 399
Predictions of future of oil pools by early wells, X, 747
Preduralie and western Urals, scheme of correlation of sections of lower Permian of, XXII, 775
Pre-Eocene, South Texas, XXV, 1037
Pre-Eocene production in San Antonio district, XXIV, 1077
Preface, Colorado symposium, XVII, 351
to symposium on recent marine sediments, RMS, 1
Pre-Franciscan stage, SC, 5, XX, 1551
Pre-glacial depression in Baltic, RMS, 299
Pre-Gulf formations in southern Arkansas, XXII, 956
Pre-Gulf paleogeographic map of southern Arkansas, XXII, 957
Pre-Jurassic oils, PROB, 144, 155, XXVII, 1319
of Wyoming, relationship of sulphur content to gravity in, XXVII, 1312
Pre-Lampasas time, XXIV, 100
Preliminary notes on geology and structure of Amarillo region, IV, 269
Preliminary observations on geological use of aerial photographs, XXIX, 1756
Preliminary paper on stratigraphy of Pennsylvanian formations of north-central Texas, III, 132; discussion, III, 146
Preliminary report of technical oil mission to Middle East, XXVIII, 919
Pre-Lussie coastal plain in Texas, XXIV, 694
Pre-McClosky production in Illinois, XXIII, 811
Pre-Mesozoic formations in Caliente Mountain district, SC, 77; XX, 1623
Pre-middle Miocene disturbance, SC, 61; XX, 1607
Pre-Miocene, MSC, 133
Pre-Miocene age of Vaqueros fauna, MSC, 9
Pre-Mississippian, Illinois Basin fields, XXIII, 1505
north-central Texas, XXIV, 99
Pre-Mississippian correlation chart for Kansas and states near it, XIII, 457
Pre-Mississippian deformation of Eastern Interior basin, XXIV, 850
Pre-Mississippian rocks, distribution of, in Kansas and Oklahoma, PROB, 321
of Kansas and Oklahoma, subsurface distribution of, XIV, 1535
Pre-Mississippian sediments in central Kansas, XIII, 441
Pre-Mississippian structure and areal geology, distribution of oil pools in Kansas in relation to, XVII, 793
Pre-Mohanian Miocene, MSC, 133
Pre-Morrow time, XXIV, 100
Prendergast, K., XX, 1055; XXV, 374, 392, 405
Pre-Nevadian paleogeography, palinspastic outline map for, XXIX, 448
Prentice, D. M., XVII, 1136
Pre-Ordovician in Urals, XXI, 1453
north-central Texas, XXIV, 99
Van Horn region, Texas, XXIV, 143
Preparation of lantern-slide copy, (Preparation)
XXVI, 1656
of samples for X-ray studies, RMS, 621
of sedimentary materials for study, methods of, XXI, 260
of suspensions for mechanical analyses, RMS, 533
Pre-Pennsylvanian, Freezeout Mountain-Bald Mountain area, XXV, 886
Gore area, XXVI, 1377
Salina basin, XII, 181
South Burbank field, XXI, 562
Pre-Pennsylvanian areal geology of Dakota basin, XXVI, 1578
of southeastern Illinois, map showing, XXIII, 1494
Pre-Pennsylvanian beds, Dora pool, STRAT, 415
in Missouri, XXVII, 811
Pre-Pennsylvanian deformation in Appalachian region, PROB, 843
Pre-Pennsylvanian fold at Cushing field, Oklahoma, STR II, 399
Pre-Pennsylvanian formations of Arbuckle mountain region, Oklahoma, XXI, 16
Pre-Pennsylvanian limestone, XXV, 889
Pre-Pennsylvanian oil and gas horizons in Kay county, Oklahoma, IV, 173
Pre-Pennsylvanian paleogeologic map of Dakota basin, XXVI, 1577
Pre-Pennsylvanian producing horizons, Kay County, Oklahoma, IV, 173
Pre-Pennsylvanian rocks at close of Devonian in West Texas, diagrammatic section, XXIX, 1344
at close of Ordovician in Marathon Mountains and northern Andrews, Pecos, and Crane counties, diagrammatic section, XXIX, 1340
before late Mississippian deformation in West Texas, diagrammatic section, XXIX, 1345
in Cushing field, Oklahoma, map showing areal distribution, STR II, 401, 402
in Marathon Mountains and their thicker equivalents on the north, comparison of, XXIX, 1339
of type in Arbuckle Mountains, map, XXI, 3
of type in Ouachita Mountains, map, XXI, 3
Pre-Pennsylvanian sequence of Ouachita Mountains, Oklahoma, XXI, 15
Pre-Pennsylvanian stratigraphy in north-central Texas, XXIV, 67
of Big Lake field, Reagan County, Texas, XIV, 798
of Front Range in Colorado, XVII, 375
of Nebraska, XVIII, 1597
subsurface, of north Mid-Continent fields, notes on, V, 117
Pre-Pennsylvanian systems in Nebraska and Iowa, correlation, XVIII, 1614
Pre-Pennsylvanian unconformity, XXIX, 132
in Eastern Interior basin, XXIV, 847
Pre-Pennsylvanian well in Young County, Texas, XXIII, 854
Pre-Permian, west side of Central Basin platform, Texas-New Mexico, XXIV, 32
Pre-Permian, West Texas, developments in, XXVI, 1028
developments in Crane, Crockett, Pecos, and Ward counties, 1940, XXV, 1054
developments in 1942, XXVII, 762
developments in 1944, XXIX, 748
Pre-Permian axes of maximum deposition in West Texas, XXIX, 1336
Pre-Permian exploration in West Texas, XXVIII, 817
Pre-Permian fusuline zones, XXIV, 268
Pre-Permian nomenclature, West Texas New Mexico region, XXIV, 6
Pre-Permian paleogeologic map, Apache pool, XXIX, 104
Pre-Permian Paleozoics of Wichita Mountain area, notes on, VI, 413
Pre-Permian rocks at close of the Pennsylvanian in West Texas, diagrammatic section, XXIX, 1347
Pre-Permian sediments in Sand Hills area, structure of, XXIV, 132
Pre-Permian strike in southeastern New Mexico, XXIX, 755
Pre-Permian tests, important, in New Mexico, XXVII, 770
Pre-Permian wells in Central Basin platform, XXVII, 762
Pre-Permian wildcats, XXVI, 1033
in Texas, XXV, 1059; XXVII, 765
Pre-potash deposition in West Texas and New Mexico basins, XXIII, 1689
Pre-potash deposition in West Texas and New Mexico basins, XXIII, 1689
Pre-Redbed series in Texas Panhandle, divisions, XXIII, 987
Pre-Redbeds in Texas Panhandle field, XXIII, 1039
Pre-Relizian, MSC, 153
Pre-Saginaw erosion, XXVIII, 189
Prescott and Taylor, XXIII, 1512, 1518, 1520, 1521, 1523
Present status of St. Peter problem in Kentucky, XXIII, 1836
Presentation of first Sidney Powers memorial medal award, XXIX, 477
of sedimentary data, RMS, 558
Preservation of oil during erosion of reservoir rocks, discussion, XVII, 1271
of organic matter in deep sea sediments, RMS, 380
Preservation control, XXVI, 1739
Presidential address, XVII, 548; XIX, 717
President's award, William Edwin Wallace, recipient of, XXIX, 469
Presidio County, Texas, upper Paleozoic Chinati series, XXII, 924
upper Paleozoic section of Chinati Mountains, XXIV, 180
Pressler, Edward, CAL, 257
Pressure, CD, 20; PROB, 43, 141, 149, 150, 243-247, 268; RMS, 377
abandonment, GAS, 1020
as related to depth, RMS, 63
bottom-hole, at Sugarland field, GC, 731; XVII, 1384
bottom-hole, at Turner Valley field, graph showing, XXIV, 1635
by water drive, low gas-oil ratios essential in maintaining, XXII, 1239
calculation of bottom-hole, GAS, 1036
computation of average reservoir, GAS, 1021

(Pressure)

- determination of final, GAS, 1046
 distribution of, in sea, RMS, 62, 110
 economic limit of, GAS, 1020
 effect in formation of petroleum, XX, 293
 effect on gravity of crude oil, PROB, 157
 effect on migration and accumulation of petroleum, VIII, 527; X, 917
 effect on other properties of sea water, RMS, 64, 70
 effect on replacement process, PROB, 289
 effects of, PROB, 98
 equilibrium, establishment of, by a balance between volumetric withdrawal and water intrusion, XXII, 1239
 gradients in sea, RMS, 63
 greater in continental blocks than under ocean floor, CD, 207
 high radial axial, genesis of oil by, XVI, 1029
 hydrostatic, RMS, 60
 in Alberta gas fields, GAS, 5, 30, 35, 36, 39, 47, 57
 in Amarillo district, GAS, 401, 403, 412, 414
 in Amatlán, effect on production of neighboring wells, MEX, 215
 in Arkansas Basin of eastern Oklahoma, GAS, 517, 522, 524, 526-528
 in atmosphere for different heads of water, kerosene, and mercury, chart, XXVII, 72
 in average reservoir, GAS, 1019
 in Bend Arch district, GAS, 641, 642
 in Big Horn Basin gas fields, GAS, 291
 in Broomfield pool, GAS, 803, 805, 807
 in California fields, GAS, 131, 143, 151, 191, 198, 201, 213
 in Chippewa pool, XXVIII, 1574
 in East Texas field, XVI, 896; XVII, 785
 in Eastern Interior Coal basin, GAS, 836
 in gas wells, bottom-hole, GAS, 1049
 in Great Salt Lake area, Utah, GAS, 240
 in Greta field, GC, 662; XIX, 558
 in Gulf Coast area, GAS, 706, 723
 in Hiawatha fields, GAS, 344, 345, 371
 in Idaho fields, GAS, 236
 in Indiana, GAS, 851
 in Interior Highlands of Arkansas, GAS, 560, 562, 563, 565-567, 571
 in Jackson field, Mississippi, GAS, 887, 893, 896
 in Kutz Canyon field, New Mexico, GAS, 379
 in Lost Soldier district, Wyoming, GAS, 314, 318
 in Maxon sandstone, GAS, 934
 in Mexican fields, GAS, 1005
 in Monroe field, Louisiana, GAS, 762
 in Montana fields, GAS, 268, 275
 in Northeast Texas, GAS, 669-671, 674
 in ocean, horizontal and vertical variations of, RMS, 63
 in Ohio fields, GAS, 851, 907
 in Ontario fields, GAS, 82-84
 in Oriskany fields, New York, GAS, 985
 in Rattlesnake Hills, Washington, GAS, 229

(Pressure)

- in Richland field, Louisiana, GAS, 781, 784
 in Schuler field, XXVI, 1500
 in South Baxter Basin, Wyoming, GAS, 326
 in southern Cincinnati Arch region, GAS, 873
 in southern Oklahoma fields, GAS, 599, 600
 in Texas Panhandle field, XVII, 894
 in Utah fields, GAS, 381
 in Venezuela fields, XIII, 1190
 in Wellington anticline, Colorado, GAS, 379
 in wells, rise of during rainy season, MEX, 171
 in West Ferris, GAS, 318
 in West Texas and southeast New Mexico, GAS, 428, 430, 433, 447
 increase of, with consolidation, PROB, 242
 influence on hydrogenation, PROB, 241
 method of calculation, RMS, 63
 of column of water and of atmosphere, differential between, XXII, 845
 of wells with hydrostatic head, correlation of, XII, 361
 on fluids within sandstones, causes of increase of, XXV, 1878
 osmotic, RMS, 65, 66
 range of, in oceans, RMS, 68, 69
 relation to estimation of oil reserves, XXV, 1304
 relation to occurrence of oil and gas, PROB, 36, 81
 release of and effect on producing wells MEX, 181, 192, 230-232
 reservoir, West Columbia field, XXVI, 1451
 Pressure apparatus, IX, 443; XII, 1053
 Pressure conditions, value of studies of, XII, 384
 Pressure control, MEX, 230
 Pressure decline, GAS, 34, 49, 1022
 Pressure decline and gas withdrawals, relative porosity and permeability of producing formations of Hugoton field as indicated by, XXIV, 1798
 Pressure-decline chart, Jones sand, Schuler field, XXVI, 1501
 Reynolds oolite, Schuler field, XXVI, 1505
 Pressure differences in contiguous wells, MEX, 183
 Pressure drop, relation of, to production, Jones sand, Schuler field, XXVI, 1503
 Pressure experiments, X, 918; XIII, 329
 Pressure extraction of fluid from core, XXVII, 67
 Pressure flood, PROB, 809
 Pressure maintenance, XXII, 1443
 at Raccoon Bend field, GC, 705; XVII, 1488
 at Sugarland field, GC, 728; XVII, 1381
 in oil fields, XXVI, 1005
 unitized, geologic factors in, Jones sand reservoir, Schuler field, Arkansas, XXVIII, 217
 Pressure-maintenance history, Schuler field, XXVIII, 229
 Pressure-maintenance program, continuance of permeability most important factor, XXVIII, 227
 Pressure map of Government Wells

(Pressure)

- field, GC, 644; XIX, 1144
 Pressure metamorphism, XIII, 306
 of coal, XIII, 306
 Pressure profiles in early stages of salt-dome formation, GC, 86, XVIII, 1182
 Pressure relief in reservoir sandstones, influence on migration and accumulation of oil, XXV, 1879
 Pressure tests on Colorado oil shale with catalysts, XIII, 354
 results of, XVI, 1035
 Pressure wells, preparation of, XXII, 195
 Pressures, bottom-hole, at Anse la Butte dome, XXVII, 1130
 bottom-hole, at Eola field, XXV, 1393
 bottom-hole, geological application of, XVI, 891
 bottom-hole, interpretation of, in East Texas oil field, XVI, 907
 bottom-hole or depth, information from, XXIV, 1373
 differential, effect of, XXIV, 114
 in Conroe field, GC, 815; XX, 761
 in Government Wells field, GC, 643, 644; XIX, 1143, 1144
 in Hobbs field, New Mexico, XVI, 893
 in Northern fields, MEX, 181, 229
 in oil, gas, and water sands of various fields, XIX, 817
 in Pánuco field, MEX, 229
 in Seminole field, XVI, 893
 in Southern fields, MEX, 229
 in stripping wells, MEX, 229
 in unconformity oil fields, XVII, 837
 in Yates sand in Wasson field, XXV, 1883
 influence of mineral cements on, in oil and gas fields, XXV, 1876
 maintenance of, in water-drive fields, XXII, 1238
 reservoir, at Amelia field, XXIII, 1655
 reservoir, at Conroe field, XX, 759
 under which gas and oil exist within an accumulation, fundamentally due to hydrostatic column of water, XXII, 840
 variable, within a sandstone, relation to mineral precipitates, XXV, 1874
 water-flooding, at Bradford, Pennsylvania, safety of, XIX, 793, 1239
 Pressures and temperatures, bottom-hole, Cunningham field, Kansas, XXI, 521
 Preston, H. M., MSC, 66, 232, 264, 308
 Preston anticline, XXI, 1027
 at Petrolia field, Texas, STR II, 550
 Preston field, III, 273
 Preston formation, II, 62; V, 307; VI, 181
 Prestonburg, Kentucky (well 431), SBP, 349-379, 410
 Pre-Stray, Austin field, STRAT, 246
 Pre-Stones River sandy zones across Nashville dome axis, cross section showing stratigraphic variability of, XXIV, 1661
 Pre-Strawn time, XXIV, 101
 Prestwich, Joseph, SD, 396
 Pre-Taconian paleogeography, palaeospastic outline map for, XXIX, 437
 Pre-Tertiary, Gulf Coastal Plain, XXIII, 192
 La Barge region, XXV, 1736
 Pre-Tertiary complex in Washington

- (Pre-Tertiary)
and Oregon, FOP, 27; XXV, 1459
Pre-Tertiary metamorphic rocks in Blue Mountains, XXIX, 1384
Pre-Tertiary rocks from deep wells at Jackson, Mississippi, XVII, 38
Pre-Tertiary section between oil fields of northern Mendoza, correlations of, XXVIII, 1464
Pre-Tertiary stratigraphy, parallels between East Indies and Coast Ranges, XXI, 558
Pre-Travis Peak marine beds, XXII, 1510
Pre-Trenton stratigraphy of middle Tennessee, XXIV, 1645
Pre-Trinity beds on Hatchetigbee anticline, XXVII, 1234
Pre-Trinity deposits in South Texas, XXVII, 1232
in South Texas, problem of, XXVII, 1228
westward and southwestward increase in slope of, on basement, and dip on beds, Texas and Arkansas, XXVII, 1237
Pre-Trinity Mesozoic horizons, XXVII, 1229
Pre-Trinity sediments in Arkansas and Louisiana, XXVII, 1230
Pre-Trinity subsurface strata, southern Arkansas, XXII, 960
Prettyman, Thomas Mann, XXVIII, 1675
memorial of, XXV, 346
Prettyman, Thomas Mann, and Cave, H. S., XXII, 793, 794; XXIX, 920, 921, 924, 925, 926
Pre-upper Miocene diastrophism, SC, 69; XX, 1615
Preuss, Stump, Nugget, and Twin Creek formations, stratigraphic section of, measured on South Piney Creek, XXI, 727
Preuss formation, XXI, 720
age and stratigraphic relations, XXI, 730
in Idaho and Wyoming, XXI, 729
unfossiliferous, XXI, 752
Preuss sandstone in Idaho section, XXIII, 1174
Preventive medicine and health in Venezuelan oil fields, XI, 299
Pre-Wisconsin drift, XXVI, 357
Pre-Wolfcamp foreland northwest of Llanoria geosyncline, PTNM, 717; XXVI, 717
Pre-Yates folding at North Cowden field, XXV, 615
Price, XIX, 1230
Price, Harry, X, 1134
Price, Paul H., PROB, 539; SBP, 357; STRAT, 820; XXII, 542; XXIV, 493; XXV, 785, 794, 795; XXVII, 1198, 1223
anticlinal theory and later developments in West Virginia, XXII, 1097
clay dikes in Redstone coal, West Virginia and Pennsylvania, XVII, 1527
discovery of gas in Rockingham County, Virginia, XXVI, 275
memorial of James Donaldson Sisler, XIX, 1717
report of resolutions committee for 1942, XXVII, 686
Price, Paul H., and Headlee, A. J. W., XXIX, 1257
- (Price)
geochemistry of natural gas in Appalachian province, XXVI, 19
natural coal gas in West Virginia, XXVII, 529
regional variations in composition of natural gas in Appalachian province, XXII, 1153
Price, Paul H., and Heck, E. T., XXVII, 1215
Price, Paul H., and Woodward, Herbert P., XXV, 810
geology and war, XXVI, 1832
résumé of Devonian system of West Virginia, XXIV, 1983
Price, Paul H., Hare, C. E., McCue, J. B., and Hoskins, H. A., XXIV, 487
Price, R. J., XVI, 1021
Price, W. Armstrong, bacterial genesis of hydrocarbons from fatty acids, discussion, XV, 703
"bibliography" or "references"?, discussion, XIX, 561
caliche and pseudo-anticlines, IX, 1009
Corpus Christi structural basin postulated from salinity data, GC, 270; XIX, 317; discussion, XX, 315
craters formed by air blowers, XVIII, 813
discovery of oil in Saxet gas field, Nueces County, Texas, XIV, 1351
discovery of oil in White Point gas field, Patricio County, Texas, and history of field, XV, 205
discovery of oil and gas in Mercedes field, Hidalgo County, Texas, XIX, 1226
discussion of Link's experiments relating to salt-dome structures, XIV, 503
discussion of salt flowage, XIV, 1046
disseminated oil in Pleistocene water sands of Corpus Christi area, Texas, XVI, 385
gas and oil near Edna, Jackson County, Texas, X, 905
geologist and State Defense Guards, XXVI, 1279
Lissie formation and Beaumont clay in south Texas, discussion, XVIII, 948
Reynosa problem of South Texas, and origin of caliche, GC, 550; XVII, 488, 1277, 1281, 1534; discussion, XVII, 1277, 1534
role of diastrophism in topography of Corpus Christi area, South Texas, GC, 205; XVII, 907, 1281
the geologist and the State Defense Guards, XXVI, 282
thickness and depth of strata, discussion, XVIII, 817
Price, W. Armstrong, and Palmer, K. V. W., XVII, 506, 512
Price, effect of, on petroleum production, XX, 37
Price of crude oil in perspective, XX, 810
relation to discovery rate, XXVII, 963
Price of gasoline by years, 1924-35, XXI, 190
Price of natural gas to consumer, GAS 1131, 1144
Price and well-completions, relationship between, for 23-year period, XXII, 636
- Price anticline, XXI, 994
Price Creek, California, outcrop section A, SBP, 167-194, 411
Price data on crude oil and refined products, XXIII, 780-786
Price field, Colorado, FOP, 37; XXII, 687; XXV, 1469
Price incentive to oil discovery, XXVII, 913
Price schedule for crude oil in 1942, XXVII, 751
Price trends, comparison of, with all commodities, XXVII, 985
Prices, index of, XXVII, 986
of crude oil in Michigan in 1939, XXIV, 987
product, relation between crude oil and, XXIII, 765
wholesale, index of, XXVII, 986
Price's dome, Louisiana, SD, 222, 263, 264, 274-276, 317-323, X, 265
Prichard, G. B., oil and gas prospects of Australia, discussion, XI, 638
Priddy, XXIV, 678
Priddy, Richard, XXVIII, 53
Priest Valley, SC, 63, 88; XX, 1609, 1634
Priest Valley quadrangle, San Benito and Fresno counties, California, Yokut sandstone in, XXIV, 1751
Primary alkalinity, PROB, 893
Primary porosity in limestone, PROB, 366
Primary radium, conversion by, XXVIII, 946
Primary ray in X-ray studies, RMS, 618, 622
Primrose formation, XXII, 900, 904
Prince of Monaco, RMS, 647
Prince of Monaco's sounding machine, RMS, 647
Prince Edward Island, FOP, 122; GAS, 105, 107; XXV, 1554; XXIX, 656
references on oil prospects in, FOP, 122; XXV, 1554
Princess area, XXIX, 657
Princeton University, SBP, 7
Principal factors of natural gas land valuation, III, 378
Principal sedimentary basins in East Indies, XXVIII, 1440
Principles bearing on occurrence of oil provinces, XXVII, 895
involved in anticlinal theory, XXII, 1097
of sedimentation, XXIV, 505
of soil mechanics, review, X, 314
some physical, of the origin of petroleum, III, 345
Pringle, J., and George, T. N., XXIV, 288
Printing paper suitable for reproduction of photographs of fossils, XXIX, 1502
Prinz Adelbert salt dome, Germany, SD, 195; IX, 1255
Prionotopsis woolgari zone, XVIII, 1410
Priority, relative importance in stratigraphic classification, XXIX, 129
weight of, in defining a system, XXIV, 345
Pritchard dome, Montana, PROB, 703
Pritchard nose, PROB, 713
Pro, M. J., Survey, Texas (well 342), SBP, 292-335, 409
Probability curve, RMS, 310
as applied to sediments, RMS, 584-587
paper, RMS, 585

- Probable-area method of estimating oil reserves, XXV, 165
- Probable error of analyses, SBP, 10, 11, 20, 23-25, 33-35, 40, 45, 54, 55, 62, 77, 78, 79
- Probable lower Mississippian age of Caballos novaculite, New Mexico, XXIV, 1679
- Probably productive sediments, definition of, SBP, 83-87
- Probe phenomena, XXVIII, 913
- Probert, F. H., XIII, 309
- Problem of crooked holes, XIII, 1095
- of exploration, notes on present status of, XXVI, 1214
- of natural reduction of sulphates, X, 1270
- of petroleum geology, application of X-ray crystal analysis to, XXI, 1333
- of pre-Trinity deposits in South Texas, XXVII, 1228
- of secondary tilt, XXII, 1255
- of secondary tilt—Harker's solution corrected, XXII, 1255
- of secondary tilt, solution of, by cotangent method, XXII, 1259
- of two tilts and the stereographic projection, XXII, 1261
- of two tilts solved by bedding normals, XXII, 1265
- of two tilts solved by planes, XXII, 1269
- of well spacing, XXVI, 100
- of well spacing, references on, XXVI, 119
- Problems connected with conditions in Turner Valley field, XXIX, 1168
- involved in scientific classification and nomenclature of rock units, XXIII, 1069
- new development, and their solution in southern Californian oil fields, VIII, 135
- of Appalachian structure, XXV, 416
- of Atlantic sediments, RMS, 394
- of beaches, RMS, 216
- of calcareous deposits, RMS, 292
- of deltaic sedimentation, RMS, 174
- of Indian Ocean, RMS, 407
- of labor in petroleum industry, XXI, 191
- of North American salt domes, SD, 172; IX, 1232
- of oil industry, VII, 277
- of oil lease valuation, III, 389
- of petroleum geology, application of chemical analysis of crude oils to, XXVII, 1595
- of sedimentation, RMS, 3
- of sedimentation in North Sea, RMS, 338
- of tidal deposits, RMS, 204
- of Tonkawa field, Oklahoma, VIII, 296
- of transport of debris in streams, RMS, 27
- of underground gas storage in Ohio, West Virginia, and Pennsylvania, XXVIII, 1561
- presented by Five Islands, Louisiana, SD, 392; IX, 792
- suggested for study groups, XXIII, 1716
- Problems tectoniques de R' Arb (Macro), sur l'un des*, review, XII, 1172
- Procedure, general, in studies of recent sediments, RMS, 525
- Proceedings of the Florida Academy of Sciences for 1939, XXV, 168
- Processes affecting composition of sea water, RMS, 144
- in natural history of petroleum, PROB, 179
- maintaining vertical circulation, RMS, 89
- now operating in Bahama area, RMS, 290-292
- of accumulation of organic matter in sediments, RMS, 264
- of bacterial action, RMS, 424
- of circulation in ocean, RMS, 55
- of diffusion, RMS, 71
- of erosion, RMS, 26
- of glauconitization, RMS, 503-515
- of momentum transfer in sea, RMS, 71
- of movement of sand in North Sea, RMS, 338
- of oxidation, RMS, 94
- of sedimentation in areas of tidal flats, RMS, 199-203
- of sedimentation on continental shelf, RMS, 227, 242
- of sedimentation on deltas, RMS, 164, 167, 172-174
- of thermal conductivity, RMS, 71
- of transport in sea, RMS, 276-280
- of turbulence in sea, RMS, 74
- of ventilation, RMS, 361-366
- relating to beaches, RMS, 212
- Producers drilled as wildcats in 1937, XXII, 1233
- dilled in southern states in 1940, XXV, 1001
- from holes located on geology or geophysics, greater percentage of, XXII, 648
- Producers and dry holes drilled in southern Arkansas and northern Louisiana in 1939, analysis of, XXIV, 1092
- in 1940, analyses of, XXV, 1027
- Producers and Refiners Company, Wilcox 1 (well 229), SBP, 194-243, 407
- Producers and Refiners Corporation, GAS, 305, 306; XXIII, 913
- Producers and wells in north and west-central Texas fields, XXIV, 1056
- Producers Oil Company, SD, 252, 412, 443, 502, 503, 611, 620, 621, 735, 760, 762; GC, 834; XX, 156
- Producing area, Esperson dome, section, GC, 871-874; XVIII, 1646-1649
- Stephens field, Arkansas, STR II, 12
- Texas Panhandle field, GAS, 402
- Producing areas at Anse la Butte, XXVII, 1142
- eastern Kansas, XXII, 672
- Illinois, distribution of, map, XXIII, 1354
- map of California showing boundaries of, and areas underlain by Eocene sediments, XXIV, 1942
- western Kansas, XXII, 669-675
- Producing areas and geologic structures in north Texas petroleum fields, III, 44
- Producing beds in North Cowden field, north-south cross sections of, XXV, 610, 612
- Producing counties, Texas, GAS, 388
- Producing dolomite in Artesia field, New Mexico, porosity, STR I, 119
- Producing fields, Montana, PROB, 699
- new, discovered during 1938, map of Gulf Coast district showing; and new producing fields, extensions, and new sands on old domes, discovered during 1939, XXIV, 1080
- (Producing)
- of United States, records, XX, 525
- Santa Maria district, California, STR II, 21
- southeastern United States, XXVII, 994
- West Texas, XXVIII, 807; XXIX, 728
- Wyoming, Colorado, and New Mexico, characteristics of, PROB, 729
- Producing formations below McCloskey sand, recent development in Illinois with discussion of, XXIII, 807
- Chapel Hill field, XXVIII, 846
- Colorado, New Mexico, and Utah, GAS, 364
- East Texas, XXIX, 768
- Eastern Interior, geologic age of, XXV, 1116
- Hoffman field, XXIV, 2133
- in Mississippi of Indiana, XXIV, 854
- in oil and gas pools of eastern Kentucky field, GAS, 923
- lithologic character of, XXIII, 1022
- main, of Mississippian in western Kentucky, XXIV, 854
- new, added in Mississippi in 1943, XXVIII, 804
- new, in Illinois in 1944, XXIX, 687
- new, in Illinois oil pools in 1943, XXVIII, 753
- of Hugoton field, relative porosity and permeability of, as indicated by gas withdrawals and pressure decline, XXIV, 1798
- of Pampa and Webb pools in western and eastern Gray County, approximately at equal elevations but not correlative, XXIII, 1005
- Producing formations or zones, pools, and extensions discovered in north and west-central Texas, 1943, XXVIII, 838
- Producing formations, South Baxter Basin, GAS, 326
- West Virginia, GAS, 991
- Producing formations and oil and gas pools, lower Wabash area, Illinois and Indiana, map, XXV, 1117
- Producing gas fields of eastern Kentucky, GAS, 942
- Producing gas sand, Bow Island gas field, GAS, 37
- Producing gas wells in Baxter Basin fields, GAS, 326
- in Hiawatha dome, GAS, 345
- Producing horizon, age of, at Kettleman Hills, California, XV, 839; discussion, XVI, 417, 611
- Producing horizon, age of, Rice County, Kansas, X, 197
- Big Injun sand most widespread, for both oil and gas in Appalachian province, XXII, 1175
- Ordovician age of, Big Lake field, Reagan County, Texas, XIV, 616
- Producing horizons, Amarillo district, GAS, 391
- Bend Arch district, GAS, 627
- Coffeyville field, Kansas, STR I, 49
- cross section of Jesse pool showing position of, XXII, 1575
- Eastern Interior Coal basin, GAS, 821
- Eldorado field, Kansas, STR II, 166
- Esperson dome, GC, 876; XVIII, 1651
- Floyd County gas field, Kentucky, GAS, 942

- (Producing)
 High Island dome, GC, 955; XX, 606
 Iles dome, Colordao, STR II, 99
 Illinois and Michigan, XXI, 787
 Jennings dome, GC, 977; XIX, 1324
 Kansas fields, GAS, 467
 Kansas fields, age of, XXI, 1003
 Laredo district, Texas, STR I, 392; XXI, 1427
 Mexia, Texas, STR I, 307
 Michigan, GAS, 793
 Monroe field, Louisiana, GAS, 757
 Muskegon field, GAS, opp. 794
 Nemaha Mountains region, Kansas, STR I, 61, 72
 Ontario, GAS, 63, 79
 principal, in Illinois oil fields, depths to, XXIII, 813
 Rainbow Bend field, Kansas, STR I, 54
 Rattlesnake Hills, Washington, GAS, 225
 Richland field, GAS, 779
 Rocky Mountain district, PROB, 157, 687, 688, 726
 Tennessee oil fields, STR I, 245
 Tri-County field, Indiana, XIV, 427
 Ventura Avenue field, California, STR II, 32
 Virgil pool, Kansas, STR II, 143
 Wyoming, Colorado, and New Mexico, PROB, 725
 Producing methods at Conroe field, GC, 829
 Producing practice, Schuler field, XXVI, 1515
 Producing rates, optimum, for Arbuckle limestone wells, XXIX, 1783
 Producing sand in Ramsey pool, First Wilcox sand, XXIV, 2002
 main, of Tepetate field, Fourth *Margulinea* or Ortego sand, XXII, 303
 Producing sands. (See Oil sands)
 advantages of chemically treating, XXV, 1043
 Amelia field, XXIII, 1652
 Anse la Butte dome, XXVII, 1141
 Bernstein field, XXVII, 1602
 California, PROB, 739
 Cartersville-Sarepta, XXII, 1493
 Conroe field, GC, 803; XX, 751
 Darrow dome, XXII, 1418
 Driscoll pool, GC, 623; XVII, 819
 eastern Ohio, general structure of, XI, 1023
 Edna gas field, XXV, 115
 Eola field, XXV, 1379
 Fairbanks field, Texas, XXIII, 687
 Government Wells field, GC, 639; XIX, 1139
 Hoh River area, Washington, GAS, 230
 Jackson formation, Laredo district, Texas, XXI, 1428
 of Cotton Valley group, distribution of, XXVIII, 613
 Shongaloo, XXII, 1486
 southeastern Kansas and northeastern Oklahoma, correlation of, V, 293
 Tepetate field, XXII, 303
 uplift in, at Darrow dome, XXII, 1421
 West Columbia field, XXVI, 1451
 West Ranch field, XXVIII, 203
 Wyoming, general character of, XXIV, 1220
 Producing sands and formations encountered at Anse la Butte dome, section, XXVII, 1132, 1134
 Producing sands and structure at South Cotton Lake field, XXV, 1912
 Producing sandstones and limestones of Wyoming and Montana, character of, XVI, 864; discussion, XVII, 268
 Producing strata of Eastern Interior Coal basin, GAS, 824
 Producing structures in Rocky Mountain region, origin of, XXVII, 431
 in Rocky Mountains, types of, XXVII, 435
 Producing wells, Amelia field, difficulties of completion of, XXIII, 1637
 certain, in Dominguez field, Los Angeles County, California, Los Angeles basin earthquake of October 21, 1941, and its effect on, XXVI, 388
 character, in Northern fields, MEX, 167, 171, 173, 175, 190, 197
 character, in Southern fields, MEX, 207, 208, 222
 compared with barren, Los Angeles Basin, SBP, 126-130
 in East Texas during 1940, XXV, 1086
 North Cowden field, methods of, XXV, 629
 Tingley field, XXV, 1021
 variations in depth, MEX, 167
 Producing zone, XXIX, 1742
 in Avoca pool, a fossiliferous, porous limestone in Canyon formation, XXIII, 855
 in Litchfield, Ragle, and Carey pools, Archer and Young counties, Texas, section, STR I, 433
 in Megargel field, Archer County, Texas, section, STR I, 434
 in northeastern Oklahoma fields, XXI, 1006
 lenticular porous, in Lisbon field, XXIII, 281
 main, in Goldsmith field, XXIII, 1530
 Patton, Lisbon field, XXIII, 304
 Producing zone and unexposed Silurian section of Irvine oil field, Estill County, Kentucky, XXII, 1447
 Producing zones, STRAT, 298, 299
 Barco area, Colombia, XXIX, 1124
 Bowers field, XXVII, 29
 California fields, GAS, 185, 187, 201, 203
 Carson County, Texas, a series of parallel bands across northeast corner of county, XXIII, 1011
 Colorado fields, XXVII, 452
 eastern Kentucky, GAS, 916, 933
 from fields of Rocky Mountain region, XXVII, 476
 Halcón-Camalote sector, MEX, 178
 Huntsville field, Alabama, GAS, 873
 important, map of Jesse pool showing, XXII, 1574
 in oil wells at Raccoon Bend field, map, GC, 706; XVII, 1489
 lower, Schuler field, sections, XXVI, 1488
 Montana fields, XXVII, 438
 new, discovered in Colorado in 1944, XXIX, 1597
 new, discovered in Montana in 1944, XXIX, 1597
 new, found in Wyoming in 1944, XXIX, 1598
 (Producing)
 new, in New Mexico in 1943, XXVIII, 821
 new, in oil fields in Rocky Mountain district found in 1940, XXV, 1150
 new, in old pools in Kansas in 1938, XXIII, 799
 new, in old western Kansas pools, XXIII, 806
 New Mexico fields, XXVII, 456
 New York and Pennsylvania, GAS, 960
 northeastern Oklahoma fields, XXI, 1006
 of Mississippi lime, XXII, 1598
 of Montana fields, analyses of waters from, XXVI, 1324, 1335, 1344, 1351, 1353, 1358, 1362
 Ohio, GAS, 898
 possible, in Dakota basin, XXVI, 1581
 Refugio, Texas, exceptional association of oil and water in, GC, 669, XXVIII, 524
 Salem field, XXIII, 1368
 Producing zones, sands, and formations, new, in Wyoming, in 1943, XXVIII, 796
 Producing zones, South Houston salt dome, XXIX, 210
 Sugar Creek field, XXII, 1513
 Tennessee, GAS, 863, 867, 869
 Turner Valley field, XXIV, 1639
 Utah fields, XXVII, 457
 West Virginia, GAS, 990
 Wyoming fields, XXVII, 440-446
 Product price ceilings, XXVII, 987
 Product, Kaibab, XXIV, 624
 Productidae, XXIV, 808
 Production, Agua Nueva formation, MEX, 49
 Alamo, Jardín, Paso Real, and San Isidro, MEX, 223
 Aldrich field, XXIX, 565
 Allegany field, XXIX, 671
 allocation of, in Kansas gas fields, XXIV, 1787
 Amelia field, XXIII, 1656
 annual, of primary mineral fuels in United States, GAS, 1146
 Anse la Butte dome, XXVII, 1127, 1130
 Anse la Butte dome, control of rates of, XXVII, 1154
 Appleby field, XXVIII, 841
 Archer County fields, Texas, STR I, 422, 437; X, 464, 470
 areas of, discovered in western Kansas during 1939, XXIV, 998
 Artesia field, New Mexico, STR I, 121, 122
 Asiatic Russia, XI, 511
 associated with anticlines or domes in Kay County oil fields, Oklahoma, STR I, 161
 at top of Mississippian residual chert in Bornholdt pool, Kansas, XXIV, 1002
 average initial, of oil wells, decline in, XXVII, 956
 Avoca pool, XXIII, 855
 Bahrain Island, XXIII, 964
 Baker-Glendon anticline, FOP, 77; XXV, 1509
 Barbers Hill dome, SD, 540-544; XIV, 735
 Barco Concession, XXIX, 1128
 Barnesville field, Ohio, STR I, 135
 Batson field, Texas, SD, 525, 528; IX, 1281

(Production)

Beekman field, XXVIII, 277
 Bellevue field, Louisiana, STR II, 250, XXII, 1680
 Bellevue field, Nacatoch sand chief source of, XXII, 1660
 Big Lake field, Texas, STR II, 503, 527, 530, 533, 536, 537; X, 366
 Big Sand Draw field, Wyoming, XII, 1139
 Blue Ridge field, SD, 607, 608, 609
 Boggy Creek salt dome, XVI, 598
 Boryslaw field, XVIII, 899
 Bowers field, XXVII, 20
 Bowlegs field, Oklahoma, STR II, 351, 352
 Bradford field, Pennsylvania and New York, STR II, 440; XVIII, 191, 210
 Bromide sand, in Jesse pool, XXII, 1577
 Bryson field, XVI, 184
 Buckeye field, GC, 755, XIX, 399, XXIV, 1980
 Bunker Hill dome, Wyoming, STR II, 653
 Burbank field, Oklahoma, VIII, 588
 Burkett-Seelye pool, Kansas, VII, 487
 Burma fields, XI, 558, 567-569, 571, 573, 574, 576
 by countries, 1903 and 1922, VII, 604
 by gas lift or Reda pump, XXI, 1012
 by pumping, flowing, and gas-lift in southern California, XII, 631
 by states, 1903 and 1922, VII, 605
 Cabin Creek field, West Virginia, STR I, 474
 Cacallao field, MEX, 183
 Caddo field, Louisiana, STR II, 190, 192, 194
 Caddo field, Louisiana, important bearing of faults on amount of, STR II, 186
 California, VII, 117; VIII, 18, 212
 California fields, PROB, 759
 California fields discovered in 1938, XXIII, 935, 937, 939
 California fields in 1939, XXIV, 1113, 1118, 1119
 California fields in 1941, XXVI, 1136
 California in 1943, XXVIII, 744
 Campbell field, XXVIII, 843
 Campton field, Kentucky, STR I, 79
 Canada, XXIII, 965
 Cañon City field, Colorado, STR II, 89
 Cantagallo Concession, XXIX, 1120
 Carterville-Sarepta and Shongaloo fields, XXII, 1487
 Casabe field, XXIX, 1119
 Catahoula Lake field, XXVIII, 273
 Cattaraugus County fields, XXIX, 671
 Celina and vicinity, Tennessee, STR I, 248
 central and western Stevens County, Kansas, largely from Krider dolomite, XXIII, 1060
 central Wilbarger County, Texas, STR I, 293
 Cerritos pool, MEX, 181
 Cerro Azul and Totoco, MEX, 217
 Chapapote-Nuñez-Southern Cerro Viejo, MEX, 220
 Chickasha field, Grady County, Oklahoma, XXIV, 1030
 Clay County gas field, Kentucky, STR I, 82

(Production)

coastal salt-dome oil fields of Texas and Louisiana, XX, 734
 Coffeyville field, Kansas, STR I, 51
 Coke field, Texas, XXVII, 784
 Cole field, Texas, STR I, 400
 Colombia, XXIII, 962, 963; XXIX, 1139
 commonly found on domes and plunging anticlines, XXIV, 969
 comparative, of leading Oklahoma counties, XXVII, 792; XXVIII, 776
 Conroe field, GC, 815, 817; XX, 761, 765
 control of decline by chokes, MEX, 230
 controlled by porosity of reservoir rocks in Owsley County gas field, Kentucky, STR I, 82
 controlled by structure in Chalk Hill field, Texas, XXI, 1023
 controlled crude, in western Europe, XXV, 1274
 Copley pool, West Virginia, STR I, 458, XI, 584, 597
 Cotton Valley field, Louisiana, IX, 883; XXIV, 1099
 Cotton Valley gas-distillate, XXVIII, 261
 Cotton Valley gas-distillate and oil, Macedonia field, XXVIII, 263
 Crescent pool, Oklahoma, XXVII, 798
 Crnnerville anticline, XXVII, 801
 Cromwell field, Oklahoma, STR II, 308, 311
 crude-oil, XXVII, 974
 crude oil at Pechelbronn, Alsace, X, 412
 crude oil, in Illinois, XXIV, 961
 crude-oil, in Indiana in 1942, XXVII, 819
 crude oil, in Mississippi, XXVI, 998
 crude-oil, leading to greatest ultimate recovery, XXV, 1285
 crude-oil, of world, XXIII, 949
 crude-oil, of world and of United States by years, 1875-1935, chart, XXI, 155
 Cuba, XVI, 816
 cumulative, of Nebraska to end of 1942, XXVII, 813
 cumulative, of oil at West Columbia field, XXVI, 1462
 cumulative, of United States, XXVIII, 1491
 cumulative oil, versus reservoir pressure and gas-oil ratio, XXVIII, 230
 Cunningham gas field, Kansas, XXI, 520; XXIV, 1788
 Currie district, Texas, STR I, 358
 Currie field, Texas, STR I, 312, 315, 363
 Cut Bank field, XXIV, 1107
 daily allowable, at Hoffman field, XXIV, 2141
 Damon Mound, SD, 619, 637-641
 Darst Creek field, XVII, 33
 decline-curve method of prediction, X, 747
 decline of, MEX, 231-234
 decline of, in southeastern United States in 1943, XXVIII, 801
 decline of, Lytton Springs field, Texas, X, 972
 decline of, Ranger field, IV, 166
 deep, at Buckeye field, GC, 734; XIX, 378

(Production)

deepest, in West Texas from Ellenburger formation, XXVIII, 818
 Delaware Extension pool, Oklahoma, STR II, 362
 Depew area, Oklahoma, STR II, 376
 Devonian, in Illinois basin, XXIV, 965
 diamond drilling for, VI, 91
 Dixie field, Louisiana, XIV, 761
 Dora pool, Oklahoma, XXIII, 698
 Driscoll pool, GC, 626; XVII, 822
 Dupo and Waterloo fields, XXIII, 821
 early, in Appalachian region, XXII, 429
 East Carroll Parish, Louisiana, XII, 765
 East Oteo pool, XXVIII, 780
 East Texas field, XVII, 780, 783
 East Texas fields, developed in 1938, XXIII, 891-895
 East Watchorn pool, XXVII, 798
 eastern Gulf Coast, Louisiana, XIV, 1381
 Eastern Interior basin, 1943, XXVIII, 751
 eastern Ohio, STR I, 147
 Ebano and Limón field, MEX, 194, 195
 Edgerly field, SD, 476
 effect of interaction of neighboring wells, MEX, 230, 233
 effect on, of increase of porosity by acidizing, XXV, 866
 Egypt during 1938, XXIII, 966
 Eldorado field, Kansas, STR II, 167
 Elk Basin field, Wyoming and Montana, STR II, 584, 587
 Elk Hills field, California, STR II, 58-61
 Elm Ridge field, XXVIII, 275
 Emba salt-dome region, XXIII, 509
 estimated, number of wells, and production per well in East Texas field, by years, 1936-1942, XXII, 641
 European Russia, XI, 503
 explanation of large initial, of wells of Haynesville field, Louisiana, VII, 295
 Fairport field, Kansas, STR I, 41; XXI, 500
 Ferris dome, Wyoming, STR II, 658
 Ferronales pool, MEX, 193
 Fitts pool, XX, 973
 flank, PROB, 388
 flank, at Jennings dome, GC, 981; XIX, 1328
 flank, of Nemaha Mountains (Granite Ridge), Kansas, STR I, 60
 Florence field, Colorado, STR II, 81, 89
 Fort Norman in Mackenzie River district, FOP, 20; XXV, 1452
 Frio, XXIV, 1071
 from Argo sand, Hoffman field, Duval County, Texas, XXIV, 2137, 2138
 from Atoka formation in Jesse pool, XXII, 1577
 from Bend limestone in Hamilton County, Texas, XXI, 1022
 from cap rock at High Island dome, GC, 955; XX, 606
 from Carolina-Texas sand at Laredo district, Texas, STR I, 393
 from Cincinnati group in Kentucky and Tennessee, XXII, 1534
 from Cisco sands controlled largely by structure, XXI, 1022

(Production)

- from Clear Fork beds, XXIX, 747
- from countries surrounding Persian Gulf, XXVIII, 1497
- from Devonian-Silurian limestone in Collinsville field, Illinois, XXIII, 820
- from Ellenburger dolomite in Archer County, Texas, XXV, 1067
- from Ellenburger wells in Pecos County, Texas, XXIV, 1037
- from fissures in Pierre shale at Florence-Canon City field, Colorado, XXI, 1246
- from flank belts at Darrow dome, XXII, 1422
- from formations below McClosky, map of areas of, in Illinois, XXIII, 814
- from French fields, XVI, 1093, 1101, 1102, 1109, 1112, 1122, 1123, 1131, 1136
- from Frio sand in South China area, XXIV, 1087
- from Gilcrease sand in Jesse pool, XXII, 1578
- from Government Wells sand, Hoffman field, Duval County, Texas, XXIV, 2135, 2136
- from Grayburg formation, XXIX, 745
- from *Heterostegina* zone in West Ranch field, Jackson County, Texas, XXIV, 1071
- from Hunton limestone in Jesse pool, XXII, 1577
- from igneous rocks, XVI, 720
- from individual wells, MEX, 181, 219, 231-236
- from Judith River sand of Upper Cretaceous at Baker-Glendive anticline, XXIII, 462
- from Lansing-Kansas City limestone, XXIV, 1002
- from lenticular Strawn sands in Anderson and Kerr field, Cooke County, Texas, XXI, 1024
- from Lower Cretaceous limestones in Mexican fields, XXVIII, 315
- from McClosky oolitic limestone of St. Genevieve, Illinois, XXII, 73
- from Miocene in Santa Maria Valley oil field, XXIII, 61
- from Mississippian limestone pools in Scott and Morgan counties, Tennessee, XXVII, 853
- from north-central Texas controlled by structural and stratigraphic traps, XXI, 1019
- from oil shale, XXI, 1264
- from Oriskany sand in New York in 1941, XXVI, 1114
- from Paluxy sand at Sulphur Bluff field, XXI, 1065
- from Petrolea anticline, XXIX, 1125
- from Red sand of upper Queen formation in Caprock pool, XXV, 1062
- from Repetto (Lower Pliocene) formation at Wilmington oil field, XXII, 1049
- from Rocky Mountain structures mostly from sands which wedge out, XXVII, 905
- from Salem formation in Jacksonville gas field in Morgan County, Illinois, XXIV, 232
- from Salem formation in Westfield pool of Clark County, Illinois, XXIV, 232

(Production)

- from San Andres formation, XXIX, 746
- from Senora sand, XXI, 1009
- from Simpson formation at Pitts pool, XXI, 1009
- from Simpson limestones in Best pool, XXIV, 1052
- from Smackover limestone in Arkansas in 1939, XXIV, 1027
- from Smithwick sand, XXI, 1022
- from Tensleep sandstone, Wyoming, XXI, 1247
- future, Bellevue field, Louisiana, STR II, 247, 251
- future, Driscoll pool, GC, 627, 629; XVII, 823, 825
- future, Government Wells field, GC, 646; XIX, 1146, 1147
- future, Homer field, Louisiana, STR II, 226, 228
- future, Little Lost Soldier dome, Wyoming, STR II, 650
- future, New York oil fields, STR II, 289
- future, of oil and gas from southern Arkansas and northern Louisiana likely to be obtained chiefly from Cotton Valley formation and Smackover limestone, XXIII, 902
- future, Pine Island field, Louisiana, STR II, 182
- future, Rock River field, Wyoming, STR II, 622
- future, South Dayton dome, Texas, IX, 665
- future, Stephens field, Arkansas, STR II, 17
- future, the petroleum production engineer and his relation to, IV, 137
- Garber field, Oklahoma, STR I, 177
- Garrucho and Menudillo pools, MEX, 185
- gas, Cushing field, Oklahoma, STR II, 397
- gas, Ferris dome, Wyoming, STR II, 658
- gas, for 1943 in California, XXVIII, 744
- gas, from deep zone, Big Lake field, Texas, STR II, 537
- gas, Grapeland field, XXI, 1066
- gas, Griffithsfield field, West Virginia, STR II, 573
- gas, Hiawatha dome, Colorado and Wyoming, STR II, 113
- gas, in Michigan in 1940, XXV, 1128
- gas, in Ohio in 1941, XXVI, 1124
- gas, Mahoney dome, Wyoming, STR II, 655
- gas, Osage County field, Oklahoma, STR II, 392
- gas, Sabinsville pool, XXII, 257
- gas, Wertz dome, Wyoming, STR II, 653
- gas fields of Daszawa district, XVIII, 902
- Gebo field, XXVIII, 796
- German oil fields, XII, 476; XVI, 1147, 1151
- Germany during 1938, XXIII, 965
- Glenn pool, Oklahoma, STR I, 237
- Golden Lanes, Kansas, independent of structure, XI, 1170
- Goose Creek field, Texas, SD, 550, 555; IX, 290, 295
- Government Wells field, Texas, XIX, 1147
- Graham field, Oklahoma, VIII, 595, 613

(Production)

- Grand Lake field, XXIV, 1087
- Granny's Creek pool, West Virginia, STR II, 576
- Grapeland field, XXVII, 786
- Greasewood pool, Colorado, XVII, 435
- Greenwich pool, XXIII, 652
- Greta field, GC, 661, 662; XIX, 557, 558
- Griffithsfield field, West Virginia, STR II, 571
- Groesbeck fields, Texas, STR I, 362
- Hackberry, Louisiana, XV, 252
- Hawkins field, XXVII, 787
- heaviest, 1936, in south Texas, in Jackson trend and Coastal zone, XXI, 1047
- Helm field, XXVI, 1144
- Henderson field, XXVIII, 843
- Hendrick field, XIV, 923
- Henne-Winch-Farris field, Texas, STR I, 403
- Hewitt field, Oklahoma, STR II, 299
- Hickory Grove pool, XXVII, 799
- High Island dome, GC, 913; XX, 564
- Hobart pool, XXIV, 1022
- Hoffman field, Duval County, Texas, XXIV, 2132, 2141
- Homer field, Louisiana, STR II, 198, 210, 223, 226-228
- Homer field, Louisiana, STR II, 198, 210, 223, 226-228
- Homer field, Louisiana, possibilities of deeper, STR II, 223
- Hoskins Mound, GC, 855; XX, 177
- Hungary in 1937, XXIII, 966
- Huntington Beach field, California, VIII, 16, 45
- Huntington-Pittsburgh syncline, XXV, 797
- Illinois fields, XXII, 653
- in barrels and number of wells in Wilmington oil field, curves showing, XXII, 1075-1077
- in barrels, of three projects before and after repressuring, XXII, 198
- in Clinton sand, Chippewa storage pool showing limits of, XXVIII, 1572
- in fissured and fractured zones, MEX, 176
- in five oil and gas fields of Kentucky eastern coal field, relation of structure to, XI, 477
- in Gantz sand, Fink storage pool showing limits of, XXVIII, 1570
- in lateral sands in West Columbia field, Texas, STR II, 466
- in lower Mississippian below McCloskey in Illinois, XXIII, 815
- in Mississippian limestone at Greenwich pool, XXIII, 644, 647
- in relation to war needs, XXV, 1266
- increase of, by segregation of two productive zones in one well, XXV, 1043
- increased by flooding, IX, 801
- increased near faults, STR II, 688
- Indiana in 1941, XXVI, 1093
- Indiana in 1942, XXVII, 819
- Indiana in 1943, XXVIII, 751, 758
- Ingomar gas field, XXVIII, 792
- initial, from Wilcox sand, XXIV, 1919
- initial, relation of, to ultimate production of wells completed in Smithwick (Gray) limestone, Breckenridge field, Stephens County, Texas, XXV, 1589

(Production)

Iran fields, XXVIII, 919
 Iraq, XXIII, 962; XXVIII, 919
 Irma field, Arkansas, STR I, 15
 Isleta pool, MEX, 177
 Jacalitos field, XXVI, 1145
 Jennings field, SD, 414, 416; X, 87, 88, 90; XIX, 1309
 Jesse pool, XXII, 1578
 Kansas, XXIII, 797
 Kansas, in 1941, XXVI, 1075
 Kansas, in 1942, XXVII, 807
 Kansas, in 1943, XXVIII, 768
 Kansas, in 1944, XXIX, 702
 Kansas gas pools, XXIV, 1796
 Kay County fields, Oklahoma, STR I, 158, 161
 Kentucky in 1940, XXV, 1123
 Kentucky in 1941, XXVI, 1095
 Kentucky in 1942, XXVII, 820
 Kentucky in 1943, XXVIII, 751
 Kentucky in 1944, XXIX, 691
 Keokuk pool, XXIII, 244
 Kevin-Sunburst field, Montana, STR II, 266, 267; XXII, 688
 KMA pool in 1943, XXVIII, 835
 Krosno region, Poland, XV, 20
 La Dicha, Laguna-La Pez and Limón, MEX, 195
 Laredo district, Texas, STR I, 390; XXI, 1423
 Lee-Estill-Powell field, Kentucky, STR I, 79
 Lisbon field, XXIII, 319, 322
 Little Lost Soldier dome, Wyoming, STR II, 649, 650
 Long Beach field, California, STR II, 66, 73, 74; PROB, 749; VIII, 418, 420, 423
 Long Lake field, XXVII, 787
 Los Angeles Basin, California, X, 767
 Luling field, Texas, STR I, 280; IX, 652
 Lytton Springs field, Texas, X, 965
 Manzfield field, XXVIII, 844
 Marginal zone, Poland, XV, 27
 Mata de Chapapote, MEX, 184
 Mexia and Groesbeck district, Texas, STR I, 357
 Mexia field, Texas, STR I, 311, 361
 Mexico, in 1934, MEX, 173, 208, 213, 216, 220, 224
 Mexico, total to end of 1934, MEX, 173, 183, 191, 195, 201, 215, 217, 219, 223, 224
 Michigan fields, XXV, 1130
 Michigan fields, in 1939, XXIV, 976
 Michigan fields, in 1942, XXVII, 828-832
 Middle Ferris dome, Wyoming, STR II, 659
 Miocene, in California in 1940, XXV, 1163
 Mississippi, in 1944, XXIX, 833
 Moffat dome, Colorado, STR II, 103
 Molino, MEX, 223
 Morrison field, Oklahoma, STR I, 152, 157; XI, 1096
 Muskegon field, Michigan, XVI, 166
 Navarro Crossing field, XXVII, 787
 Netherlands East Indies, XXIII, 960
 new areas of, discovered in Kansas in 1940, XXV, 1108
 new areas of, discovered in western Kansas in 1941, XXVI, 1080
 New Harmony field, areas of, XXVI, 1604, 1605
 New Hope field, XXVIII, 844; XXIX, 773

(Production)

New Mexico in San Juan Basin, XXI, 999
 New York oil fields, STR II, 285, 286
 Nigger Creek and Cedar Creek fields, Texas STR I, 324, 361, 420
 north and west-central Texas in 1943, XXVIII, 835
 north and west-central Texas, in 1944, XXIX, 762
 North Amatlán, MEX, 213
 North Chinampa, MEX, 212
 North Cowden field, XXV, 595, 619
 North Currie district, Texas, STR I, 317, 358, 363
 North Louisiana and South Arkansas, XXVI, 1250
 north Louisiana in 1937, XXII, 719
 north-central Texas, from Pennsylvanian, XXI, 1019
 Northeast Coalina field, XXIV, 1113
 Northern fields, MEX, 173
 Oak Canyon field, XXVI, 1142
 of Barco area largely from Cretaceous, XXIX, 1135
 of coal in United States, GAS, 1140
 of commercial gases in United States, GAS, 1139
 of crude oil and casinghead gasoline in East Indies, XXVIII, 1441
 of crude oil from Gulf Coast in 1935, GC, xii
 of crude petroleum, Russian, XXV, 370
 of crude petroleum, United States, XXI, 164
 of gas (See Production, gas)
 of gas, Alberta fields, GAS, 5, 20, 23, 32, 35, 39, 46-49, 57
 of gas, Arkansas Valley fields, GAS, 517, 522, 528, 566, 573
 of gas, associated with anticlinal structure, GAS, 236
 of gas, Baxter Basin, Wyoming, GAS, 326
 of gas, Bend Arch fields, GAS, 618, 642
 of gas, Big Horn Basin gas fields, GAS, 291
 of gas, Big Lake field, GAS, 438
 of gas, California, GAS, 123, 131, 136, 139, 143, 147, 152, 166, 169, 177, 180, 183, 188, 191, 195, 197-199, 204, 206, 207, 209, 213, 215, 771
 of gas, cumulative, GAS, 1022
 of gas, Eastern Interior Coal basin, GAS, 819, 836
 of gas, Fayette gas field, Alabama, GAS, 856
 of gas, five leading states, GAS, 771
 of gas from Glen Rose, in northeast Texas, XIV, 1477
 of gas from Pettit zone at South Groesbeck field, XXIV, 1067
 of gas, Great Salt Lake area, GAS, 240
 of gas, Gulf Coast fields, GAS, 703, 709, 710, 717-719, 723, 727, 729, 730
 of gas, Hebron field, XX, 1025
 of gas, Hiawatha fields, Colorado and Wyoming, GAS, 344, 371
 of gas, Illinois fields, GAS, 815, 816, 837
 of gas, Indiana fields, GAS, 837, 851
 of gas, interior highlands of Arkansas, GAS, 539, 560, 562-571
 of gas, Iowa fields, GAS, 732

(Production)

of gas, Jackson field, Mississippi, GAS, 893, 894
 of gas, Kansas fields, GAS, 477-479, 485, 504, 505
 of gas, Kentucky fields, GAS, 837
 of gas, Lost Soldier district, Wyoming, GAS, 312, 313, 315, 318
 of gas, Louisiana, GAS, 754, 766, 770, 771, 782, 784, 786
 of gas, Maljamar field, GAS, 438
 of gas, Mansfield area, GAS, 568
 of gas, Maritime Provinces, GAS, 106
 of gas, Massard Prairie field, GAS, 567
 of gas, Mexican fields, GAS, 1005, 1008
 of gas, Michigan fields, GAS, 802, 803, 805, 807
 of gas, Middle Ferris, GAS, 318
 of gas, Mirando sand, Cole field, Texas, STR I, 402
 of gas, Monroe field, Louisiana, VII, 570
 of gas, Montana fields, GAS, 256, 257, 261, 264, 270, 271, 275, 276
 of gas, New Mexico, GAS, 379, 429, 430, 433, 438
 of gas, northeast Texas, GAS, 677
 of gas, Ohio, GAS, 851, 908, 914
 of gas, Oklahoma, GAS, 771
 of gas, Ontario fields, GAS, 82-84
 of gas, Paleozoic and basal Mesozoic, GAS, 17
 of gas, Payette-Weiser area of Idaho, GAS, 236
 of gas, Pennsylvania, GAS, 972
 of gas, Poland, XVIII, 900, 905
 of gas, Raccoon Bend field, GC, 707; XVII, 1490
 of gas, Rattlesnake Hills, Washington, GAS, 229
 of gas, Russia, XVIII, 747
 of gas, South Baxter Basin gas field, GAS, 332
 of gas, southern Cincinnati Arch region, GAS, 856
 of gas, southern Oklahoma fields, GAS, 590, 599, 600
 of gas, Texas, GAS, 669, 771
 of gas, Texas Panhandle field, GAS, 400, 404; X, 743
 of gas, ultimate, GAS, 1102
 of gas, Viking field, GAS, 57
 of gas, West Texas fields, GAS, 405, 412, 414, 418, 449-452, 454, 456, 457
 of gas, West Virginia, GAS, 771
 of gas and oil, Carterville-Sarepta field, XXII, 1499
 of gas and oil, Crinerville field, Oklahoma, STR I, 210
 of gas and oil, North Cowden field, XXV, 607
 of light oil, MEX, 202
 of natural gas and natural-gas gasoline in Illinois, Indiana and Kentucky, GAS, 819
 of natural gas in New York state, XXII, 87
 of natural-gas gasoline, GAS, 1122
 of new wells in Kansas, decline in 1942, XXVII, 806
 of North American Continent largely from Paleozoic rocks, XX, 1476
 of oil, XXI, 150
 of oil, Carterville area, governed by porosity, XXII, 1496
 of oil, Darrow dome, XXII, 1422
 of oil, East White Point field, XXV,

(Production)

- 1973
 of oil, Eastern Interior basin in 1941, XXVI, 1086
 of oil from General Petroleum sand in General Petroleum field, Wyoming, STR II, 660
 of oil, gas, and water from wells, analytical principles of, review, XIII, 861
 of oil, Hobbs field, XVI, 54
 of oil, Illinois, in 1942, estimated by geological systems, XXVII, 819
 of oil, in barrels, in Rocky Mountain region, XXIX, 1593
 of oil, Illinois, increase in, from March 1, 1938, to March 1, 1939, XXIII, 807
 of oil, Indiana, in 1944, XXIX, 691
 of oil, Japan, XVIII, 924
 of oil, Jennings field, GC, 962
 of oil, Jesse pool, XXII, 1573
 of oil, Kentucky, in 1944, XXIX, 682
 of oil, Michigan, in 1939, XXIV, 1952
 of oil, New Mexico, in 1939, XXIV, 1040
 of oil, North Shensi, XXV, 2061
 of oil, north-central and west-central Texas district, XXIII, 859; XXIV, 1061
 of oil, Ohio in 1941, XXVI, 1123
 of oil, Oklahoma, in 1938, XXIII, 823
 of oil, Oklahoma, in 1939, XXIV, 1012
 of oil, Oklahoma, in 1940, XXV, 1091
 of oil, Oklahoma and Kansas, relation of nitrogen-reduction ratio to, XXI, 1396
 of oil, Peru, XII, 37
 of oil, Pickets field, Mississippi, 1940, XXV, 1019
 of oil, Raccoon Bend field, GC, 707; XVII, 1490
 of oil, Refugio field, Texas, XXII, 1214
 of oil, relation to structure, STR II, 129
 of oil, Richland district, Texas, STR I, 319, 361, 365
 of oil, Rocky Mountain district, in 1938, 1939, and 1940, XXV, 1158
 of oil, Rocky Mountain region, table, XXIV, 1111
 of oil, Santa Maria Valley oil field, relation to thickness and lithologic character of Monterey formation, XXIII, 69
 of oil, south Texas since 1922, XXIV, 1074
 of oil, texture of oil sands with relation to, VIII, 716
 of oil, Tinsley field, 1940, XXV, 1019
 of oil, world records in, XII, 549
 of oil and gas, Bradford field, Pennsylvania and New York, STR II, 436
 of oil and gas, Clay Creek dome, GC, 865; XX, 76
 of oil and gas, Crinerville field, Oklahoma, XI, 1085
 of oil and gas, 1859-1910, chart, PROB, 14
 of oil and gas, Elk Basin field, Wyoming and Montana, STR II, 587
 of oil and gas, Illinois, XXIV, 853
 of oil and gas, in Smackover limestone in Arkansas, Texas, and Louisiana, XXI, 1068

(Production)

- of oil and gas, Jamin action—what it is, and how it affects, XII, 659
 of oil and gas, Lance Creek field, Wyoming, STR II, 612
 of oil and gas, Sand Hills area, Texas, XXIV, 127
 of oil and gas condensate, from Wilcox sand at Pinehurst, XXVIII, 855
 of oil, and number of producing wells in Centralia, Beecher City-Louden, Lake Centralia-Salem, and Central City fields, Illinois, chart showing, XXIII, 809
 of oil fields of Gulf Coast area, stratigraphic distribution of, XIV, 1386
 of petroleum in Germany, XVI, 1144
 of petroleum in Spindletop field, XXI, 490
 of reservoir, engineering principles in, XXII, 1442
 of salt from Jefferson Island dome, GC, 990; XIX, 1609
 of six leading counties of Oklahoma, in 1944, XXIX, 709
 of sodium sulphate, XXV, 160
 of sodium sulphate in southwestern states, XXV, 159
 of sulphur at Hoskins Mound dome, GC, 835; XX, 157
 of sulphur at Jefferson Island dome, GC, 1021; XIX, 1640
 of synthetic fuels by Axis powers, XXVIII, 1499
 Ohio wells, XXVII, 847
 Ohio wells in 1941, XXVI, 1126
 oil fields of Rocky Mountain region, XXVII, 1327
 Okha, Sakhalin Island, X, 1169
 Oklahoma, graph showing relation of, to national production, 1930-1943, XXVIII, 775
 Oklahoma, in 1941, XXVI, 1058
 Oklahoma, in 1942, XXVII, 791
 Oklahoma, in 1943, decrease in, XXVIII, 774
 Oklahoma City field, XIV, 1524; XVI, 991, 993, 999
 Olympic pool, XXII, 1585
 on anticlinal structures, PROB, 388
 on flank of anticline, MEX, 180, 183, 194
 on Rock Crossing structure, XXI, 1024
 Oplin area, Texas, XXIII, 857
 Orange field, GC, 886; XX, 537
 Oriskany, New York state, 1942, XXVII, 836
 Oriskany sand, in Kanawha County, West Virginia, XXII, 1160
 Osage County, Oklahoma, STR II, 389; VI, 464
 Paciencia y Aguacate, MEX, 180
 Palangana pool, MEX, 180
 Pánuco district, Mexico, X, 690
 Pánuco field, MEX, 4, 178
 Payton pool, XXVI, 1643
 peak, of Lisbon field, XXIII, 324
 peak, reached soon after discovery, XXVII, 956
 Pecos, Crockett, Upton, and Crane counties, Texas, 1940, XXV, 1049
 Pennsylvania, 1942, XXVII, 842
 per flowing well in Texas (exclusive of East Texas), by years, 1936-1942, XXII, 642
 Peru, XXIII, 963
 Petaluma area, XXVI, 1143

(Production)

- petroleum, XXI, 811
 petroleum, and supply, XX, 1
 Piedras Pintas dome, SD, 758
 Pine Island field, Louisiana, STR II, 180, 181
 Pine Prairie dome, Louisiana, SD, 435; IX, 754
 Pleasant Valley field, XXVIII, 745
 Poland, XVI, 1083
 pools on east flank of Cacahiao-Chapacao anticline, MEX, 185
 potential, Kansas, XXIV, 995
 potential gas, Page field, XXV, 631
 Potrero del Llano field, MEX, 4, 219
 Powell and Corsicana district, Texas, STR I, 358
 Powell field, Texas, STR I, 319, 364
 Quebracha field, MEX, 197, 201
 Raccoon Bend field, GC, 705; XVII, 1488
 Rainbow Bend field, Kansas, STR I, 56, 57; IX, 978
 Rainbow Bend field, relation to structure, STR I, 56
 Raisin City field, XXVI, 1143
 Ramsey pool, XXIV, 2004
 ratio of, to known reserves, XXVIII, 1486
 Rattlesnake Hills gas field, XVIII, 855
 relation of drainage area to, STR II, 705
 relation of drainage area to structure in Martinsville field, Illinois, STR II, 137
 relation of pressure drop to, Jones sand, Schuler field, XXVI, 1503
 relation to faulting, PROB, 527
 relation to stratigraphy and structure at Schuler field, XXVI, 1511
 relation to structural bulge caused by settling over sand body at Washburn College pool, XXII, 826
 relation to structure in five oil and gas fields of the Kentucky eastern coal field, STR I, 73
 relation to structure and stratigraphy at Oklahoma City field, XVI, 1019
 Richland gas field, Louisiana, XV, 950
 Rio Vista and McDonald gas fields, XXIV, 1948
 Robberson field, Oklahoma, VII, 636
 Rock River field, Wyoming, STR II, 621
 Rocky Mountain region, XXI, 998
 Rogers pool, Montague County, Texas, XXIV, 1050
 Roumanian fields, XVIII, 889; XXIII, 961
 Saginaw field, Michigan, STR I, 106; XI, 960
 Sakhalin, XXV, 357
 Salt Creek field, Wyoming, STR II, 597
 Salt Flat field, XIV, 1421
 Samarinda oil fields of lower Mahakam River Basin, Borneo, XXVIII, 1448
 San Felipe sector, MEX, 175
 San Manuel fault zone, Pánuco field, MEX, 176
 Santa Fe Springs field, California, VIII, 10, 145, 178, 187, 188
 Santa Maria field, XXII, 50
 Saratoga field, SD, 503, 504, 519-IX, 265, 280
 Satsuma field, Texas, XXIII, 688

(Production)

Saudi Arabia, XXIII, 964
 Saudi Arabia and Bahrain, XXVIII, 919
 Saxet field, XXIV, 1832, 1833
 Saxet field, effect of faulting on, XXIV, 1830
 Sayre field, VIII, 347
 Scenery Hill gas field, Pennsylvania, STR II, 449
 Schott-Aviator field, Texas, STR I, 406
 Schuler field, XXVI, 1499
 Seminole district, Oklahoma, STR II, 318, 319; XI, 1106
 shallow, at Brenham dome, GC, 781; XIX, 1331
 Shensi, China, X, 1109
 shut-in, California, XX, 947
 Signal Hill field, California, VIII, 14
 significance of initial daily, of wells in Burbank and South Burbank oil fields, Oklahoma, XXV, 1175
 Smackover limestone gas-distillate, Macedonia field, XXVIII, 263
 Smith-Ellis field, Texas, STR II, 558, 567, 568
 sour-gas, in Texas Panhandle, XXI, 1033
 South Alamo, Buena Vista, and San Manuel pools, MEX, 178
 south Arkansas and north Louisiana, XXVIII, 257
 South Burbank pool, Oklahoma, XXI, 561, 566
 South Chinampa, MEX, 213
 South Cotton Lake field, Texas, XXV, 1905
 South Houston field, XXIX, 210
 South Mountain field, California, VIII, 811
 South Texas, in 1940, XXV, 1041
 south Texas in 1941, XXVI, 1005
 South Texas in 1942, XXVII, 746
 South Texas in 1943, XXVIII, 859
 South Texas pool, XXIX, 782
 South Vernon pool, Texas, STR I, 301
 southeast Stroud pool, XXVIII, 782
 southeastern Illinois field, XXI, 782
 southeastern New Mexico, XXVI, 1035
 southeastern United States in 1941, XXVI, 997
 Southern Amatlán, MEX, 214
 southern Arkansas in 1939, XXIV, 1092
 southern Arkansas and northern Louisiana in 1940, XXV, 1024
 southern fields, MEX, 107, 208
 Spindletop dome, IX, 609
 Spindletop field, SD, 493
 Spurrier-Riverton field, Tennessee, STR I, 250
 Stephens County, Texas, STR II, 470
 Stephens field, Arkansas, STR II, 2, 12, 15, 17
 stratigraphic distribution of Gulf coastal salt-dome, GAS, 697
 Sugarland field, GC, 731, 733; XVII, 1384, 1386
 Sundance, XXI, 764
 sweet-gas, in Texas Panhandle, XXI, 1033
 Sweetwater, Carbon, Albany, Natrona, and Niobrara counties, Wyoming, XXI, 764
 synclinal, at Scenery Hill gas field, Pennsylvania, STR II, 447

(Production)

Table Mesa field, XIII, 137
 Talco field, XXVII, 788
 Tamboyoche, on flank of structure, MEX, 180
 Tancoco pool, MEX, 187-189, 191, 235
 Tanhujo from Oligocene sands, MEX, 226
 Tatum pool, XIX, 409
 Temple field, Michigan, XXIV, 981
 Tennessee east of Cincinnati arch in 1943, XXVIII, 742
 Tepetate, MEX, 212
 Texas and Louisiana salt-dome oil fields, GC, 117
 Texas Panhandle, X, 744; XIX, 1091
 Texas Panhandle, 1944, XXIX, 721
 Texas Serpentine fields, XVI, 765
 Thomas field, Oklahoma, X, 644, 646
 through tubing, theory of, XXII, 1243
 Tierra Amarilla field, MEX, 224
 Tierra Blanca-Chapapcte Nufez-Southern Cerro Viejo, MEX, 219
 Tierritas Blancas pool, MEX, 173, 174
 Tierritas Blancas pool, compared with Tancoco, MEX, 190
 Tinsley field, Mississippi, XXIV, 1027
 Tinsleys Bottom field, Tennessee, STR I, 248
 Tonkawa field, Oklahoma, VIII, 283, 298; X, 891
 Topila and Tamboyoche area, MEX, 181
 total, in South Texas in 1943, XXVIII, 861
 Toteco and Cerro Azul, MEX, 217
 Tow Creek anticline, Colorado, STR II, 108
 Tri-County field, Indiana, STR I, 30
 Trinidad, in 1938, XXIII, 963
 Trimity, in Arkansas, Texas, and Louisiana, XXI, 1068
 Tupungato oil field, XXVIII, 1455
 Turkey Mountain pools, Oklahoma, STR I, 219
 Turnbull Canyon field, XXVI, 1145
 Turner Valley, XI, 257; XXVI, 327
 Union Avenue oil field, XXVI, 1141
 U.S.R., upward trend of, XXVIII, 1493
 United States, III, 29; IV, 137
 United States, decline of, in 1942, XXVII, 790
 United States, in 1929, XIX, 493
 Urania field, Louisiana, STR I, 102-104
 Vacuum field and Lovington field, from porous dolomite in San Andres group, XXIV, 34
 Van field, XXVII, 788
 Venezuela, XIII, 1199; XXIII, 958, 959; XXV, 370
 Ventura Avenue field, California, STR II, 32, 37, 40-43; VIII, 829
 Vernalis gas field, XXVI, 1141
 vertical relief of, on structure, STR II, 674
 Vinton salt dome, Louisiana, XII, 392
 Virgil pool, Kansas, STR II, 142, 143
 voluntary restriction in rate of, at Keokuk pool, XXIII, 237
 Voshell field, XVII, 190
 Wasco field, XXIII, 935
 Watson field, XXVII, 772
 Wayne County, Illinois, from Mc-

(Production)

Closky sand in top of St. Genevieve of Mississippian, XXII, 74
 Welsh field, SD, 438, 449, 451
 Wertz dome, Wyoming, STR II, 652
 West Columbia field, Texas, STR II, 467, 469
 West Ranch field, XXVIII, 208, 215
 West Texas and southeastern New Mexico, 1940, XXV, 1046
 West Texas and southeastern New Mexico, 1944, XXIX, 732
 Westbrook field, Texas, STR I, 289; XI, 473
 western Kentucky, XXIV, 969
 Wheeler Ridge field, California, X, 499
 Wilbarger County, Texas, STR I, 299, 301
 Wilbarger County, Texas, relation to structure, STR I, 296
 Willow Springs field, XXVII, 788
 Wilmington oil field, XXII, 1053, 1078
 world cumulative, by years, XXVIII, 1494
 world oil, relation of, to consuming centers, XXV, 354
 world's crude-oil, in 1935, by countries and areas, XXI, 153
 Wortham district, Texas, STR I, 321, 361, 366
 Wyoming, Sundance belt of, XXI, 767
 Yates dome, XIII, 1548
 yearly, in northern Louisiana, showing discovery of various pools, XXV, 1026
 yearly, in southern Arkansas, showing discovery of various pools, XXV, 1025
 Zacamitle, MEX, 215
 zones of, in Del Valle oil field, XXVI, 193
 Production and consumption, California, VIII, 19
 of metered natural gas in United States, GAS, 1099
 Production and decline of Ranger oil field, IV, 221
 of shale-gas wells, XIII, 379
 Production and development, Amelia field, XXIII, 1657
 Archer County field, Texas, X, 474
 Coastal Louisiana, XXVII, 737
 East Texas district, XX, 975
 Production and development data, XXV, 622
 Production and development statistics on Coastal Texas, XXVII, 734
 Production and drilling, XXIV, 1055
 in north-central Texas during 1938, XXIII, 857
 Tupungato field, XXVIII, 1481
 Production and drilling methods at Elk Hills field, California, STR II, 57
 at La Rosa field, XXV, 317
 Production and drilling practices at Goldsmith field, XXIII, 1543
 Production and drilling statistics, north central Texas, XXI, 1024
 Texas Panhandle, XXI, 1031
 West Texas and southeastern New Mexico, XXIII, 838
 Production and reserves, petroleum, in United States, chart showing trends in, XXVII, 888
 Production and structure, certain relations between, in northern Osage County, Oklahoma, VI, 464

(Production)

- relation between, in Pine Island field, Louisiana, STR II, 180
- relation between, in Sallyards field, Kansas, V, 276
- Production and supply, petroleum, XX, 1
- Production and well data for East Texas field for 1936-1937, XXII, 640
- for Texas (excluding East Texas field) for 1936-1937, XXII, 640
- Production changes in California fields, XII, 653
- Production chart, Burbank field, Oklahoma, STR I, 222
- Production contour map of Cromwell field, Oklahoma, STR II, 310
- Production cost in California, XXVII, 865
- Production curve, Bellevue field, Louisiana, STR II, 250
- Crinerville field, Oklahoma, STR I, 209
- Fairport field, Kansas, STR I, 42
- Hewitt field, Oklahoma, STR II, 298
- Kynard lease, Westbrook field, Texas, STR I, 290
- Orange field, GC, 900; XX, 551
- typical Bradford sand property, Bradford field, Pennsylvania and New York, STR II, 440
- Urania field, Louisiana, STR I, 104
- Ventura Avenue field, California, STR II, 38; XII, 739
- Production curves, accumulated, gas-oil ratio, bottom-hole pressure, and number of wells, Goldsmith field, for period of May, 1935, to June, 1938, XXIII, 1549
- Barbers Hill, Texas, IX, 970
- Blue Ridge fields, IX, 312
- Cromwell field, Oklahoma, STR II, 312
- Damon Mound, Texas, IX, 530
- deep zone, in Big Lake field, Texas, STR II, 534
- Edgerly field, IX, 503
- estimation of underground oil reserves by oil-well, review, IX, 361
- Long Beach field, California, STR II, 69
- Luling field, Texas, 281
- Nemaha Mountains region, Kansas, STR I, 71; XI, 930
- Osage County field, Oklahoma, STR II, 391, 393, 394
- Pine Island field, Louisiana, STR II, 180
- value of, GAS, 123
- Welsh field, Louisiana, IX, 475, 476
- West Columbia oil field and Japhet lease, Texas, STR II, 468
- Production data, XXVIII, 1482
- Basin fields, Illinois, July, 1939, XXIII, 1496
- Big Horn Basin gas fields, GAS, 291
- Elk Hills field, California, STR II, 57
- Eola field, XXV, 1391, 1392
- Esperson dome, GC, 878; XVIII, 1653
- for Mississippian limestone, Greenwich pool, XXIII, 658
- for oil and gas pools in the Mexia fault zones, Texas, STR I, 357
- for pay sands below Woodbine formation in oil and gas fields of Mexia and Tehuacana fault zones, Texas, STR I, 367

(Production)

- for pay sands within Woodbine formation in Mexia field, Texas, STR I, 361
- for Viola limestone, Greenwich pool, XXIII, 659
- Porter field, XXVIII, 195
- Salem field, XXIII, 1371
- Production data and reserves in California, XXIV, 1717
- Production decline curve, Artesia field, New Mexico, STR I, 122
- Bradford field, Pennsylvania and New York, STR II, 441
- Homer field, Louisiana, STR II, 227
- South Vernon field, Wilbarger County, Texas, STR I, 302
- Stephens field, Arkansas, STR II, 16
- West Columbia field, XXVI, 1455
- Production department, cooperation of geologist with, XXII, 520
- Production division of natural gas industry, functions of, GAS, 1104
- Production engineer, petroleum, and his relation to future production, IV, 137
- Production figures for Rocky Mountain region, by states, for years 1936, 1937, and 1938, XXIII, 930
- for Rocky Mountain region in 1935, 1936, and 1937, XXII, 692
- Production interference and well spacing in West Columbia field, Brazoria County, Texas, XXVI, 1441
- Production map of Bowlegs field, Oklahoma, STR II, 353
- of Burbank field, Oklahoma, STR I, 228
- of Virgil pool, Kansas, STR II, 146
- Production method, relation to increase in recovery, XXVIII, 248
- Production methods. (See Development, Drilling methods)
- at Bradford field, Pennsylvania and New York, STR II, 437
- at Copley pool, West Virginia, STR I, 460
- at Irma field, Arkansas, STR I, 16
- at Salem pool, XXIII, 1372
- efficient, XXV, 1046
- Production methods and drilling at Payton pool, XXVI, 1646
- Production methods and practices at Amelia field, XXIII, 1659
- Production-porosity curve of Burbank field, Oklahoma, STR I, 225; VIII, 768
- Production possibilities in South Texas in stratigraphic traps and under favorable structural conditions, XXVII, 1243
- Production practice at Greta field, GC, 663; XIX, 559
- Production practice and development at Cunningham field, Kansas, XXI, 517
- Production problems, application of temperature surveys in the solution of, XXI, 792
- at Long Beach field, California, VIII, 412
- at Wheat pool, XX, 788
- in California, XXIV, 1125
- Production rate for state of Texas, XXII, 639
- Production rates, annual, in United States, XXVIII, 1488
- of growth of coals, petroleum, and natural gas, relative, GAS, 1092
- world annual, 1890-1943, XXVIII,

(Production)

- 1492
- Production regulation at Schuler field, XXVI, 1515
- Production requirements, GAS, 1107
- Production statistics of United States, GAS, 1092, 1099
- on Wasson field, XXVII, 522
- Production summary, Kansas, XXI, 1005
- Production variations, XXVIII, 1561
- Productive and non-productive structures, comparison between, PROB, 732
- Productive area, Florence field, Colorado, STR II, 85
- at Jennings dome, in graben, XXVII, 1116
- Productive areas, comparable to drainage patterns, PROB, 553
- in McClosky of western Kentucky, XXII, 1844
- Northern fields, MEX, 164
- of 1936 in Texas and Louisiana largely due to geophysical prospecting, XXI, 1056
- of sandstones in New Harmony field, XXVI, 1603
- oil and gas, of Refugio field, map showing, XXII, 1193
- relations of, to paleogeography, XXI, 1246
- Productive beds, XXIX, 1742
- Productive counties in East Texas, XXIX, 768
- in Illinois, XXIX, 688
- in Kansas, XXIV, 1796; XXVIII, 768, 771; XXIX, 704-706
- in Michigan, XXVII, 829-832; XXIX, 696
- in Mississippi, XXIX, 831
- Productive features, structure contours at Montebello field showing relative positions of, XXIV, 1122
- Productive fields in Poland, XXI, 1189
- in Rocky Mountain region, age distribution of, XXVII, 467
- Productive horizon, new, in California, XV, 201
- Productive horizons from Lower Cretaceous to Pliocene in Texas, XXI, 1086
- Productive measures in Yassamal Valley, Russia, XXIII, 950
- Productive oil wells in Szechuan, XXVIII, 1436
- Productive pools in Chappel limestone, XXVI, 1042
- Productive sands in fields of Texas coastal region, GC, 667; XVIII, 522
- in Ohio, XXVII, 850
- in Saxet field, XXIV, 1812
- Productive sandstones, acid solubilities of, XXV, 864
- in New Harmony field, lithology of, XXVI, 1606
- Productive section in north- and west-central Texas, XXIII, 848
- Texas Panhandle, XXI, 1027
- Productive structures, types of, PROB, 571
- Productive zones at Koschagyl dome, XXIII, 509
- in Fredonia member in Clay City, Noble, and Olney areas of Illinois, XXIV, 229
- in oil fields of Rocky Mountain region, XXVII, 1327
- in Rocky Mountain fields, VII, 404

(Productive)

- new, discovered in Louisiana during 1940, XXV, 1014
- two, in one well, increase of production by segregation of, XXV, 1043
- Productivity of wells, effects of crookedness of holes on, XIII, 1131
- parameter, SBP, 83-85, 382-386
- relation of the origin of domes to, STR II, 680
- Productivity classification, SBP, 83-87
- Appalachian samples, SBP, 375
- California, SBP, 146-151
- California outcrop samples, SBP, 190, 191
- definition, SBP, 83-87
- East Texas, SBP, 327, 328
- Gulf Coast, SBP, 345-347
- Mid-Continent, SBP, 280
- relation of, to properties, SBP, 381-392
- Rocky Mountain outcrop samples, SBP, 253, 254
- Rocky Mountain samples, SBP, 236-240
- West Texas, SBP, 289, 290
- Productus inflatus* zone, XXII, 275, 276
- Productus* limestone fauna, XXV, 406
- Productus* limestone of Salt Range, XXIV, 274
- Profile across continental shelf, RMS, 232
- Profile of equilibrium, RMS, 238, 272
- on shoreline, RMS, 272
- variation in, XIII, 717
- Profile of foreshore and shoreface parts of beach, RMS, 213
- vertical in ocean, RMS, 54
- youthful, on continental shelf, RMS, 239
- Profile section, projection of dip angle on, XVII, 740
- Profits and recoveries, well spacing and its effect on, XXVIII, 231
- Progradation of shore, RMS, 279
- Progress of stratigraphic studies in California, XXVI, 153
- Progress reports on geology of Alaska Highway, XXVIII, 1655
- Progressive marine overlap, XXV, 2010
- Progressive Oil and Gas Company, GAS, 743
- Progressive sorting, RMS, 35, 36
- Progressive waves, RMS, 129, 132
- tidal, RMS, 128
- Project method for teaching petroleum geology, XXVI, 1277
- Prommel, H. W. C., XI, 112, 123, 127, 388, 786, 803, 804, 805; XIII, 1445; XVI, 775; XVII, 399
- geology and structure of portions of Grand and San Juan counties, Utah, VII, 384
- Prommel, H. W. C., and Crum, H. E., PROB, 658; XI, 786, 807
- salt domes of Permian and Pennsylvanian age in southeastern Utah and their influence on oil accumulation, XI, 373
- structural history of parts of southeastern Utah from interpretation of geologic sections, XI, 809
- Promontory Range, XXII, 1309
- Propane, GAS, 1075, 1122, 1149; PROB, 147
- Propertinites* ammonoid fauna in Fisk formation, XXIV, 41
- Propertinites* zone, XXII, 1016, 1017
- Properties, comparison of, of California outcrop and well samples, SBP,

(Properties)

- 186, 252
- considered in study of sediments, XXI, 1382
- of California samples, summary of, SBP, 145
- of clay, RMS, 466
- of clay, references on, RMS, 490
- of Gulf Coast samples, summary of, SBP, 341
- of Mid-Continent samples, summary of, SBP, 279
- of pure water, RMS, 66
- of Rocky Mountain outcrop samples, summary of, SBP, 252
- of Rocky Mountain samples, relation of, to oil zones, SBP, 239
- of Rocky Mountain samples, summary of, SBP, 236
- of samples from all regions, summary of averages of, SBP, 397
- of samples from Los Angeles Basin, summary of, SBP, 129
- of samples from West Texas area, relation of, to oil zones, SBP, 290
- of samples from West Texas area, summary of, SBP, 287
- Properties of sediments, SBP, 5, 18, 80, 81, 394-400, 412, 413 (See also under headings for individual properties)
- assay number, A, SBP, 61-64
- bitumen, B, SBP, 64-70
- calcium carbonate, Ca, SBP, 77-80
- carbon, C, SBP, 18-32
- carbon-nitrogen ratio, C/N, SBP, 32-35
- color, Rf., SBP, 73-77
- general summary, SBP, 394-401
- in Los Angeles Basin, areal variation of, SBP, 108
- in Los Angeles Basin, relation to texture, SBP, 158
- nitrogen, N, SBP, 32-40
- nitrogen-reduction ratio, N/R, SBP, 59-61
- organic content, OM, SBP, 18-21, 33, 44, 45, 72, 394-400
- oxidation factor, C/R, SBP, 56-59
- reduction number, R, SBP, 41-56
- reflectivity, Rf, SBP, 73-77
- relation to oil zones, SBP, 381-397. (See also Oil zones, relation to properties)
- relation to oil zones, Appalachian area, SBP, 374-379
- relation to oil zones, California, SBP, 144-167
- relation to oil zones, California outcrop samples, SBP, 191-194
- relation to oil zones, Dominguez field, California, SBP, 160-165
- relation to oil zones, East Texas, SBP, 326-335
- relation to oil zones, Gulf Coast, SBP, 345-349
- relation to oil zones, Mid-Continent, SBP, 278-285
- relation to oil zones, Rocky Mountains, SBP, 236-243
- relation to oil zones, Rocky Mountains outcrop samples, SBP, 253-255
- relation to oil zones, West Texas, SBP, 288-292
- relation to source beds, SBP, 83-87, 381-392
- relative volatility, A/R, SBP, 63
- results of studies of, XXI, 1386
- texture, T, SBP, 70-73

(Properties)

- variations, areal and vertical. (See also Areal and vertical variations of properties)
- variations, areal and vertical, Appalachian area, SBP, 359-379
- variations, areal and vertical, California, SBP, 100-167
- variations, areal and vertical, California outcrop, SBP, 167-194
- variations, areal and vertical, central California, SBP, 154-165
- variations, areal and vertical, East Texas, SBP, 297-339
- variations, areal and vertical, Gulf Coast, SBP, 339-349
- variations, areal and vertical, Mid-Continent, SBP, 262-285
- variations, areal and vertical, Rocky Mountains, SBP, 200-243
- variations, areal and vertical, Rocky Mountains outcrop samples, SBP, 243-255
- variations, areal and vertical, West Texas, SBP, 287-292
- vertical variation of, in Dominguez field, SBP, 155
- weathering, W, SBP, 168
- Properties, ranking of, as means of recognizing source beds, XXI, 1395
- Proportion of original organic matter preserved in sediments, RMS, 441
- Propp field, GAS, 476
- Proration, PROB, 809, XXI, 166
- Amelia field, XXIII, 1656
- Anse la Butte dome, XXVII, 1130
- Conroe field, GC, 827, 828; XX, 774, 775
- drastic, deterrent to development of K. M. A. field, XXIII, 850
- economic structure of petroleum industry under, XXI, 169
- effect in limitation of production, XXIII, 1315
- Eola field, XXV, 1395
- essential to conservation and maximum recovery in oil fields with divided ownership, XXIII, 1318
- function of, XXIII, 1315
- Greenwich pool, XXIII, 647
- in Texas, basis of, XXIII, 1314
- in Texas, solely a measure for prevention of physical waste in production of petroleum, XXIII, 1314
- influence of, XXII, 634
- Keokuk pool, XXIII, 241
- Lisbon field, XXIII, 324
- North Cowden field, XXV, 628
- Oklahoma City, Oklahoma, XVI, 1021
- Ramsey pool, XXIV, 2004
- Sugarland field, GC, 727, XXVII, 1380
- Temple field, Michigan, XXIV, 981
- valuable contribution to welfare of oil-producing industry in East Texas field, XXIII, 1317
- West Ranch field, XXVIII, 216
- west-central and north Texas, XXI, 1024
- Proration and price in Michigan, XXIV, 987
- Proration formula for a field, designing the ideal, XXII, 1443
- Proration policies, XXV, 1266
- Proration practice at Cunningham field, Kansas, XXI, 524
- Proration program at Oklahoma City field, XVI, 1011
- Proration regulations in Kansas, XXIV, 996

- (Proration)
in Kansas, in 1940, XXV, 1105
Proration unit system at Yates pool, XIII, 1554
Prospect map, shallow oil, of Texas Panhandle, XXIII, 1042
Prospect Oil Syndicate, XXII, 687
Prospecting by drilling, beginnings of, XXI, 708
 cooperation between arms in, XXIII, 1741
 electrical, for oil structure, XIV, 1145
 for oil, electric and electromagnetic, XIV, 1199
 for petroleum, subsurface studies the one continuing technique in, XXI, 710
 for petroleum, technique of, XXI, 708
 geological, early, XXI, 709
 geophysical, for petroleum, 1929, XIV, 1105
 geophysical methods of, in Union of Socialist Soviet Republics, XIV, 93, 325
 in national economy, XXIII, 1880
Prospecting or exploratory department, importance of, XXI, 714
Prospecting, review on problems, VI, 388
Prospecting drilling distinct from drilling for production, XXI, 712
Prospecting techniques, succession of, XXVI, 1218
Prospecting tool, geophysics as, XXI, 709
Prospecting topographic mounds and oil or gas seepages, XXIV, 1392
Prospective areas in Russia with exploration under way, XXIII, 951
Prospective geologists, hints to, I, 127
Prospects, future, in Mississippi, XXIX, 833
 outstanding, in Gulf Coast, XXIII, 887
Prospectus of Ohio Petroleum Company, XXII, 1687
Prosper field, XXVII, 828; XXVIII, 763
Prosser limestone, XXV, 1639
Proteins, PROB, 37, 39, 450; RMS, 150, 421, 422, 441, 443
Proteolytic bacteria, RMS, 421
Proterozoic an era of marked sial shifting, CD, 143
 in Tejon Quadrangle, California, XXI, 213
 of North Sea, RMS, 332
Proterozoic folding in south-central Wisconsin, XXII, 1546
Proterozoic sialosphere welded into three latitudinal land zones, CD, 143
Protescu, M. O., SD, 141
Prothro dome, Louisiana, SD, 222, 276, 297-304; IX, 904; X, 245-252
Proto-petroleum, PROB, 261
Protoplasm, RMS, 443
Protozoa, MSC, 184; XXV, 1215
 Proodontites zone, XXII, 1016
 Prout, Franklin S., XIII, 656, 958, 999
 discussion of Capitan limestone, XIII, 656
 memorial of, XXIV, 944
 schist east of Santa Rosa, New Mexico, XI, 88
Proved-area method of estimating oil reserves, XXV, 165
Proved oil reserves and exploratory drilling in area of eleven selected states, statistics on, XXIX, 641, 643
Provenance, RMS, 4, 171, 269, 527, 592, 593, 610
 of Baltic sediments, RMS, 299, 317
 of detritus in Atlantic sediments, RMS, 386
 of East Indies sediments, RMS, 349-350
 of North Sea sediments, RMS, 334
 of oceanic sediments, RMS, 396
 of sediments on east coast of United States, RMS, 232, 238, 240
 submarine, for calcareous detritus in Baltic sediments, RMS, 317
Providence sand, XXII, 791, 1652
Provinces, geologic, CAL, 1
 in Coast Ranges, structural history of three types of, XXI, 551
Provo River, South Fork of, XXIII, 83
Provot, F. A., III, 312
Proximate analysis of coal, XXVII, 1209
Prue, Calvin, and Cleveland waters, Oklahoma, analyses of, PROB, 865
Prue sand, PROB, 413, 440, 441; STRAT, 394, 395; VI, 471; XXVIII, 782
 Davenport field, STRAT, 394
 Depew area, Oklahoma, STR II, 366, 377
Prue sand production at Stroud credited to geochemical prospecting by soil analysis, XXIV, 1449
Prusa pool, Kansas, XXIV, 1002
Prutzman, Paul W., XVI, 784
 chemical characteristics of California petroleum, VIII, 560
 effects of underground storage conditions on characteristics of petroleum, XV, 455
Pryor Mountains, XXVII, 429
Pseud-abyssal sediments and geological extrapolation, XXVI, 765
 bibliography on, XXVI, 792
Pseudo-anticlines and caliche, IX, 1009
Pseudomonotis shale from Alaska, XIII, 836, fol. 848
Pseudoschwagerina, base of zone of, Carboniferous-Permian boundary, XXIV, 319
 Permian, in Oquirrh formation, XXIV, 627
Pseudoschwagerina and *Properrinites* zone, lowest part of Permian system, XXIV, 340
Pseudoschwagerina complex at a distinct horizon recognizable in most parts of the world, XXIV, 324
Pseudoschwagerina zone, XXIV, 245, 265, 270, 282, 293
 importance of, XXIV, 324
 in America, XXIV, 279
 in Ufa Plateau, XXIV, 271
 in western United States, XXIV, 317
 overlying great regional hiatus in Orient, XXIV, 280
 widespread break below, in America, XXIV, 279
Pseudo-stratification in core recoveries, XII, 1167
Pseudo-tectonic structures, XVII, 1098
Pteropod, RMS, 149
Pteropod ooze, RMS, 285, 376; XXIII, 1668, 1671
Pteropod shells, RMS, 376
Public oil lands, supervision of, review, VII, 196
Public relations program, XXVI, 1248
Public Service opportunity of the oil geologist, IV, 5
Publication of Association papers in trade journals, X, 1004
Publication fund, XI, 1341
Publications. (See Bibliography, References)
Publications in 1943 on geology of Eastern Interior basin, XXVIII, 759
Publications of Charles Townsend Kirk, XXIX, 1223
 of Frederick G. Clapp, XXIX, 405
 of Geological Society of America, XXVIII, 880
Oklahoma Geological Survey, IX, 708
 on Antillean-Caribbean region, XXIII, 1417
 on use of drilling time in logging wells, list of, XXIII, 1834
Publicity and Geological Society of America, XXVI, 1228
Pudsey, Fawcett, XX, 909
Puebla, Neocomian rudistids and corals in, XXVIII, 1125
 southeastern, areal geology of, XXVIII, 1125
Puebla Viejo (Veracruz), Mesón beds at MEX, 136
Pueblo, PROB, 276
Pueblo formation, III, 138
Pueblo group, XXIV, 41, 91
Puente fault, PROB, 752; CAL, 39
Puente field, PROB, 215, 219, 742
Puente formation, CAL, 188, 189, 208, 211-213, 222; MSC, 39, 165, 174; VI, 306; XXIV, 651; XXVI, 1146
 in California fields, GAS, 189, 204, 207, 212
 in Wilmington oil field, XXII, 1072
Puente Hills, CAL, 212, 224, 228, 313; GAS, 173, 210; MSC, 28, 124, 127, 166, 196, 201, 219, 221, 223, 239, 248, 253, 281, 282, 307, 316, 321, 328, 332, 334, 336, 345, 346, 350; SC, 114-116; XX, 1660-1662; XXIV, 649
 age of diatomaceous shales from, XIV, 1447
 eastern, MSC, Fig. 14 (in pocket)
 geological map of part of, XXIV, 652
San Bernardino County, California, Lower Pliocene in eastern end of, XIV, 1445
 stratigraphy and lithology of rocks of, XXIV, 650
Puente Hills fault block, XIV, 1445
Puente Hills field, VI, 303
Puente sands, PROB, 211
Puente shale, MSC, 22, 28, 196, 201, 219, 221, 223, 239, 247, 248, 250, 253, 254, 260, 267, 270, 272, 273, 281-283, 307, 316, 320, 321, 328, 332, 334, 336, 343, 345, 346, 350; PROB, 183, 214-216, 218, 221-223
 Globigerina faunas from, MSC, 17
 upper, MSC, 196
Puente shale faunules, upper, MSC, Fig. 14 (in pocket)
Puerco-Torrejon, CAL, 303
Puerto Colombia area, XXIX, 1131
Puget group, XXIX, 1408
Puget Sound, Marine fauna of, CAL, 155, 304
Puget Sound-Willamette trough, XXIX, 1391
Puget Trough section, GAS, 222
Pujal, Black limestones at, MEX, 38, 39, 48
Pulaski gas field, Oswego County, New York, XXII, 89, 93
 development of, XXII, 96

- (Pulaski)
rock pressures in, XXII, 97
section, XXII, 93
Pulaski shale, XXII, 93
Pulaskite at Encarnación, MEX, 147
Pullen, M. W., XVI, 1271
Pulmonella zone, MSC, 18,
Figs. 4, 14, and Table I (in pocket)
lower, MSC, 17
upper, MSC, 17
Pulliam formation, V, 26
Pulsation and polar control theories,
earth history in the light of
Rhythm of the ages, XXV, 1421
Pulsation system, Cambroviatic, Paleozoic
formation in light of the
pulsation theory, Vol. III, XXII,
934
Pulsation theory, Paleozoic formations
in light of, XXIII, 1580
Pulsation theory, Vol. III, Cambroviatic
pulsation system, Paleozoic
formations in light of, XXII, 934
Pulsations in turbulent flow, RMS, 17,
28
Pulvinulina zone, MSC, Figs. 4, 14,
and Table I (in pocket)
lower, MSC, 17
upper, MSC, 17
Pump Creek structure, Minnelusa water
in, XXIV, 1302
Pumpage, average daily, in Houston
and Pasadena areas, XXVII, 1093
for public and industrial supplies in
Houston and Pasadena areas in
1941, XXVII, 1094
Pumpage and rainfall in Katy rice-
growing area, XXVII, 1097
Pumpage and water levels, XXVII,
1093
at Camp Polk and North Camp
Polk, XXIX, 1188
Pumping, use of, in restoring produc-
tion, GC, 643; XIX, 1143
Pumping tests in Camp Polk area,
XXIX, 1169
Pumping wells, MEX, 184
Pumpkin Center field, PROB, 435
Punchbowl dome in St. George district,
Utah, XXIII, 143
Punctospirifer pulchra fauna of Rex
chert member of Phosphoria forma-
tion, XXIII, 89, 90
Pungarabato-Huetamo area of Guerrero
and Michoacán, Neocomian in,
XXVIII, 1122
Punjab, symposium on age of saline se-
ries of Salt Range of, XXIX, 1232
Punjab oil lands, PROB, 18
Punta Gorda, RMS, 254, 278
Punta Mirador uplift, XII, 31
Purcell, Paul E. M., Murphy, James K.,
and Barton, H. E., Seymour pool,
Baylor County, Texas, STRAT,
760
Purcell sandstone lenses, XX, 1465
Purdy, Wesley, VII, 148
summary of Canadian foothills belt,
IV, 249
Pure Oil Company, Barton 1 (well 388),
Blake 3 (well 362), Bracken 35-8
(well 363), Davis 6T-1 (well 364),
Hill 1 (well 395), Howell 45-1 (well
365), Jarman 37-11 (well 366),
Rosson 1 (well 390), Thompson
49-2 (well 367), Thompson 401-1
(well 368), Standard section (well
369), SBP, 292-335, 409
seismograph work in Illinois basin,
XXI, 784
Purgatoire formation, IV, 75, 96; VI, 74
(Kpu) (Cretaceous) (well 241), SBP,
194, 198, 200-243, 415
Puri, Amar Nath, RMS, 537, 539, 540,
541
Purísima anticline, GAS, 159
Purísima formation, PROB, 185, CAL,
232, 233, 248, 249, 254, 313
Purísima Hills, GAS, 158; MSC, 133
stratigraphic relations of Foxen mud-
stone and Careaga sandstone in,
XXVII, 1353
type region of basin facies of Sisquoc
formation, XXVII, 1348
Purísima Hills anticline, PROB, 208
Purísima Valley, PROB, 185
Purkyn, Cyril, VI, 529
Purplish red shales in western Calafillo,
MEX, 70
Pursley field, XXVIII, 837
Purzer, Joseph, XXVIII, 579
Purzer, Joseph, and Weeks, Warren B.,
developments in southern Arkan-
sas and northern Louisiana during
1939, XXIV, 1092
during 1940, XXV, 1024
Pushmataha County, Oklahoma (well
301), SBP, 255-285, 408
Pushmataha geosyncline, XXII, 859
Pushmataha series of Bendian sedi-
ments, XXII, 853, 855; XXIV, 81
history, XXII, 859
subdivisions, XXII, 853
Pusi field, V, 597, 601
Pustovalov, L. B., XXII, 776
Pustowka, A., XXI, 1274
über Rumanische Salzlagerstätten,
review, XIII, 1493
Putah district, Russia, XXI, 1077
Putah Creek, California, outcrop sec-
tion D, SBP, 167-194, 411
Putah Creek section, XXIX, 963
of Upper Cretaceous, Yolo, Napa,
and Saleno counties, California,
XXVII, 288
Putlitz, Fritz L., XXIV, 1743
Putnam, J. F., XXI, 584
Putnam, L. G., MEX, 25, 27, 45, 56, 58,
61, 85, 89-91, 162; XXVIII, 1149
memorial of, XX, 996
memorial of Maurice B. Schmittou,
XIV, 255
Putnam, William C., and Webb, Robert
W., laboratory exercises in
physical geology, review, XXII,
501
Putnam County, Missouri, Des Moines
series in, section, XXV, 57, 61
Missouri series in, section, XXV, 57
Putnam County, Tennessee, GAS, 868
Putnam formation, PTNM, 681;
XXVI, 681
Putnam overthrust, XXVII, 428
Putrefaction, PROB, 261
Pycnometer, VIII, 731
Pye, Willard D., XXIX, 1255
petrology of Bethel sandstone of
south-central Illinois, XXVIII, 63
Pyhäla, E., XX, 289
Pyle, Howard, SC, 77
Pyle, Howard C., and Jones, P. H.,
XXV, 1312
Pyle, Howard C., and Sherborne,
John E., XXV, 854, 1311
Pyle, Howard C., Dodge, John F., and
Trostel, Everett G., estimation by
volumetric methods of recoverable
oil and gas from sands, XXV,
1302
Pyote pool, XXVII, 755
Pyramid Hill, MSC, 114, Fig. 14 (in
pocket)
Pyramid Hill field, California, XXII,
702
Pyramid Hills anticline, SC, 67; XIII,
220; XX, 1613
Pyramid Mountains, Hidalgo volcanics
resting on Pennsylvanian limestone
in, XXII, 539
Pyre, Augustin, and Hedberg, Hollis D.,
XXIX, 524, 525, 526
stratigraphy of northeastern An-
zoátegui, Venezuela, XXVIII, 1
Pyrenean orogenesis cause of emergence
of Cordillera de Mérida and Carib-
bean Coast Range, XXIV, 1604
Pyrenean revolution cause of interrup-
tion of communications between
the Antillean and Mediterranean
region, XXIV, 1606
Pyrite, MEX, 148; RMS, 385, 423, 432,
498, 602; XXIV, 643; XXVIII,
79
as cementing mineral, XXV, 1867
effect of, on oxidation factor, SBP, 57
in Antrim shale, XXVIII, 184
in mud, RMS, 357
in rock salt, XXI, 1289
in shales in East Indies, RMS, 354
Raccoon Bend field, GC, 680; XXVII,
1463
Pyrite and formation of oil, STRAT,
811
Pyrite and marcasite in black shales,
XXIII, 1181
Pyritiferous zones, XXVI, 45
Pyritization of faecal pellets, RMS, 516,
523
Pyrobituminous sediments of Brazil,
XXI, 120
Pyroclastic beds above marine wedge,
section showing that thickness of
beds indicates correlation of surface
Catahoula with, XXIII, 174
Pyroclastic material in surface Cata-
houla, XXIII, 175
Pyroclastic pyroxenes in Chalky Mount
grits and conglomerates in Barba-
dos, XXIV, 1561
Pyroclasts at Kettleman Hills, XVIII,
1573
Pyrolysis, free radical formation in,
XXVIII, 940
Pyrolysis plants in United States, GAS,
1117, 1136
Pyrophyllite, RMS, 485
Pyroxene, MEX, 148
Pyroxene group, XXVIII, 79
Pyroxenes, RMS, 44, 602
effect of transportation on, RMS, 33
glauconitization of, RMS, 507
Pyrrhotite, RMS, 602
- Q**
- Quadrant and Tensleep formation wa-
ters, XXVI, 1358, 1359
Quadrant formation, Montana, PROB,
159, 698; V, 257, 327; VI, 148; X,
986, 991, 993; XXVII, 1288
oil possibilities, X, 995
waters in, XXVI, 1357, 1360
Quall limestone, XXV, 672
Quallwater Creek, California, CAL,
288; MSC, 122, 250
outcrop section L, SBP, 167-194, 411
Quall formation, XXVI, 825, 827
Qualified-ownership theory, XXII,
1082
Quality of oil, relation of, to structure at
El Dorado, Arkansas, VI, 350

- (Quality)
of product obtainable from various
crudes, XXV, 1171
- Quantitative *versus* qualitative studies
in geology, review, XIII, 239
- Quantitative approach to sedimentary
problems, XXIX, 1234, 1246
- Quantitative data, application of, to ap-
plied problems of sedimentation,
XXIX, 1250
- Quantitative studies, RMS, 592
of amount of sediment transported to
ocean, RMS, 270
- Quantity of bacteria in sediments and in
sea water, RMS, 417
- of faecal pellets in sediments, RMS,
518, 522
- of foraminifera in Atlantic sediments,
RMS, 374, 375
- of material transported by streams,
RMS, 25, 27
- of mineral present in order to be iden-
tified by X-ray, RMS, 627, 628
- of organic matter at depth in sea,
RMS, 439-440
- of organic matter in sediments, means
of determination of, SBP, 18-21
- of organic matter produced in sea,
RMS, 436-441
- of sediment deposited upon Atlantic
cables, RMS, 409
- of water transported by currents,
RMS, 117
- of water transported by currents of
wind origin, RMS, 121
- Quapaw sandstone, II, 122
- Quarantine Bay, Louisiana, XXII, 744
- Quarry conglomerate, XXIV, 653, 656
- Quarter-Centennial, Illinois State Ge-
ological Survey, XIV, 806
- Quartermaster and Greer formations in
Collingsworth County, Texas,
XXI, 450
- Quartermaster formation, I, 103; II, 74,
114; III, 170; IV, 270; XXI, 430,
1569; XXV, 1684
- Texas, XIII, 953
- Weatherford area, Oklahoma, XII,
709
- western Oklahoma, XV, 427; XX,
1473
- Quartermaster group and Whitehorse
group included in upper redbeds di-
vision of Permian, XXI, 1525
- Quartermaster sands, XXIV, 63
- Quartermaster unconformity of Weath-
erford area, Oklahoma, XXII, 110
- discussion of, XXI, 1529
- Quartermaster unconformity, relation-
ships of, XXI, 1532
- Quartile, RMS, 184, 564, 581, 590
- Quartile and moment measures, XXIX,
1245
- Quartile deviation, RMS, 564, 581
- Quartile diameters, RMS, 183, 193, 581
- Quartile measures, critique of, RMS,
570, 581
- Quartile skewness, RMS, 564, 565, 572,
581
- Quartiles, SBP, 10, 24, 26
- Quartz, RMS, 44, 197, 200, 211, 234,
235, 257, 287, 290, 382, 466, 498,
515, 531, 593, 602, 603, 604, 617,
623, 628; XXII, 556; XXVII, 175
- as cementing mineral, XXV, 1858,
1859
- coated with iron oxides, RMS, 500-
502
- identification of, by X-ray, RMS,
624
- (Quartz)
in beach deposits, RMS, 210
- in Dockum conglomerates, XXVII,
629, 630
- in East Indies, RMS, 350
- in rock salt, XXI, 1289
- rounding of, RMS, 36, 392
- secondary, XXV, 1862
- suspensions, as basis for testing of
Stokes' Law, RMS, 543
- types and relations of, XXVIII, 90
- Quartz dolerites, intrusive, MEX, 147,
148
- Quartz-glaucophane rocks and cherts,
analyses of, XXVII, 179
- Quartz pebbles, MEX, 8
- Quartz sandstone, relation of porosity
of, to carbon ratio of associated
coals, XXI, 76
- Quartz schist in Dockum conglomer-
ates, XXVII, 630
- Quartzite, MEX, 10, 12; RMS, 593;
V, 67, 137, 375, 509, 605, 672; VI,
106
- Quartzite pebbles at base of Lance
formation in Montana, IX, 344
- Quartzitic flags, MEX, 75
- Quartzose sands, RMS, 598
- in East Indies, RMS, 349
- Quatame phyllites, fossiliferous Paleo-
zoic, XXV, 1795
- Quaternary, CAL, 3, 26, 34, 35, 74,
135, 155, 179, 180, 210, 247, 260,
262, 267, 274, 287, 300; MSC, 25;
RMS, 157, 359; SD, 93, 279
- Alaska, VI, 295
- Argentina, XXVIII, 1459
- Cuba, II, 144
- Dakota basin, XXVI, 1559
- Davis Mountains, XXVI, 1016
- Ecuador, XIV, 288
- Grass Creek field, Wyoming, STR II,
626
- Hugoton field, STRAT, 80, 83, 84
- Japan, nitrogen from, GAS, 1061
- Kansas, STRAT, 80, 106, 121; II, 82;
VI, 69; XXIII, 1054
- Lost Soldier district, Wyoming, STR
II, 640
- Louisiana, VI, 180, 249, 251; X, 227
- Louisiana, difficulty of subdividing,
GC, 422; XVII, 653
- Nevada, XXVI, 1803
- New Mexico, IV, 77; XXVI, 63
- Nikkel pool, 106
- North Cowden field, XXV, 599
- Oklahoma, STRAT, 80; III, 255; V,
33
- Peru, VII, 443
- Rock River field, Wyoming, STR II,
614
- Roumania, SD, 132, 180; IX, 148,
1171
- Seminole district, Oklahoma, STR
II, 324
- sub-Carpathian zone, IX, 1240
- Tennessee, V, 647
- Tupungato field, great angular un-
conformity at base of, XXVIII,
1459
- Utah, XXIII, 125, 126
- Wheeler Ridge, California, X, 497
- Wyoming, V, 211; XXV, 1735
- Quaternary and Cretaceous in Lost
Soldier district, GAS, 306
- Quaternary and Tertiary faunas, clim-
atic relations, MSC, 17, 81, 169
- Quaternary and Tertiary systems of
Texas Gulf Coast, XXIII, 147
- Quaternary alluvium, MSC, 126,
XXV, 1735
- Quaternary alluvium and Topango,
lower Modelo, upper Modelo
formations, contacts of, MSC, 126
- Quaternary deposits of coastal area,
changes in facies in, XXIX, 1703
- Quaternary deposits of Texas Coastal
Plain between Brazos River and
Rio Grande, XXIX, 1693
- correlation of, with glacial scale,
XXIX, 1716
- references, XXIX, 1720
- Quaternary epeirogenic movement in
North America, XII, 118, 131
- Quaternary folding and faulting at
Long Beach field, GAS, 184
- Quaternary formations at Wilmington
oil field, XXII, 1053
- Quaternary geologic history of Texas
Coastal Plain, XXIX, 1718
- Quaternary history, CAL, 267
- Quaternary period a time of great
activity in Pecos Valley, XXI, 898
- Quaternary Redbeds, XXIII, 1040
- Quaternary revolution in coastal Cali-
fornia, XXIII, 551
- Quaternary samples, lake beds (Q1)
outcrop section V, SBP, 168-194,
415
- lake beds outcrop section, SBP, 168-
194, 415
- San Pedro sand (Qsp), SBP, 93, 97-
167, 415
- Santa Barbara formation (Qs), out-
crop section N, SBP, 93, 168-194,
415
- Quaternary sands productive in Toyah
field, FOP, 102; XXV, 1534
- Quaternary sediments in Japan, natu-
ral gases in, XI, 188
- Quayle, E. H., XXIII, 518; XXV, 194
- Quealy field, Albany County, Wyom-
ing, XXII, 688
- Quealy oil field, Cloverly water in,
XXIV, 1261
- Quebec, FOP, 123; XXV, 1555
- map showing St. Lawrence lowlands
and Gaspé Peninsula, FOP, 124;
XXV, 1556
- references on oil prospects in, FOP,
125; XXV, 1557
- Quebec and maritime provinces, natural
gas in, GAS, 89
- Quebec Bureau of Mines, Geological
Survey of Canada, and Newfound-
land Geological Survey, possible
future oil provinces of eastern
Canada, FOP, 107; XXV, 1539;
2194
- Quebrache area, GAS, 1002, 1006
- Quebracha field, MEX, 52, 63, 64, 136,
164, 172, 197-201, 230
- Queen Bess Islands, RMS, 188, 189, 192
- Queen Charlotte Islands, British Col-
umbia, occurrence of bitumin in,
XVI, 797
- Queen City beds, GC, 765; XX, 76
- productive of gas in Lopeno field,
XXIII, 865
- Queen City formation, XXIV, 1913;
XXVI, 260
- Queen City member of Mount Selman
formation, XXI, 1429
- (Eocene) (Tq), SBP, 337-349, 416
- Queen City sand, STRAT, 608; XXIV,
2142
- Queen formation, XXIV, 45, 47; XXV,
1049; XXVI, 84, 94, 1020; XXVII,
490, 755, 768

(Queen)
in Midland basin, XXIV, 60
productive in belt paralleling Capitan reef from Pecos County to Eunice, New Mexico, XXIV, 48
upper, in Caprock pool, production from Red sand of, XXV, 1062
Queen sand, XIII, 940; XXV, 605
Queen sand group, Sand Belt, STRAT, 752, 759
Queen sand production, Weiner pool, XXVIII, 826
Queen sand zone in New Mexico, XIII, 972; XV, 1089
Queen sandstone, XXI, 859
Queensland, concretionary development in, XVII, 1102
drilling in, review, VII, 196
Queenston formation, correlation, GAS, 92
Queenston shale, SBP, 351, 355-379, 415, XXII, 81
(Oq) (Ordovician), SBP, 351, 355-379, 415
Quenstedt, F. A., MSC, 90
Quentin, R. P. Louis, XXIV, 1550
Querétaro, eastern, western Hidalgo, and northern México, Alban in, XXVIII, 1124
Questel, M. A., XXIV, 1550
Questionably productive sediments, definition of, SBP, 83-87
Quevado, T., Survey, Texas (well 359), SBP, 292-335, 409
Quiamare member, XXVIII, 23
Quicksilver, SBP, 36
early work of United States Geological Survey on, XXVII, 254
Quicksilver-rock, XXVII, 183
Quincy trend, XVIII, 1331
Quinlan fault, XXI, 1067
Quinn field, VI, 260
Quintana Petroleum Company (well 404), SBP, 335-349, 410
Quintette Oil Company, GAS, 709
Quinto Creek, CAL, 100-102, 106, 107, 313
Quinto Creek conglomerates, XXVIII, 489
Quinton field, GAS, 520, 521
Quiring, CD, 9
Quiriquire field, lenticular sands in, XXIII, 959
Quirke, T. T., XII, 843
Quitman field, Texas, XXVII, 785; XXVIII, 848; XXIX, 774
gravity of oil in, XXVII, 785
Quitman Mountains, V, 15-23

R

Raab, R., XXIV, 1890
Rabbit Ear Pass section, Colorado, outcrop section in, SBP, 243-255, 411
Rabbs Ridge dome, discovery by torsion-balance method, XIX, 20
Raccoon Bend Oil field, Austin County, Texas, GAS, 718-724; GC, 676; XVII, 1459
Jackson production at, GC, 15; XVIII, 514
map showing areas of similar oil gravities in Gutoskey sand, GC, 696; XVII, 1479
(well 399), SBP, 335-349, 410
Raccoon Bend rim syncline, XX, 1418
Raccoon Bend uplift, GC, 688; XVII, 1472
Raceland field, XXIII, 885
Racetrack field, California, XXIX, 650
Racom compensator, XVI, 1303

Radabaugh, Robert E., XXVIII, 181
Radabaugh, Robert E., and Ehlers, George M., XXII, 398; XXIV, 1961; XXVIII, 178
Radcliffe, D. H., VIII, 198
memoir of Carl Bernard Hummel, VII, 715
Radcliffe, Thomas, XXV, 1228
Radczewski, O. E., RMS, 382, 392, 397
eolian deposits in marine sediments, RMS, 496
Rader limestone member, PTNM, 583, XXVI, 583
Radial dispersion from Holarctis and Antarctica a possible explanation of distribution of land life, CD, 138
Radial dispersive movements of the northern crust sheets from north polar region, map showing, CD, 168
Radial faulting associated with salt domes, PROB, 646
Radial flow apparatus, cross section through cylinder of, showing position of oil sand and arrangement of flow tubes for downward withdrawals of fluids, XXIV, 2168
Radiating structure of Great Salt Lake oolites, origin of, XXII, 1380
Radiation during different times of year, RMS, 87
from sun, RMS, 58
received by sea, factors influencing, RMS, 84
scattered, in X-ray studies, RMS, 85
Radiations in Paleozoic rocks, distribution of, XXIX, 10
of uranium and thorium, interaction between organic matter buried in sediments and, XXIX, 9
Radio transmission and geology, XX, 1123
Radioactive elements, apparatus and methods of measurement of, XXIX, 2
Radioactive heat, evolution of, based on uranium and thorium series for sedimentary rocks, XXI, 1200
use of, in molecular changes, CD, 94
Radioactive logging, XXVI, 1136
Radioactive material, chemical effects accompanying disintegration of, XXVIII, 934
difference in concentration of, XXIX, 1484
in sediments, efficiency of conversion by, XXVIII, 942
Radioactive materials in magma, effects of, XXIII, 1346
Radioactive matter, alteration of concentrations of, by weathering, deposition, and metamorphism, XXIX, 1483
in rocks, distribution of, XXV, 1771
mass of, in sediments increased by volcanic ash and other pyroclastic materials incorporated in them, XXIX, 1484
now in sedimentary rocks, source of, XXIX, 1483
Radioactive mineral zones, XXVI, 48
Radioactive phenomena, review of, XXVIII, 933
Radioactive substances in shales, concentrations of, XXIX, 2
Radioactive substances and organic matter, relation of, XXIX, 15
Radioactivities, average, of sand-free shales of various organic contents, XXIX, 1479

(Radioactivities)
relative, of igneous and sedimentary rocks, XXIX, 1482
relative, of various sedimentary rocks, diagram showing, XXV, 1775
Radioactivity, PROB, 451, 997
as an aid to petroleum discovery, abstract, XII, 102
concentrated in organic layer, XXVIII, 944
decrease in, with depth, XXIX, 1483
definition, XXV, 1770
effects of, XXIV, 1542
high, of rocks which yield oil on distillation, XXIX, 1479
high degree of, in crude oils and waters and brines associated with crude oils, XXIV, 1534
in rocks and petroleum, references on, XXIV, 1546
maximum, found in Kaibab limestone of Grand Canyon and in shaly Ordovician limestone of Fitts pool, Oklahoma, XXIV, 1539
methods of determining, XXIV, 1535
National Research Council committee on standards of, XXIV, 1534
of cores and samples, apparatus for testing in laboratory, XXV, 1773
of crude oils, XXIV, 1532
of deep-sea deposits, XXIX, 1485
of oil-well waters in Russia, XXIV, 1533
of petroleum, measurements of, XXVIII, 927
of sedimentary rocks, research on, before 1921, XXIV, 1531
of sedimentary rocks and associated petroleum, XXIV, 1529
of sediments and of crude oils, need for future research on, XXIV, 1546
of soil gases, XVIII, 63, 273
of some Paleozoic shales, references on, XXIX, 21
organic content, and sedimentation, relation of, XXIX, 1470
relation to age, XXIX, 1486
relation to origin of helium in natural gas, XXIX, 1490
relation to origin of oil, XXIX, 1490
relation to rate of deposition, XXIX, 1487
source of samples used for determinations of, XXIV, 1537
statistical fluctuations in, XXV, 1777
techniques for determining, XXIV, 1535
thermal effect in interior of earth, CD, 42, 46, 90
Radioactivity, well logging by, XXV, 1768
discussion, XXV, 2211
Radioactivity and oil field location, VII, 290
Radioactivity and organic content, determinations of, XXIX, 1472-1478
of some Paleozoic shales, XXIX, 1
Radioactivity and petroleum genesis, XXVIII, 924
references on, XXVIII, 950
Radioactivity and thickness of Chattanooga shale in four wells in Oklahoma, relation between, XXIX, 1489
Radioactivity cross section through Urbana pool, Union County, Arkansas, XXV, 1784
Radioactivity cross sections and their

- (Radioactivity)
 use in stratigraphic and structural research, XXV, 1783
 Radioactivity logging, explanation of process, XXV, 1770
 Radioactivity logs, accuracy of depth determinations to various formations on, XXV, 1774
 determining sample lag by use of, XXV, 1782
 estimating permeability and porosity from, XXV, 1776
 identification of rock types on, XXV, 1775
 in Cooper pool, Lea County, New Mexico, showing correlation, interval changes, and expression of potash beds, XXV, 1786
 in Cordes pool, Washington County, Illinois, correlation of, XXV, 1788
 J. L. Gartner responsible for establishing manner in which sedimentary rocks are expressed on, XXV, 1769
 of bore holes, XXV, 1262
 of wells in Creek, Pottawatomie, Carter, and Marshall counties, Oklahoma, illustrating correlation of logs across long distances, XXV, 1787
 Radioactivity measurements of crude oils, results of, XXIV, 1537
 of crude oils and associated rock formations, XXIV, 1541
 Radioactivity surveys, effect of materials in hole on, XXV, 1773
 mapping subsurface structure by making, XXV, 1783
 surface, XXV, 1780
 Radioactivity well surveying, description of apparatus used in, XXV, 1771
 Radiolaria, CAL, 80, 85, 89, 90, 93, 209; RMS, 149, 291, 379; XXII, 8, 871; XXV, 1244, XXVII, 200; XXIX, 991
 in California oil fields, X, 899
 in East Indies, RMS, 351
 in Franciscan cherts, XXVII, 193
 in novaculite from Black Knob Ridge, XXI, 11
 in Potato Hills, XXI, 10
 planktonic, RMS, 145
 Radiolarian chert, CAL, 81, 103, 106, 196; XXI, 1445
 Radiolarian earth, XXIV, 1584
 of Barbados, XXIV, 1548
 Radiolarian mudrock, CAL, 195, 259, 261, 264
 Radiolarian ooze, RMS, 149, 350, 379, 396-401; XXVI, 779
 Radiolarians, CAL, 89, 209; XXVII, 629
 Miocene, in California, IX, 234
 of Bigfork chert, XXI, 8
 Radiolarite, deposits of, XXVI, 778
 Radiolarites, origin of, and fracturing of fractured shale in Santa Maria basin, California, XXVII, 1622
 Radium in sial and sima, CD, 43
 Radium and its decay products, XXVIII, 933
 Radium content in ocean bottom sediments, determinations of, by means of electroscope, XXIV, 1531
 in travertine, determinations of, by means of an electroscope, XXIV, 1531
 of oil, methods for determining, XXIV, 1535
- (Radium)
 of rock samples, fusion method of determining, XXIX, 4
 Radium content and description of sedimentary rock samples, table of, XXIV, 1536
 Radium determinations made in connection with cosmic-ray studies, XXIV, 1531
 Radium emanation, XXIV, 1530
 in waters from oil-bearing rocks, XXIV, 1533
 Radium measurements on basis of rock type, comparison of, XXIV, 1538
 Radium water, V, 137
 Radler, Dollie, PROB, 764, 766, STRAT, 386; VI, 426, XI, 1071; XV, 734
 review, XIV, 1233
 Radon, millicurie, unit for measuring, XXVIII, 933
 Radon to radium ratio, XXIV, 1538
 Radon and heavy-mineral content of soils, correlation between, XVI, 1349
 Radon and radium, quantity of, in crude oils highly variable, XXIV, 1540
 Radon content of soil gases, measurements of, XVIII, 64
 Radziszewski, PROB, 38, 261
 Rae, Colin C., PROB, 43, 56, X, 713; XVIII, 1477, XXI, 1249
 Big Sand Draw field, Fremont County, Wyoming, XII, 1137
 organic material of carbonaceous shales, VI, 333; discussion, VII, 440
 Raeburn, C., and Milner, Henry B., alluvial prospecting, review, XII, 1121
 Rafts, vegetation, RMS, 221
 Raggatt, H. G., XX, 1031, 1038; 1039, 1043, 1048, 1049, 1050, 1055; XXV, 375, 378, 389, 391
 Raggatt, H. G., and Crespin, Irene, possibilities of heavy-mineral correlation of some Permian sedimentary rocks, New South Wales, discussion, XXIV, 1682
 Raggatt, H. G., and Fletcher, H. O., XXV, 374, 380, 382, 384, 397, 398, 402, 406
 Raggatt, H. G., Condit, D. D., and Rudd, E. A., XXV, 374
 Raggatt, H. G., Condit, D. Dale, and Rudd, Eric A., geology of Northwest Basin, Western Australia, XX, 1028
 Raggatt's standard section of North-West artesian basin, XXV, 379
 Ragged Valley shale, XXIX, 986, 987
 Ragland oil field, GAS, 915; XXVIII, 741
 Ragland sand, PROB, 509; IV, 307
 Ragland sandstone in Rothwell (Menifee) gas field, GAS, 943
 Raglin, H. W., XXIII, 1091
 Rahn, Otto, PROB, 40, 41
 Railroad Commission of Texas, GAS, 1112
 Rainbow Bend field, Kansas, STR I, 52; PROB, 323, 775; IX, 974
 Rainbow Bend sand, STR I, 56; PROB, 774
 Rainbow City field, Union County, Arkansas, XII, 763, 952
 Rainfall, effect of, on soils, RMS, 486
 Rainfall and temperature, Colombia, South America, graphs, XXIX,
- (Rainfall)
 1069
 Rain-wash, effect of, on erosion, RMS, 8
 Raised beaches, RMS, 214, 215
 Raish, Henry G., and Giesey, Sam C., developments in West Texas and southeastern New Mexico in 1944, XXIX, 725
 Raisin, C. A., XXIV, 1577, 1587, 1591
 Raisin City field, XXVI, 1142, XXVIII, 743
 gravity of oil in, XXVI, 1143
 production in, XXVI, 1143
 seismograph exploration at, XXVI, 1143
 Raitt, R. W., and Evans, R. D., XXIV, 1531, 1539
 Ralston, Wallace, development and production, East Texas district, XX, 975
 developments in northeast Texas district in 1936, XXI, 1063
 Ralston formation, V, 580
 Ralston group in Garber field, Oklahoma, STR I, 178
 Ramaccioni, D., XVI, 573
 Ramah test, XXIII, 922
 Ramann, Remell, Shellhorn, and Krause, XIII, 1469
 Ramers Island field, XXVII, 733
 Rame cellulose, decomposition of, at different charging densities at same temperature, XXIV, 1879
 decomposition of, at different temperatures, XXIV, 1878
 Ramirena pool, XXIII, 865
 Ramirez, Santiago, XXVIII, 1169, 1170; XXIX, 1074
 Ramp, George, STRAT, 827
 Ramp Creek member of Warsaw limestone, XXIV, 805
 Ramp hypothesis, validity of, XXII, 307
 Ramp-like features in Bighorn Basin, XXIII, 1484
 Ramp structure, or vertical uplift, at Wind River Canyon, XXIII, 490
 Ramsey, Andrew Crombie, SD, 396
 Ramsay, W., and Soddy, F., XXVIII, 934
 Ramsay, William, significance of nickel in petroleum, review, VIII, 832
 Ramsey area, development in, XXIV, 2004
 Ramsey dome, XXIV, 1999
 Ramsey field, V, 295, 369; VI, 468
 Ramsey oil pool, Payne County, Oklahoma, XXIII, 830; XXIV, 1995
 drilling methods and practices at, XXIV, 2004
 geologic structure maps, XXIV, 1998, 1999, 2000, 2002
 isopach map showing thickness of Mississippian limestone, XXIV, 2001
 production in, XXIV, 2004
 proration at, XXIV, 2004
 reservoir pressure at, XXIV, 2003
 subsurface stratigraphy of, XXIV, 1997
 subsurface structure at, XXIV, 1999
 surface stratigraphy of, XXIV, 1997
 surface structure at, XXIV, 1999
 Ramsey Petroleum Company, XXIX, 716
 Ramsey sand, VI, 465
 Ramsey structure, XXIII, 830
 Ramsdell, L. S., XXII, 1307, 1368, 1378
 Rancho La Brea, CAL, 263-265

(Rancho)

- correlation, CAL, 268, 303
- fossils at, CAL, 263, 305
- oil seeps at, CAL, 258, 266
- Rancho La Brea deposits, PROB, 213
- Rancidity, PROB, 40
- Rand, Wendell P., XIV, 452; XXIII, 283
- generation of oil in rocks by shearing pressures, IV-V. Further studies of effects of heat on oil shales, XVII, 1229
- Rand, Wendell P., and Hawley, J. E., PROB, 449
- Rand, William, CAL, 3, 68; MSC, 49, 308; SC, 105, 107; XIII, 509; XX, 154, 1651, 1653
- Rand, William, and Barbat, William, XIII, 222
- Rand Mountains, CAL, 201, 204
- Randado field, Texas, STR I, 403
- Randall, XII, 971
- Randolph County, Illinois, geologic cross section of Iowa series from, to Sullivan County, Indiana, XXIV, 226
- Random motion of particles in water in sea, RMS, 72, 77
- Randsburg, CAL, 313
- Randsburg district, continental deposits of Upper Miocene, CAL, 200, 204
- igneous rocks, CAL, 205
- rocks of post-Temblor age in, CAL, 175
- Randsburg quadrangle, CAL, 39, 41, 96, 176, 200, 201, 204, 243
- Garlock fault across, CAL, 40
- Range, semi-interquartile, SBP, 10
- Range and number in depth of samples analyzed from each well and outcrop section in study of source beds, SBP, 403
- Range chart, MSC, 137
- Rangely and Tow Creek fields, production from Mancos shale at, XXI, 1246
- Rangely dome, Colorado, PROB, 343; STR II, 108, 110; XXVII, 449
- anticline, STR II, 676
- oil in, from Weber sandstone, XXI, 1250
- Rangely field, Colorado, PROB, 162, 929; V, 202; XXVIII, 791; XXIX, 1599
- Colorado (well 232), SBP, 194-243, 407
- Ranger district, PROB, 59
- Ranger lime producing area, XXVII, 772
- Ranger limestone, III, 137, 138; XXIII, 854; XXIV, 88
- Cross Cut-Blake district, STRAT, 549, 551, 552
- Walnut Bend pool, STRAT, 785
- Ranger oil field, Texas, III, 39, 49, 164; IV, 8, 160, 221; XXV, 1677
- decline in production, IV, 227
- decline and production of, IV, 221
- description of cuttings from Duffer well, III, 39
- hellum in, GAS, 1055
- Ranger Petroleum Company, XXII, 1052
- Ranger sand, Eastland County, Texas, XI, 635
- Ranger zone, XXII, 1052
- Wilmington oil field, XXII, 1072
- Wilmington oil field subsurface structure contours drawn on top of,

(Ranger)

- XXII, 1050-1051
- Rangia, new, from upper Miocene of western Gulf province, XXIV, 476
- Rangia johnsoni zone, SBP, 336
- Rangia microjohnsoni zone in Louisiana, XXIV, 437
- Rank, Anton, X, 1275
- Rank of a unit, change of, without change of name, permissible under certain circumstances, XXIV, 357
- Rankin, XVIII, 377, XX, 145
- Rankin, C. L., XVII, 1293, 1294
- faulting in southwestern Arkansas, XIV, 829
- Rankin, Charles H., XIII, 684; XV, 1233; XVII, 397, 408
- stratigraphy of Colorado group, Upper Cretaceous, in northern New Mexico, review, XXIX, 232
- Rankin, Charles H., Jr., STRAT, 31
- study of well sections in northeastern Colorado, XVII, 422
- use of thin bentonite beds in mapping structure, Rosencranz area, Kansas and Colorado, XIV, 1065
- Rankin, Wilbur D., CAL, 68, 70, 100, 103, 166, 168, 170; GAS, 119; MSC, 13, 47, 79, 130, 201, 211, 221, 224, 236, 247, 248, 251, 253, 254, 260, 263, 267, 268, 270, 272, 273, 279, 281, 282, 297, 307, 317, 319-321, 327, 329, 331, 332, 334, 336, 343-346, 350, Fig. 14 (in pocket); XVIII, 435, XXIII, 518, 535; XXV, 194, 217
- Rankin, Wilbur D., and Hobson, H. D., MSC, 68
- Rankin, Wilbur D., and Hoots, H. W., MSC, Fig. 6 (in pocket)
- Rankin, Wilbur D., and Hughes, D. D., MSC, 28
- Rankin, Wilbur D., Hughes, Donald D., and Goudkoff, Paul F., MSC, 247, 250, 254, 267, 270, 272, 273, 320, Fig. 14 (in pocket)
- Ranney, Leo T., XXIV, 1365
- Ransome, F. L., CAL, 9, 80, 82, 89; VII, 2, 4; XIII, 201; XX, 869; XXIV, 309; XXVI, 1798, 1803; XXVII, 114, 159, 160, 162
- Ransome, F. L., and Cross, W., VII, 385
- Ransome, R. L., XI, 114
- Rapid City, South Dakota, two deep water wells near, XXVII, 646
- Rapley, E. E., SD, 396
- Raritan formation, XXIX, 891
- Rasmussen, Clayton, Levorsen, A. I., Tuttle, Helen Fowler, and Hedberg, Hollis D., selected bibliography of articles describing stratigraphic type oil fields, STRAT, 858
- Rasor, E. A., XII, 735
- Rasmuss, J., XIX, 1735, 1752
- Rastall, R. H., XXVI, 318
- Rastall, R. H., and Hatch, F. H., XVII, 1223
- Rastries longispinus, XXI, 1443
- Rate of change of density with depth, RMS, 59, 60
- of change of temperature in sea with time, RMS, 55
- of change of properties, SBP, 394-400. (See also Isoleth maps)
- of deposition of sediments, RMS, 4, 265
- of deposition of sediments, in Atlantic, RMS, 388-390
- of deposition of sediments, in Indian

(Rate)

- Ocean, RMS, 405-407
- of diffusion of heat, RMS, 75
- of discharge of sediments by rivers on California coast, RMS, 273
- of formation of hydrogen sulphide, RMS, 363
- of heat conduction in sea, RMS, 75
- of heating in determination of reduction number, SBP, 47, 54
- of production of carbonates, RMS, 404
- of production of organic matter in ocean, RMS, 438-441
- of sedimentation, RMS, 273
- of sedimentation, in fords, RMS, 361, 362
- of sedimentation, in sea, RMS, 441
- of sedimentation of recent deep-sea sediments, RMS, 409
- of sedimentation, references on, RMS, 414
- Rates charged by utilities supplying natural gas, GAS, 1129
- of flow, GAS, 18
- of flow for field, determining proper, XXII, 1443
- of flow for wells, proper, XXII, 1444
- Rath, Charles M., memorial of Thomas Hartman Olds, XVI, 435
- Rathbone Brothers, XXII, 429
- Rathbone Oil Company, XXII, 1098
- Rathbun, Mary, MEX, 113; IX, 168; XIX, 1200; XX, 1229
- Rathke field, Young County, Texas, XXI, 1022
- Rathwell, H. B., XXIII, 518
- Ratio. (See also carbon-nitrogen ratio, C/N; nitrogen-reduction ratio, N/R; oxidation factor, C/R; relative volatility, A/R)
- isopleth maps, RMS, 587
- molecular, in clays, RMS, 485
- of load to discharge, RMS, 26, 27
- Ratio of organic matter to carbon, RMS, 445
- in sediments, SBP, 18-20
- Ratio of organic matter to nitrogen, SBP, 33
- to reduction number, SBP, 43, 44
- to reduction number, Appalachian area, SBP, 359
- Rationing, gasoline, on Pacific Coast, XXVII, 863
- Raton basin, XXVII, 427
- Raton-Trinidad basin, PROB, 680
- Rattlesnake anticline, XXI, 994
- Rattlesnake beds, V, 27
- Rattlesnake Canyon, XXI, 838
- Rattlesnake dome, PROB, 409, 933; GAS, 370
- Rattlesnake field, New Mexico, PROB, 163, 691, 724; XIII, 127; XXIII, 920; XXVII, 450, 858
- on a dome, STR II, 677
- Pennsylvanian production in, XXI, 1250
- Upper Cretaceous and Pennsylvanian production in, FOP, 75; XXV, 1507
- Rattlesnake formation, CAL, 221; XXIX, 1386, 1388
- Rattlesnake Hills, Eocene and Miocene in, XVIII, 848
- Sundance section at, XXI, 741
- Rattlesnake Hills gas field, Benton County, Washington, GAS, 222-230; XVIII, 847
- gas pressures at, XVIII, 856, 857

- Rattlesnake Mountain anticline, XXV, 2039
- Rau, H. L., and Ackley, K. A., geology and development of Keokuk pool, Seminole and Pottawatomie counties, Oklahoma, XXIII, 220
- Rauch, W. E., XXIII, 464
- Rauzer-Chernousova, D., XXII, 772, 773; XXIV, 243, 245, 247, 253, 257, 259, 269, 270, 276, 280, 297, 324, XXVI, 404; XXIX, 133
- Rausser-Cernoussova, D., Beljaev, G., and Reitlinger, E., Carboniferous foraminifera of the Samara Bend, review, XXV, 1943
- Raven Pass anticline, magnetometer survey, XV, 1355
- Ravenna field, Michigan, XXII, 410; XXIV, 985
- Ravensfield sandstone, XXIV, 638
- Ravines, homoclinal, STR II, 686
- Ravn, J. P. J., XV, 150, 151; XXVII, 262, 270
- Razor, E. A., GAS, 162; XXIV, 985
- Rawlins, E. L., and McGowen, N. C., GAS, 1113
- Rawlins, E. L., and Pierce, H. R., GAS, 1021, 1026, 1113
- Rawlins, E. L., and Schellhardt, M. A., XXII, 404
- extent and availability of natural gas reserves in Michigan strays sandstone horizon of central Michigan, review, XXI, 123
- Rawlins, E. L., Bopp, C. R., and Hill, H. B., engineering report on Oklahoma City oil field, Oklahoma, review, XXI, 815
- Rawlins, E. L., Chalmers, J., and Taliaferro, D. B., Jr., GAS, 1103
- Rawlins-Bell Springs fault, GAS, 309
- Rawlins fault, PROV, 723
- Rawlins-Lost Soldier district, Wyoming, oil fields of, VII, 131
- Rawlins uplift, XXVII, 430
- Rawns, A. M., Banta, A. P., and Pomeroy, R., XXVII, 1189
- Ray, Bernard A., and Dickey, Robert I., XXVIII, 832
- developments in West Texas and southeastern New Mexico in 1942, XXVII, 747
- Ray, Robert H., XXIX, 210
- Ray County, Missouri, Des Moines series northeast of Hardin, section, XXV, 38
- Ray pool, first prolific pool in Phillips County, Kansas, XXV, 1107
- Rayburn's dome, Louisiana, SD, 222, 274-276, 281, 312-317; X, 229, 260, 262-265
- Rayleigh, J. W. S., CD, 43
- Rayleigh, Lord, XVIII, 115
- Raymond, P. E., VII, 628; X, 1045; XII, 598, 901; XIII, 1213
- Raymond pool, PROB, 769
- Rayon, upper Méndez, Foraminifera same as in Navarro, MEX, 74
- Rea, Henry Carter, applied sedimentology, XXV, 899
- photogeology, XXV, 1796
- Reaction products, unsaturated hydrocarbons and hydrogen as, XXVIII, 947
- Reaction velocity, ratio of, to ionization, XXVIII, 936
- Read, Charles B., and Hendricks, T. A., GAS, 514; XX, 1343, 1352
- correlations of Pennsylvanian strata in Arkansas and Oklahoma coal fields, XVIII, 1050
- Read, H. H., XXVI, 1232
- Read Lake, GC, 1030; XX, 183
- Reading, A. L., XIV, 1282
- Reagan, XI, 1321
- Reagan County, Texas, Barnhart field, XXVI, 387
- Ellenburger production in, XXVII, 764
- (well 304), SBP, 285-292, 408
- Reagan formation, XXV, 1630
- Reagan sand, Zenith pool, STRAT, 151
- Reagan sandstone, V, 34, VI, 6
- (Car) (Cambrian), SBP, 260-280, 413
- Reagan uplift, XXIV, 111; XXVI, 229
- Reagents, nitrogen analyses, SBP, 38-40
- reduction number, SBP, 49-51
- Real County, Texas, columnar sections from, to Sierra del Burro of northern Coahuila, Mexico, XXIX, 1443
- Real series, XXVI, 816, 819; XXIX, 1100
- Reardon, J., MEX, 222
- Reaville, Nancy, Survey, Texas (well 397), SBP, 292-335, 410
- Recent, CAL, 40, 155, 158, 210, 248, 258, 265, 267; GAS, 224; MEX, 141; MSC, 15, 78, 124, 201, 262, 281, 297, 298, 307, 332, 350, 351; XXII, 799
- Anzoategui, XXI, 239
- Bellevue field, Louisiana, STR II, 242
- coastal Texas and Louisiana, GC, 454; XIX, 673
- Florence field, Colorado, STR II, 78
- Fluhman pool, STR I, 300
- Laredo district, XXI, 1423
- late, history of Côte Blanche salt dome, St. Mary Parish, Louisiana, GC, 1026
- North Dakota, XXVI, 357
- Santa Maria oil field, California, XXIII, 53
- Tejon Quadrangle, XXI, 219
- Texas, STRAT, 752; IX, 19
- Recent and ancient sediments, maps of, XXIX, 1258
- Recent and Late Pleistocene sediments along Gulf Coast, XXIX, 1308
- Recent and Paleozoic branching Hexactinellida; Titusvillidae, XXV, 1282
- Recent and Pleistocene, Wind River Mountains, Wyoming, XXV, 143
- Recent alluvium, section showing thickness of, and position of Jackson Eocene in each boring at Greenville, Mississippi, XXIII, 1396
- Recent Colorado River delta, XXIX, 1711
- Recent deep-sea sediments, rate of sedimentation of, RMS, 409
- Recent deep test in Moore County, Texas, XXIX, 227
- Recent deposits in coastal Texas and Louisiana, GC, 433; XIV, 1314; XIX, 652
- Recent development in Illinois with discussion of producing formations below McClosky sand, XXIII, 807
- Recent developments in Michigan basin, XXII, 659
- in south Mid-Continent, XXIV, 1025
- Recent disturbances, SC, 50; XX, 1596
- Recent experimental and geophysical evidence of mechanics of salt
- (Recent)
- dome formation, XXVII, 51
- Recent faunas, MSC, 134, 170
- Recent Foraminifera, dredged off east coast of Australia, MSC, 13
- from Bay of Palermo, Sicily, MSC, 13
- from Grecian Archipelago, MSC, 13
- from Mutsu Bay, MSC, 12
- from off Juan Fernandez Islands, MSC, 12
- from off San Pedro, MSC, 12
- from west coast of South America, MSC, 12
- of Malay Archipelago, MSC, 13
- Recent formations in Trinidad, XX, 1449
- Recent fossils, MSC, 171
- Recent history of western part of East Indies, XXII, 60
- Recent marine sediments, organic content of, RMS, 428
- Recent material of Colorado delta, fossils in, XXIX, 1711
- Recent molluscan province, MSC, 99
- Recent movements along faults of Balcones system in central Texas, evidence of, XX, 1357
- Recent oceans, faunal provinces of, MSC, 13
- Recent oil and gas developments in West Virginia, IV, 27
- Recent oil discoveries in southeastern Illinois, XXII, 71
- Recent petroleum activities in Coastal Plain of south Georgia, XXII, 794
- Recent petroleum development in Illinois, XXII, 649
- Recent secondary recovery of oil in Ohio, XXIV, 494
- Recent sedimentation and the search for petroleum, XXIX, 1233
- Recent sediments, STRAT, 483
- application of X-ray methods to investigation of, RMS, 616
- general procedure in studies of, RMS, 525
- of Santa Monica Bay, near-shore deposition of, XXVI, 1606
- Recent series in Gulf Coastal Plain, XXIII, 192
- Recent shoreline process, Brazoria County, Texas, XXIV, 731
- Recent species of Foraminifera, MSC, 12, 171, 172
- Recent tectonic events, XX, 873
- Recent tilting at Gulf of Aqaba, XXII, 1222
- Recent uplifts, V, 554
- Recent Ventura Basin, SC, 102; XX, 1648
- Recession of cliffs, rate of, in California, RMS, 270
- Recherches sur le pétrole dans l'antiquité*, XXI, 275
- Reclus, Elisée, XX, 881, 892
- Recommendations, publication of original, XIV, 794
- Reconditioning problems in preparing pools for storage, XXVIII, 1587
- Reconnaissance geological map of state of Anzoategui, Venezuela, XXI, 236
- Reconnaissance geology, XXIV, 1391
- in state of Anzoategui, Venezuela, South America, XXI, 233
- Record chart to illustrate six trouble points encountered in ensemble photography of fossils, XXIX, 1497

- Recording micrometer, Wentworth, XXIX, 1028
- Recoverable oil and gas, XXV, 1321
- Recoverable oil and gas from sands, estimation of, by volumetric methods, XXV, 1302
- Recoveries of new fields, ultimate, decrease of, XXVII, 955
- Recoveries and profits, well spacing and its effect on, XXVIII, 231
- Recoveries and well spacing, mathematical relation between, XXVIII, 247
- Recovery, estimated, and oil-in-place, Schuler field, XXVIII, 219
- estimated ultimate, from Anse la Butte dome, XXVII, 1154
- factors affecting, XXVI, 101
- greater with close spacing of wells, XXVIII, 241
- of oil and gas in Kentucky, some geological problems in, IV, 303
- of oil by sinking shafts and driving galleries, preliminary study on, VI, 342
- secondary, XXVI, 1124
- ultimate, from Dark Victor in Tupungato field, XXVIII, 1483
- Recovery chart showing influence of well spacing, XXVIII, 237
- Recovery percentages, XXVIII, 353
- Recruit Pass fault, XXV, 1336, 1337; XXVI, 1624
- thrust sheet of, XXV, 1338
- Recrystallization, PROB, 79, 519, cause of compaction of sediments, X, 1038
- Recumbent folds, MEX, 159
- Recurrent deposition, PROB, 520
- Recurrent structural movement, PROB 296, 298, 303, 305-307, 313, 583, 690, 770
- Red and Mississippi rivers, meander patterns of, XXIII, 1206
- Red basin of Szechuan Province, China, XXVIII, 1419
- bibliography on, XXVIII, 1439
- oil and gas in, XXVIII, 1436, 1438
- petroleum possibilities of, XXVIII, 1430
- section of formations in, XXVIII, 1431
- Red Bird gas field, GAS, 945
- Red Bluff beds, XXI, 424
- Red Bluff clay, XXVIII, 59, 1316, 1318, 1319, 1321
- in Covington County, Mississippi, GC, 373; XIX, 1152
- Red Bluff clay and Forest Hill sand, stratigraphic relations, GC, 359; XIX, 1163; XXVIII, 1323
- Red Bluff formation, II, 74
- Red canyon, cross section of hidden anticline on, XXV, 149
- Red Canyon anticline, XXIII, 1464, 1484
- Red clay, RMS, 375, 381, 385-414, XXIII, 1666, 1668
- in East Indies, RMS, 350
- Red clays, Europe, VI, 526
- intercalation of, with coarser detrital deposits, XXVI, 782
- Red color of rocks, loss of, discussion, XII, 767
- Red Coulee oil field, GAS, 28; PROB, 167; STRAT, 273, 297, 299, 301, 330, 339
- stratigraphy of, ALTA, 33, XV, 1161
- Red Desert basin, PROB, 343; XXI, 1254
- Red dome, XX, 1176
- Red Fish reef, XXV, 1009
- Red Fork sand, STRAT, 443, 481, V, 290, 402; XXIV, 2001
- Red Fork shoestring sand, STRAT, 475, 478, 483
- Red Fork shoestring sand pool, Pawnee, Creek, and Tulsa counties, north-eastern Oklahoma, STRAT, 473
- accumulation of oil, STRAT, 485, 488
- analysis of oil, STRAT, 491
- cost of completion, STRAT, 490
- Red formation in Venezuelan Andes, XXIV, 1611
- Red formations in Pine Island field, Louisiana, STR II, 172
- Red horizon of Méndez shales in Northern fields area, MEX, 69, 73
- Red Injun sand, XXV, 802
- Red Lake and Square Lake areas, New Mexico, XXVII, 767
- Red Lake area, XXVI, 1037
- Red-maroon shales of top Ninnescab, XXIII, 1773
- Red Medina (Oq), SBP, 351, 355
- Red Medina siliceous shale, XXV, 817
- Red Mountain, SC, 99; XX, 1645
- Red Mountain area in McKinley County, New Mexico, XXI, 995
- Red Oak field, GAS, 518
- Red Peak formation XXV, 134
- Red Pennsylvanian, V, 427
- Red River, RMS, 157, 166, 637
- active and abandoned channels of, and abandoned channels of Mississippi in alluvial valley of central Louisiana, XXIII, 1207
- Red River arch, PROB, 627; XV, 1015; XXIII, 848; XXIV, 54; XXV, 1670
- Archer County fields, Texas, STR I, 429
- north Texas, section along axis of, XXI, 1086
- Petrolia field, Texas, STR II, 548, 550, 554, 702
- sketch map of Oklahoma and part of Texas, showing relation of, to other major structural features, STR II, 551
- Red River coal at Campton field, Kentucky, STR I, 83
- Red River-Crichton field, II, 66
- Red River-DeSoto field, IV, 127; VI, 186, 192, 478
- Red River dispute, settlement of, VII, 192
- Red River district, PROB, 612
- Red River formation, XXVI, 345
- Red River high, XXV, 1640
- Red River syncline, XIII, 425, XXV, 1065, 1078; XXVI, 1040; XXVII, 771, XXVIII, 835
- Petrolia field, Texas, STR II, 550
- Red River uplift, FOP, 95; XXI, 1017; XXIII, 845; XXIV, 1031; XXV, 6, 1527, 1626, 1662
- Wilbarger County, Texas, STR I, 296; XIII, 425
- Red River uplift region, XXIV, 71
- Red River Valley, XXVI, 336; XXIX, 26
- Red rock in Tri-County field, Indiana, STR I, 26
- of Coldwater formation XXV, 732
- Red-Rock beds, XXVIII, 187
- Red Rock Canyon, California, outcrop section U, SBP, 167-194, 411
- Red Rock Mountain unit, Tejon (Red)
- Quadrangle, XXI, 219
- Red Rock shale, basal part of Coldwater shale in Michigan, XXV, 721
- Red sand, Artesia field, New Mexico, STR I, 118
- Red sandstone, RMS, 334
- loss of color of, upon deposition, XII, 85
- Red sandstones, unfossiliferous, Permian, in England and Wales, XXI, 833
- Red Sea, PROB, 30; RMS, 101, 365
- a trough-fault feature, theory on, XXII, 1218
- biological observations on, XXI, 1579
- Red Sea and Dead Sea, origin of, distinct structural depression, XXII, 1218
- Red Sea and Gulf of Aqaba, series of faults paralleling, XXII, 1218
- Red Sea depression, bibliography on, XXII, 1223
- origin of, XXII, 1217
- Red shale, Caddo field, Louisiana, STR II, 187
- of Eagle Mills formation, XXII, 963
- Pine Island field, Louisiana, STR II, 175
- Red shale and Granite wash, interrelationship between, in Gray County, Texas, XXIII, 999
- Red shale and sand zone in Homer field, Louisiana, STR II, 202
- in Stephens field, Arkansas, STR II, 2, 4
- Red shales in Zacamixtle, MEX, 90
- Red silt in Goldsmith field, XXIII, 1528
- Red siltstone, XXV, 134
- Red Springs anticline, Hot Springs County, Wyoming, XXVII, 450
- Red Springs field, XXVII, 465
- Red Springs structure, Madison water in, XXIV, 1308
- Redbed and salt localities in Mexico and Central America, XXVII, 1503
- Redbed bleaching, some features of, X, 304
- discussion, X, 636
- Redbed Embur of central Wyoming, XXVIII, 1657
- Redbed facies, MSC, 109
- of Oligocene, SC, 80; XX, 1626
- of Phosphoria and Dinwoody formations, XVIII, 1680
- of Saucanian, MSC, 114
- Redbed section, MSC, 102; XXI, 505
- Redbed zone in Bellevue field, Louisiana, XII, 1086
- Redbeds, age of, in Mid-Continent region, VII, 696; IX, 814
- areal geologic map of southern Kansas and northern Oklahoma showing distribution of subdivisions of, XXIII, 1760
- as criteria of general aridity, XXI, 1124
- at Pongo de Manserche, XXI, 1348
- below *Gryphaea* zone at Cody and Kane, Wyoming, XXI, 740
- Chugwater in Grass Creek field, Wyoming, STR II, 634
- contribution to stratigraphy of, II, 114
- early Upper Jurassic, in Mexico, XXVII 1415
- exposed in Rocky Arroyo, XXI, 1569
- Garvin County, Oklahoma, XVI, 121
- Garvin County, Oklahoma, correlation of, XVI, 133

(Redbeds)

- Hewitt field, Oklahoma, STR II, 293
in eastern Oaxaca, XXVII, 1505
in southern Arkansas, XXII, 966
in southern Mexico, XXVII, 1478, 1506
in Sundance formation, XXI, 748
in Tamaulipas, XXVII, 1477
in Texas Panhandle field, XXIII, 1039
in Villa Juarez uplift, XXVII, 1476
in West Texas region in Leonard time, PTNM, 740, XXVI, 740
Lost Soldier district, Wyoming, STR II, 641
lower, of Kansas, XXI, 1557
lower Sundance, XXI, 752
near base of Cherokee shales, IX, 350
near Mesquite, Nuevo León, XXVII, 1477
New Mexico, IV, 54, 74, 99; V, 329
of Collingsworth County, Texas, XXI, 450
of Delaware basin, XXVIII, 1601
of Honda series, XXVI, 815
of Lower Ninnescah, XXIII, 1766
of Mexico, origin of, XXVII, 1479
of northern Mexico, correlation of, XXVII, 1477
of State Bridge formation, XXVI, 1397
Oklahoma, II, 114; III, 291; V, 34, 44, 173, 326, 428, 470, 569, 627, 628; VI, 7, 54, 88, 367
Oligocene, SC, 31; XX, 1577
origin of, XII, 927
origin of color of, abstract, XIII, 697
Pecos Valley, XXI, 856
(Pennsylvanian) (CRP), SBP, 194, 258, 261-280, 414
Permian, XXIII, 566
Permian, correlation in Kansas, Oklahoma, and Texas, X, 152
Permian, heterogeneous character of, XXI, 1569
Permian, of Coke County, West Texas, an outcrop of surface oil sand in, IX, 1215
Permian of Kansas, XXIII, 1751
Permian of Kansas, pioneer work on, XXIII, 1815
Permian, of southwestern Oklahoma, new classification of, VIII, 322
Permian, of Wilbarger County, Texas, STR I, 294
Permo-Trias, MEX, 8, 13, 14
Petrolia field, STR II, 544, 548, 549
relation of base of, to oil pools in portion of southern Oklahoma, V, 173
Richland field, GAS, 781
Sierra de Catorce, San Luis Potosi, XXVII, 1476
southern Mexico, correlations of, XXVII, 1508
southern Oklahoma fields, GAS, 586, 587
spelling of, discussion, XXIII, 1249
study of, a regional problem, XXI, 1572
Texas, IV, 270; V, 23, 154, 379
Triassic and Permian, XXVII, 481
underlying Upper Triassic of West Texas, XXI, 474
Upper Eocene, SC, 27; XX, 1573
vertebrates, Texas, early history of, review, XX, 832
West of Ural Mountains, XXI, 833
Wyoming, X, 304
Redbeds and conglomerates in Ecuador, XI, 1272
Redbeds and gypsum within Sundance formation, XXI, 770
Redbeds and salt, Eagle Mills, XXVII, 1423
in southeastern Veracruz, section, XXVII, 1507
of Divesian stage, XXVII, 1419
Redbeds area in Rocky Mountain region, XXI, 1258
Redbeds division, upper, of Permian, XXI, 1525
upper, of Permian, Whitehorse group and Quartermaster group included in, XXI, 1525
Redbeds facies of Eagle Mills formation in Arkansas, XXVII, 1430, 1349
Redbeds nomenclature, XXI, 430
Redbeds unit of Eagle Mills formation, XXVII, 1411
Redcliff Gas Company, GAS, 36
Redd sand, V, 293
Reddin pool, XXVII, 780
Redding, CAL, 18, 63, 65, 111, 313
Carboniferous detritus at, CAL, 65
volcanic Tnassic rocks near, CAL, 69
Redding Cretaceous section, age equivalents of members of, XXVII, 312
members of, XXVII, 307
Redding Cretaceous strata, XXIX, 992
Redding district, Cretaceous in, CAL, 99, 117, 118
Devonian in, CAL, 63
geologic history of, CAL, 117
Jurassic in, CAL, 72, 74
Lias formation in, CAL, 76
marine reptiles, CAL, 70
Pleistocene fossils in caves of, CAL, 266
Triassic section in, CAL, 67, 69
Redding Folio (Diller), CAL, 15, 63, 67, 95, 117
Redding Quadrangle, generalized columnar sections of Cretaceous in, XXVII, 310
map showing principal Cretaceous exposures, XXVII, 308
Redding region, Cretaceous in, XXVII, 306
Redditt and Gray, XXIII, 893
Redfield, XXVI, 1649
Redfield, Arthur Huber, XVI, 1093, 1096
petroleum possibilities of Costa Rica, review, VII, 455
petroleum resources of Russia, XI, 493
review, VII, 455
Redfish Bay, RMS, 169
Redmon, H. E., and Ruedemann, Paul, PROB, 762, 763
Turkey Mountain lime pools, Oklahoma, STR I, 211; XI, 933
Redondo, CAL, 270-273, 313
Redondo Canyon, RMS, 252
Redondo field, VI, 303
Redondo submarine canyon, XXII, 204
Redrock Canyon, CAL, 191
Redrock Canyon member of Santa Margarita, SC, 80; XX, 1626
Redstone coal, clay dikes in, West Virginia and Pennsylvania, XVII, 1527
Reduced iron, RMS, 289
Reducible dyes in bacterial studies, RMS, 419
Reducing capacity of sediments, RMS, 419
Reducing conditions, RMS, 95, 260, 266

(Reducing)

- in relation to formation of glauconite, RMS, 503
in sediments, RMS, 261, 381, 444
Reducing intensity of sediments, RMS, 418, 419
Reducing power, SBP, 41, 42
of sediments, RMS, 432; XXI, 1384
Reduction, amount of, involved in use of maps, etc. for lantern-slide copy, XXVI, 1665
of sediments by bacteria, RMS, 418-424
Reduction, state of, effect of, on reduction number, SBP, 42-44, 56-60
Reduction, state of, organic matter, SBP, 400
Reduction, state of, relation of, to oxidation factor, SBP, 58, 59
Reduction number, SBP, 41-61, 394-400
Appalachian, SBP, 365, 366
as index of organic content, SBP, 21, 45, 46
basic data on, SBP, 412
California, SBP, 113-118, 137, 138, 156-165
California outcrop samples, SBP, 174-176
central California, SBP, 137, 138
Dominguez field, California, SBP, 156-165
East Texas, SBP, 303-307, 321
effect of bitumen content on, SBP, 126-130
factors influencing, SBP, 42-44
Gulf Coast, SBP, 340
Los Angeles Basin, SBP, 113-118
method of determination of, SBP, 46-55
Mid-Continent, SBP, 267, 268
number of determinations of, SBP, 403-411
relation to carbon content, SBP, 42, 45
relation to color, SBP, 74
relation to nitrogen reduction ratio, SBP, 391-394
relation to organic content, SBP, 359
relation to source beds, SBP, 381-384
relation to volatility, SBP, 63, 64
reliability of method of determination, SBP, 54, 55
Rocky Mountains, SBP, 220, 221
Rocky Mountains outcrop samples, SBP, 246, 247
small-scale variation of, SBP, 162-165
use of, in regional studies, SBP, 81
variation of, among ancient sediments, SBP, 55
West Texas, SBP, 287, 288
Redwall limestone, VI, 47, 207
Redwine, L. E., RMS, 654, 655, 657
Redwood, XI, 494
Redwood, Boverton, PROB, 436; VIII, 718; X, 1085
a treatise on petroleum, review, VI, 260, 382
Redwood Canyon, MSC, 65
Redwood Creek, MSC, 26
Reed, C. E., RMS, 554
Reed, Clyde T., XVII, 922; XVIII, 955
Reed, Cowper, XIX, 1210, 1738, 1743, 1746, 1748
Reed, D. W., XIX, 890
Reed, D. W., and Botset, H. G., experiment on compressibility of sand, XIX, 1053

- Reed, D. W., Wyckoff, R. D., Botset, H. G., and Muskat, M., GAS, 1084; PROB, 808
 measurement of permeability of porous media, XVIII, 161
- Reed, Eugene C., XXIII, 103; XXIV, 1010; XXVI, 1517, 1518, 1576
- Reed, Eugene C., and Condra, G. E., XXIII, 102; XXIV, 312; XXVI, 1518; XXIX, 167
- Reed, Frank R., X, 866; XXV, 406
- Reed, Frank R., and Applin, Esther Richards, IX, 83
- Reed, I., Survey, Texas (well 354), SBP, 292-335, 409
- Reed, J. C., XVI, 727
- Reed, Lyman C., SD, 437; VIII, 425; X, 154, 160; XVI, 585; XVIII, 958
 Welsh, Louisiana, oil field, SD, 437; IX, 464
- Reed, Lyman C., and Silliman, E. R., XXVII, 1488, 1492; XXVIII, 1143
- Reed, Ralph Daniel, CAL, 49, 58, 150, 195, 207, 238, 283; GAS, 119, 161; MEX, 94; SBP, 7
 geology of California, CAL, iii; SC, 2
 geology of California: some corrections, XIX, 1819
 honorary member, XXIII, 1884
 memorial of, XXIV, 1152, 1160
 microscopic subsurface work in oil fields of United States, XV, 731
 Miocene paleogeography in central Coast Ranges, X, 130
 occurrence of feldspar in California sandstones, discussion, XII, 1023
 Pennsylvanian paleogeography in Henryetta District, Oklahoma, VII, 50
 report of editor for 1932, XVII, 594
 report of president for 1936, XXI, 650
 reviews, XII, 867, 953; XIII, 1494; XVI, 616, 1161; XVIII, 268, 550; XIX, 562, 567; XX, 226, 1497; XXI, 122, 278, 315, 317, 352, 813, 1214, 1355, 1497, 1595
- Sespe formation, California, XIII, 489
- small *en echelon* fractures in Santa Barbara County, California, XIV, 320
- Southern California as a structural type, XXI, 549
- Reed, Ralph Daniel, and Bailey, J. P., subsurface correlation by means of heavy minerals, XI, 359
- Reed, Ralph Daniel, and Hollister, J. S., MSC, 91, 158; XXI, 1139, 1141, 1142, 1143; XXII, 2, XXIII, 36; XXIV, 1936; XXV, 6, 194, 1334; XXVI, 397; XXVII, 7, 15, 121, 1338, 1372; XXVIII, 302
 structural evolution of Southern California, SC, iii; XX, 1529
- Reed, Ralph Daniel, and Meland, Norman, IX, 626, 630; XXI, 1543; XXIII, 564, 568, 574, 1806
- Reed, Ralph Daniel, Hoots, H. W., and Baddley, E. R., MSC, 75
- Reed, W. H., XXVIII, 1196, 1215
- Reed, W. J., and Taff, J. A., PROB, 778
- Reed City gas area, XXV, 1129
- Reed City gas field, XXVI, 1102, 1105, 1106; XXVII, 823, 828
- Reed City pool, XXVI, 1097
- Reed City structure, XXVI, 1106
- Reed dolomite, CAL, 60
- Reeds, Chester A., GAS, 582; PROB, 766; I, 32; XIV, 803, 1551; XVII, (Reeds)
- 867; XVIII, 570, 577, 580, 586, XX, 1108
- Reed spring formation, XXV, 1652
- fossils from, XVIII, 1144, 1145
 in Oklahoma, XXIII, 328
 southern Ozarks, XVIII, 1141
- Reef, PROB, 577
- Reef beds of Capitan limestone, XXI, 893
 of Coalinga, CAL, 171
- Reef-coral fauna, MSC, 180
- Reef deposits in Guadalupe time, PTNM, 756; XXVI, 756
 of Permian in West Texas region, PTNM, 730; XXVI, 730
- Reef development in Permian basin, XXI, 863
- Reef dolomites underlying Capitan reef, relation of Cherry Canyon formation of Bone Spring area to, XXV, 94
- Reef Escarpment, PTNM, 592; XXVI, 592
- Reef facies, PROB, 393
 in Word formation, PTNM, 643; XXVI, 643
 of Middle Cretaceous, MEX, 23, 24, 36, 95, 96, 222
 of Upper Cretaceous Tamasopo limestone, MEX, 60
- Reef growth in San Andres time, XXVI, 250
 in South Permian basin, XXV, 79
- Reef growth and structure in Permian in Pecos Valley, XXI, 891
- Reef growths, post-Capitan, XXVIII, 1599
- Reef limestone or dolomite, origin of porosity in, discussion, XIII, 1219
- Reef limestones, PROB, 358; XXII, 540
 in Canyon group productive of oil in Johnson field, Ford County, and in Wilbarger County fields, XXIV, 1053
 in East Indies, elevated, XXII, 59
 of Capitan, gradation of, into Delaware Mountain formation, XXI, 894
 on Guadalupe Escarpment and Brokeoff Mountains, panorama, XXI, 853
 on margin of Delaware basin, XXI, 839
- Reef production, XXVII, 917
- Reef Ridge, California, CAL, 151, 177, 215, 245, 314; MSC, 128, 129, 156, 200, 261, 270, 296, 299, 323, 328, 336, 344, 355; SC, 69; XX, 1615 (well 6); SBP, 130-153, 403
 Etcheogin (Jacalitos) sands unconformable upon, XXIII, 34
 McLure shale faunule from, MSC, Fig. 14 (in pocket)
 type, MSC, 156
- Reef Ridge anticline, SC, 55; XX, 1601
- Reef Ridge formation, CAL, 190, 208, 235, 236, 242, 254; SC, 59, 66; XX, 1605, 1612
 Buena Vista Hills, GAS, 149
 North Belridge field, GAS, 137
- Reef Ridge-Jacalitos contact, XXIII, 35
- Reef Ridge-Kreyenhagen Hills area, correlation chart of, XXIII, 28
- Reef Ridge shale, MSC, 165, 195, 229, 237, 249, 250, 254-256, 262, 264, 277, 278, 281, 282, 285, 318, 344, 345; SC, 61; XX, 1607
 age of, SC, 63; XX, 1609; XXIII, 36
- (Reef)
- diatomite of Chico Martinez Creek area correlated with, XXIII, 25
 distinct from McLure shale, XXIII, 32
 distribution, XXIII, 25
 foraminifera in, MSC, 68; XXIII, 38
 in southern California, stratigraphic features of, XXIII, 24
 maximum thickness in vicinity of Elk Hills, XXIII, 26
 upper part of Arnold and Anderson's Santa Margarita, XXII, 26
 upper part questionably Pliocene, XXIII, 44
- Reef Ridge shale basin, XXIII, 27
- Reef Ridge shale faunule from Tar Canyon, MSC, Fig. 14 (in pocket)
- Reef Ridge shale faunules from Belridge and Kettleman Hills, MSC Fig. 14 (in pocket)
- Reef Ridge shale formation, character of, XXIII, 26
 limited to caving blue shale, XXIII, 29
- Reef zone in Delaware basin, formations of, PTNM, 586; XXVI, 586
- Reef zone of Permian of Pecos Valley, subdivisions, XXI, 857
- Reef-zone province of Permian of Pecos Valley, XXI, 846
- Reefs. (See Coral reefs)
- of Guadalupe Mountains, structure, PTNM, 637; XXVI, 637
 of sand in rivers, RMS, 18
- Reefs or bioherms in Sakmarian series, XXIV, 255
- Reelsville limestone, Tri-County field, Indiana, STR I, 26
 of lower Chester group, XXII, 275
- Reentrant syncline, MEX, 183
- Reese, F. R., I, 6
- Reese, R. G., GAS, 119; XXI, 584, 611
 discussion of California coast sediments, XXII, 216
- Reeside, J. B., GAS, 367; PROB 685; VI, 119; XI, 2, 271, 751; XIII, 1074; XVII, 369, 1358; XVIII, 1409, 1411; XXVI, 1395
- Reeside, J. B., and Dorton, N. H., PTNM, 572, 573, 601, 603; XXVI, 572, 573, 601, 603
- Reeside, John B., Jr., fauna of Dakota formation, review, VII, 306
 fauna of so-called Dakota formation of north-central Colorado, and its equivalent in southeastern Wyoming, review, VII, 306
 supposed marine Jurassic (Sundance) in foothills of Front Range, Colorado, XV, 1095
- Reeside, John B., Jr., and Baker, A. A., XIV, 784; XVII, 146; XXIV, 309, 619
 correlation of Permian of southern Utah, northern Arizona, northwestern New Mexico, and southwestern Colorado, XII, 1413
- Reeside, J. B., Jr., and Bassler, Harvey, VI, 208; XIII, 1418; XVII, 150; XXIV, 635
- Reeside, J. B., Jr., and Dorton, N. H., XIII, 645, 650, 655, 930, 981; XXI, 868; XXIX, 1772, 1773, 1775
- Reeside, John B., Jr., and Dobbin, C. E., PROB, 697; XVII, 426
- Reeside, J. B., Jr., and Gilluly, James, XI, 804; XIII, 1434; XVII, 125
- Reeside, J. B., Jr., and Spieker, E. M., XIX, 1498, 1500

- Reese, John B., Jr., and Stephenson, Lloyd W., comparison of Upper Cretaceous deposits of Gulf region and western interior region, XXII, 1629
- Reese, J. B., Jr., Baker, A. A., and Dane, C. H., XVII, 125; XXI, 723, 724, 730, 731, 746, 753, 754, 1259; XXIII, 1167, 1170, 1171, 1172
- Paradox formation of eastern Utah and western Colorado, XVII, 963
- Reese, J. B., Jr., Baker, A. A., Dobbin, C. E., and McKnight, E. T., notes on stratigraphy of Moab region, Utah, XI, 785
- Reese, John B., Jr., Imlay, R. W., and Cobban, W. A., type section of Ellis formation, Jurassic, of Montana, XXIX, 451
- Reeve meta-andesite, CAL, 62
- Reeves, Frank, GAS, 624; PROB, 75, 89, 469, 697, 703
- carbon-ratio theory in light of Hilt's law, XII, 795
- present status of carbon-ratio theory, XI, 637
- Reeves, John R., PROB, 616, 617, 770, 995; SBP, 260; STR I, 61; XII, 179
- accumulation of oil, IX, 1023
- Eldorado oil field, Butler County, Kansas, STR II, 160
- Hebron gas field, Potter County, Pennsylvania, XX, 1019
- inclusion of petroleum in fossil cast, IX, 667
- New Albany shale of Indiana, review, VII, 85
- oil shales of Indiana, review, V, 108
- possibility of fusing oil sands when shot, XII, 87
- production of oil in Indiana, IX, 317
- review, X, 452
- value of relief models and a simple method for their construction, IX, 340
- Reeves, John R., and Davies, N. C., subsurface distribution of Hamilton group of New York and northern Pennsylvania, XXI, 311
- Reference maps (Mexican), list of, MEX, 248
- References (See Bibliography)
- Alaska Peninsula, FOP, 12; XXV, 1444
- Alberta, Canada, XI, 259
- Alberta oil sands, FOP, 24; XXV, 1456
- Amoura shale, Costa Rica, XXVI, 1655
- Anahuac formation, XXVIII, 1368
- anhedrite-gypsum of Blaine formation, XVIII, 1311
- anisotropy in apparent-resistivity curves, XIX, 57
- Anse la Butte dome, XXVII, 1156
- application of X-ray methods, RMS, 628
- applications of geothermics to geology, XVIII, 36
- Arbuckle Mountains, XVIII, 568
- bacteria in marine sediments, RMS, 425
- Balcones, Luling, and Mexia fault zones in Texas, XXIX, 1737
- Balcones and Mexia fault zones, Texas, X, 1268
- Bamberg balances, X, 1208
- Barbers Hill field, Texas, IX, 973
- barred basins and source rocks of oil,

- (References)
- XXI, 1156
- base exchange in relation to composition, XVIII, 366
- base exchange in relation to sediments, RMS, 464
- beaches, RMS, 216
- Belle Isle dome, GC, 1039; XIX, 650
- Big Hill dome, Texas, IX, 737
- biological oceanography, RMS, 151
- bottom-sampling apparatus, RMS, 662
- Brazer and lower Wells section at Dry Lake, Utah, XXIX, 1155
- calcium chloride waters from oil fields, IX, 1087
- Cambrian of Mid-Continent, XXV, 1699
- Canada, natural gas fields of Ontario, GAS, 87
- Carboniferous-Permian boundary in Russia, XXIV, 294
- Carboniferous rocks of the Ouachitas, footnotes, XVIII, 972-1009
- Central America, XXIII, 1417
- central Colorado, XVII, 373
- Chinese geology, XXVIII, 1429
- Cincinnati Arch region, GAS, 879
- classification of oil and gas accumulations, XXIX, 1754
- Clay County, Texas, STR II, 555
- Clay Creek dome, GC, 762; XX, 73
- Coastal Plain deposits of Texas, XVII, 486
- Comodoro Rivadavia oil field, XVI, 576
- conglomerates of southern California, XXIV, 670
- continental drift hypothesis, CD, 3, 105
- continental shelf sediments, RMS, 229
- conversion of fatty and waxy substances into petroleum hydrocarbons, XVII, 1264
- Corpus Christi structural basin, GC, 307; XIX, 354
- Cretaceous of Central America and Mexico, XXVIII, 1190
- Cretaceous of Texas, XIII, 522
- Crocker Flat landslide area, California, XXVI, 1631
- Damon Mound, Texas, IX, 534
- deep-sea sediments of Indian Ocean, RMS, 407
- Desmoinesian and Missourian in Oklahoma and Kansas, XXVII, 640
- development of Cincinnati arch, XXIII, 1852
- developments in southeastern states in 1944, XXIX, 834
- developments in West Texas and southeastern New Mexico in 1943, XXVIII, 831, 832
- Devonian and Mississippian inliers of southwestern Pennsylvania, XXV, 163
- Devonian areas of Paraná Basin, XX, 1235
- diastrophism in Corpus Christi area, GC, 249; XVII, 961
- disseminated oil of Corpus Christi area, XVI, 407
- early studies in petroleum geology, XIV, 614
- East Coast district, New Zealand, X, 1258
- eastern United States, FOP, 139; XXV, 1571

- (References)
- effects of transportation on sedimentary particles, RMS, 45
- environments of origin of black shales, XXIII, 1197
- Eocene of Chico Martinez Creek, California, XXVII, 1385
- olian deposits in marine sediments, RMS, 502
- estimation of gas reserves, XII, 1104
- Etchegoin sand and San Joaquin clay, XVIII, 498
- European oil and gas occurrences, XVIII, 745
- faecal pellets, RMS, 523
- field photography for geologists, XX, 214
- Five Islands, Louisiana, IX, 795
- Florida and Bahama marine calcareous deposits, RMS, 293
- fluid mechanics of salt domes, GC, 107; XVIII, 1203
- foraminifera, VII, 529
- foraminifera and ostracoda in north Texas, XXVII, 1080
- foreign literature on problem of petroleum generation, XX, 1237
- foreign petroleum resources, VII, 593, 698; VIII, 251, 352, 678, 834; IX, 368, 672, 815, 911
- future oil provinces in Pacific Coast states, FOP, 25; XXV, 1457
- gas in Germany, XVIII, 734
- gas in Washington, Idaho, Oregon, and Utah, GAS, 242
- geological calendar, XXIX, 1042
- geological developments in West Texas and New Mexico in 1941, XXVI, 1011
- geology of Alaska, FOP, 14; XXV, 1446
- geology of California, CAL, 319-327
- geology of coastal southeast Texas, XIV, 1319
- geology of Cuba, XVI, 552
- geology of glauconite, XIX, 1600
- geology of Gulf Coast salt domes, PROB, 630, 665, 666, 677
- geology of Honda district, Colombia, XXVI, 836
- geology of Huntington Beach area, XVIII, 342
- geology of Kettleman Hills field, XVII, 1195
- geology of New Guinea, XXVII, 1267
- geology of Northwest Basin, Australia, XX, 1070
- geology of West Texas and southeastern New Mexico, XXVII, 751
- geology and oil resources of California, SBP, 92
- German salt domes, IX, 1267
- glauconitization, RMS, 512
- Gondwana rocks of Brazil, XIX, 1776, 1802
- graptolites, XXVII, 1392
- gravity anomalies, XII, 897
- Hockley dome, Texas, IX, 1060
- Hoskins Mound salt dome, Texas, GC, 855; XX, 177
- hydraulic theory of oil migration, VII, 213-224
- Imperial Valley, California, FOP, 36; XXV, 1468
- insoluble residues, XXI, 331
- interior salt domes of Louisiana, X, 290
- investigation of source beds of petroleum, SBP, 8
- Iowa series in Illinois, XXIV, 236

(References)

- Jennings field, Louisiana, X, 92
 Jurassic formations of Gulf region, XXVII, 1530
 land-locked waters and black muds, RMS, 369
 late Paleozoic crustal movements, XIX, 1304
 late Paleozoic stratigraphy of Gore area, XXVI, 1397
 Luling field, Texas, IX, 653
 magnetic field balances, X, 1199
 magnetometer and torsion-balance surveys, XIII, 1186
 manuscript, review, VI, 488
 maps of German salt domes, IX, 1268
 Mesozoic of Mid-Continent, XXV, 1705
 Mexican fields, MEX, 237, and footnotes
 microflora of oil waters, XVII, 64
 micropaleontology, macropaleontology, and stratigraphy of Mexico, XX, 444
 microscopic subsurface work, XV, 751
 Midway fauna of northwestern Louisiana, XXV, 742
 mineral analysis of sediments, RMS, 613
 Miocene paleogeography of California, X, 136
 Mississippian of Mid-Continent, XXV, 1701
 Monterey shale of California, XII, 981
 movement of gases through glass, XXIV, 1446
 natural gas in Bend Arch district, Texas, GAS, 648; XVIII, 891
 natural gas in eastern Kansas, GAS, 509
 natural gas in Quebec and maritime provinces, GAS, 111
 natural gas and oil in India, XVIII, 313
 neglected Gulf Coast Tertiary microfossils, XXVI, 1198
 Nemaha Mountains region, Kansas, STR I, 72; XI, 931
 New Guinea, XI, 175
 normal geothermal gradients, XIX, 115
 northwestern Alaska, FOP, 12; XXV, 1444
 Oakville, Cuero, and Goliad formations in Texas, XXIX, 1732
 oil in Limagne area, France, XVI, 832
 oil in Oklahoma-Kansas zinc-lead field, XVII, 1445
 oil and gas possibilities of France, XVI, 1138
 oil fields of Germany, XII, 498
 oil possibilities of South America, XXIX, 561
 oil prospects in Alabama, FOP, 149; XXV, 1581
 oil prospects in Anadarko-Panhandle region, FOP, 89; XXV, 1521
 oil prospects in Big Horn Basin, FOP, 52; XXV, 1484
 oil prospects in Black Mesa Basin, FOP, 72; XXV, 1504
 oil prospects in California, FOP, 31; XXV, 1463
 oil prospects in Cincinnati arch area, FOP, 142; XXV, 1574
 oil prospects in Colorado, FOP, 59,

(References)

- 64; 66; XXV, 1491, 1496, 1498
 oil prospects in Colorado River Salt Basin, FOP, 70; XXV, 1502
 oil prospects in Edwards plateau, FOP, 101; XXV, 1533
 oil prospects in Florida, FOP, 148, XXV, 1580
 oil prospects in Georgia, FOP, 147, XXV, 1579
 oil prospects in Hudson Bay and James Bay region, FOP, 109; XXV, 1541
 oil prospects in Magdalen Islands, FOP, 123; XXV, 1555
 oil prospects in Maritime provinces of Canada, FOP, 121; XXV, 1553
 oil prospects in Mississippi, FOP, 153; XXV, 1585
 oil prospects in Montana, FOP, 42, 43, 46; XXV, 1474, 1475, 1478
 oil prospects in Montana and Wyoming, FOP, 50; XXV, 1482
 oil prospects in Nebraska, FOP, 82; XXV, 1514
 oil prospects in Newfoundland, FOP, 130; XXV, 1562
 oil prospects in North and South Dakota, FOP, 77; XXV, 1509
 oil prospects in northern Mid-Continent, FOP, 85; XXV, 1517
 oil prospects in Oklahoma-Arkansas region, FOP, 94; XXV, 1526
 oil prospects in Ontario, FOP, 118; XXV, 1550
 oil prospects in Prince Edward Island, FOP, 122; XXV, 1554
 oil prospects in Quebec, FOP, 125; XXV, 1557
 oil prospects in Rocky Mountain region, FOP, 39; XXV, 1471
 oil prospects in San Juan Basin, FOP, 75; XXV, 1507
 oil prospects in Tennessee, FOP, 154; XXV, 1586
 oil prospects in trans-Pecos Texas, FOP, 105; XXV, 1537
 oil prospects in Uinta Basin, Utah and Colorado, FOP, 66; XXV, 1498
 oil prospects in Washington, FOP, 29; XXV, 1461
 oil prospects in west Texas and New Mexico, FOP, 97, 101; XXV, 1529, 1533
 oil prospects in Wind River Basin, FOP, 53; XXV, 1485
 oil prospects in Wyoming, FOP, 58; XXV, 1490
 Ordovician of Mid-Continent, XXV, 1700
 Ordovician graptolites, XVII, 1435; XXVI, 1775
 organic content of recent marine sediments, RMS, 451
 origin of petroleum, XV, 626; XX, 298
 orogeny of Urals, XXI, 1461
 Osage formation of southern Ozarks, XVIII, 1158
 Ouachita orogeny, XIV, 72
 Ouachita peneplain, Arkansas-Oklahoma-Texas, XII, 1014
 Paleogene of Barbados, XXIV, 1607
 paleontology as used in search for oil, XXVIII, 908
 Palestine, XI, 148
 pelagic sediments of North Atlantic Ocean, RMS, 394
 Pennsylvanian of Mid-Continent, XXV, 1702

(References)

- Pennsylvanian climates and paleontology, XIV, 1296
 Pennsylvanian rocks of New Mexico, XXIV, 178
 permeability of porous media, XVIII, 189
 Permian of Mid-Continent, XXV, 1704
 Permian of northwestern Oklahoma, XIV, 173; XV, 432
 Peru, XII, 39
 petroleum and allied substances, for 1919-1920, review, VII, 302
 petroleum geology of Uruguay, XIX, 1218
 petroleum research in northern Africa, XVI, 466
 petrological relations of sediments of southern North Sea, RMS, 347
 physical processes in ocean, RMS, 136
 Pine Prairie dome, Louisiana, IX, 755
 Pliocene of Los Angeles Basin, XVIII, 811
 pre-Cambrian of Mid-Continent, XXV, 1698
 present tectonic state of the earth, XX, 878
 pressure metamorphism of bituminous rocks, XVI, 1030, 1031
 problem of crooked holes, XIII, 1159
 problem of well spacing, XXVI, 119
 problems affecting search for future oil provinces, FOP, 7; XXV, 1439
 producing sands in Arkansas and Louisiana, footnotes, VII, 363-367
 properties of clay, RMS, 490
 publications of United States Geological Survey, by Charles T. Lupton, XX, 514
 Quaternary deposits of Texas Coastal Plain, XXIX, 1720
 radioactivity in rocks and petroleum, XXIV, 1546
 radioactivity of soil gases, XVIII, 68
 radioactivity of some Paleozoic shales, XXIX, 21
 radioactivity and petroleum genesis, XXVIII, 950
 rate of sedimentation, RMS, 414
 recent development in Illinois, XXIII, 822
 recent sedimentation and search for petroleum, XXIX, 1259
 regional investigation, Oklahoma and Kansas, XIX, 970
 regional metamorphism of coal in West Virginia, XXVII, 1223, 1227
 regional stratigraphy of Mid-Continent, XXV, 1698
 relation of oil and gas pools to unconformities in the Mid-Continent region, footnotes, PROB, 761-782
 relation of water analyses to structure and porosity in West Texas Permian basin, PROB, 889
 research, selected, XXIX, 1668
 resistivity and potential-drop-ratio methods in oil prospecting, XVI, 1333
 Reynosa problem and origin of caliche, XVII, 520
 rôle of structure in accumulation of petroleum, STR II, 711
 Roumanian oil fields, IX, 156
 Roumanian salt domes, IX, 1198, 1266
 Russia, XI, 504, 512
 Sacramento Basin, California, FOP, 34; XXV, 1466
 Salina basin, Kansas, XII, 179

(References)

- salt-dome cap-rock minerals, GC, 131, XVIII, 224
 salt domes of Louisiana, SD, 342, 395, 436, 468
 salt domes of Texas, SD, 496, 545, 599, 642, 717, 771
 sandstone dikes, XIV, 420
 search for oil in Italy, XVI, 1158
 sedimentary conditions on continental shelf off east coast of United States, RMS, 244
 sedimentary data, RMS, 591
 sedimentation, XXIV, 376
 sediments of Baltic Sea, RMS, 321
 sediments of East Indian archipelago, RMS, 354
 sediments of fresh-water lakes, XXV, 848
 sediments of North Sea, RMS, 339
 sediments off California coast, RMS, 281
 Sespe formation, California, XIII, 506
 Seven Rivers formation, New Mexico, XXVI, 98
 Silurian and Devonian of Mid-Continent, XXV, 1701
 South Permian basin, footnotes, GAS, 422, 423
 south Texas salt domes, IX, 589
 Spindletop dome, Texas, IX, 612
 stratigraphic nomenclature, XXV, 2201
 stratigraphy of Anzoátegui, Venezuela, XXVIII, 27
 stratigraphy of Appalachian area, SBP, 356
 stratigraphy of Rocky Mountain region, SBP, 196; XVII, 167
 stratigraphy, western Texas and southeastern New Mexico, XV, 1091
 stratigraphy and occurrence of oil and gas in East Texas region, SBP, 296
 stratigraphy and occurrence of oil in West Texas district, SBP, 287
 stratigraphy and oil zones of Mid-Continent area, SBP, 257
 study group reports, XXIII, 1275
 subsurface formations of South Texas, XXIX, 1468
 Sulphur dome, IX, 495
 technique of testing large cores of oil sands, XXVII, 83
 tectonic structure of Northern Andes, XVII, 226
 tectonics of southeastern Caucasus, XVIII, 670
 temperature gradient in Pechelbronn, XIII, 1272
 theory of continental spreading, XIX, 1815
 thickness and depth of strata, XVIII, 820
 thrust faulting in Temblor Range, XXV, 1342
 tidal flat deposits, RMS, 205
 tidal lagoon sediments on Mississippi delta, RMS, 194
 torsion balances, X, 1208
 transportation of detritus by moving water, RMS, 29
 Transylvanian salt domes, IX, 1267
 Trinity group, XII, 1092
 Turner Valley gas and oil field, XVIII, 1443
 upper Des Moines and lower Missouri series, XXV, 72

(References)

- upthrust of salt masses of Germany, IX, 438
 use of drilling time in logging wells, XXIII, 1834
 Vaqueros formation of California, XIX, 534
 vertical distribution of bacteria in marine sediments, XX, 268
 Vicksburg foraminifera, GC, 357; XIX, 1667
 Vinton salt dome, Louisiana, XII, 394
 Viola limestone in Oklahoma, XVII, 1434
 water cones and sheaths in oil wells, XXIV, 2178
 West Edmond field, XXIX, 720
 western Canada, FOP, 21; XXV, 1453
 Woodbine sand, Texas, footnotes, X, 613-624
 Yakataga district, Alaska, FOP, 11, XXV, 1443
 zone of *exogyra cancellata*, XVII, 1353
 zones in Alberta shale, XVIII, 1415
 Refined product prices, various, relationship among, XXIII, 778
 Refined products, lag of crude price adjustments behind changes in prices of, XXIII, 787
 Refined products and crude oil, price data on, XXIII, 780-786
 Refineries in Michigan, XXIV, 992
 in Middle East, XXVIII, 920
 Refinery crude runs to stills, XXVII, 981
 Refinery margin on oil products, XXIII, 769
 Refining, demand, XXV, 1267
 of crude petroleum, XXI, 176
 Refining capacity, XXV, 1288
 Refining margin, reason for narrowing, XXIII, 776
 Reflected anticlines, PROB, 619
 Reflected buried hills, PROB, 618
 in oil fields of Persia, Egypt, and Mexico, X, 422
 Reflected ray in X-ray studies, RMS, 618
 Reflection of crystal plane on flat plane camera, RMS, 623
 Reflection method of exploration, introduction of, GC, xi
 Reflection seismic investigation of West Ranch lease, XXVIII, 199
 Reflection-seismic method, use in outlining structure, XXV, 1351
 Reflection seismic technique in exploration, XXVI, 1220
 Reflection seismic work in Armour field, XXIII, 880
 Reflection seismograph, XXI, 201; XXVI, 1205; XXVIII, 575, 915; XXIX, 814
 application of, XVI, 1204
 discovery of Sejita structure due to, XXIV, 483
 discovery of Valentine (LaRose) dome, Louisiana, by, GC, 1040; XVIII, 543
 importance in discovery of La Rosa field, XXV, 300
 main exploratory method in Gulf Coast developments, XXIII, 872
 use of, at Wasco field, XXIII, 935
 used at North Crowley, Louisiana, XXII, 744
 value in discovering microscopic leakage of oil and gas, XXIV, 860

- Reflection seismograph and torsion-balance surveys, Gillis English Bayou field discovered by, XXVIII, 1292
 Reflection-seismograph computing techniques, XXVIII, 615
 Reflection-seismograph data, interpretation of, XXVIII, 627
 Reflection seismograph exploration in Louisiana, XXIX, 794
 in Louisiana Gulf Coast in 1944, XXIX, 799
 Reflection-seismograph maps of La Rosa area, XXV, 302-304
 Reflection-seismograph methods responsible for discovery of Paloma oil field, XXIV, 742
 Reflection seismograph records in California, correlation of, XVII, 257
 Reflection-seismograph structure maps of Eola area, Avoyelles Parish, Louisiana, XXIV, 709, XXV, 1366
 Reflection-seismograph survey, XXII, 705
 Louisiana salt dome fields located by, XXVIII, 1258, 1259, 1263, 1266, 1269, 1274, 1280, 1283, 1286, 1292, 1298
 South Houston area, XXIX, 213
 Reflection-seismograph surveys responsible for fields in Wyoming, XXIII, 919
 Reflection seismograph work in Rio Bravo field, XXIV, 1330
 in South Cotton Lake field, XXV, 1905
 in Steuben County, XXIX, 666
 Reflection shooting, fundamental assumptions, XXVIII, 616
 Reflection-shooting methods of measuring velocities, XXVIII, 620
 Reflection survey, first oil-field discoveries in California made by, in 1936, XXI, 977
 of Edna gas field area, Jackson County, Texas, XXV, 108
 Reflection surveys, correlation methods in, XVIII, 120
 Reflections on flank of Allen dome, XXVII, 59
 on north side of Hoskins Mound dome, XXVII, 59
 Reflectivity, SBP, 73-77, 394-398.
 (See also Color)
 measured, median reduction number and median nitrogen content related to, with respect to nitrogen-reduction ratio, XXV, 1928
 measured, median reduction number related to, with respect to texture, XXV, 1930
 measured, of sediments from six oil-producing regions of United States, median reduction number related to, XXV, 1931
 of samples, vertical variation of reduction number and, XXV, 1932
 relation of, to reduction number, 1926
 Reflectivity and reduction number of lithified sediments, scatter diagram representing quantitative relation between, XXV, 1924
 Reflectometer for measuring color, SBP, 73, 74
 Refraction, evaluation of petroleum in oil sands by its index of, XXI, 1464
 of tidal waves, RMS, 130
 Refraction anomalies, XXIV, 1408
 Refraction anomaly shown at North Crowley oil field an indication of

- (Refraction)
annularity, XXIV, 1458
Refraction fan, North Crowley oil field, Acadia Parish, Louisiana, XXIV, 1410
Refraction fans, Turtle Bay oil field, Chambers County, Texas, XXIV, 1410
Refraction method of salt-dome exploration, XV, 1316
Refraction seismograph, MEX, 222; XXIII, 872; XXVI, 1800, XXVIII, 915
fan method for use of, XXIV, 1406
Refraction seismograph and torsion balance, XXI, 200
Refraction seismograph development in Louisiana, XXV, 1012
Refraction-seismograph work in California, XXIV, 1710
Refraction survey of Gulf Coast of Texas and Louisiana for shallow salt domes, most outstanding of all individual techniques of prospecting, XXIV, 1392
Refraction work, depth calculation in, XVI, 1212
Refractive index, RMS, 71
determination of, RMS, 604
of liquids, effect of, on optical properties of clays, RMS, 469
of petroleum, method of determining, XXI, 1466
of various paraffines, relation between solidifying point and, XXI, 1469
of Venezuelan petroleum oils, XXI, 1471
of water, RMS, 68
relation of, to specific gravity and A.P.I. gravity for some Venezuelan crudes, XXI, 1471-1475
significance of, XXI, 1465
Refractive-index method for evaluation of oil sands, XXI, 1475
Refractive indices and specific gravities of Pennsylvanian and Russian crudes, XXI, 1470
Refugan, MSC, 114, 115, 179, 181, 188, 196, 220, 317, 336, 354, Figs. 6 and 14 (in pocket)
of California, MSC, 174
upper, MSC, 172, 178, 196
Refugian foraminifera, MSC, 78, 102, 152
comparison with Vicksburg species, MSC, 177
Refugian species, MSC, 110
Refugian stage, MSC, 33, 79, 101-103, 108, 109, 111, 160, 161, 174, 175; SC, 91; XX, 1637
at Canada de Santa Anita, MSC, 100
of California Tertiary, foraminifera typical of, XXIV, 1930
of Pacific Coast Tertiary, MSC, 99; XX, 215
type area of, MSC, 100
Refugian time, paleogeographic map of California during, XXVIII, 967
Vallecitos channel in, XXVIII, 966
Refugian-Zemorian-Saucesian sequence, MSC, 176, 177
Refugio, McFaddin-O'Conner, Greta, Fox, White Point, and Saxet fields, Texas, GC, 664; XVIII, 519
Refugio, Texas, characteristics of Eocene oil at, PROB, 123
exceptional association of oil and water in producing zones at, GC, 669; XV, 953; XVIII, 524
Refugio County, Texas, GC, 665
Greta oil field, GC, 648
map showing location of Refugio, Fox, Greta, and O'Conner productive areas, XXII, 1186
La Rosa field, XXV, 300
Refugio dome, XXIX, bet. 508 and 509
Refugio oil and gas field, Refugio County, Texas, GC, 670; XVIII, 525; XXII, 1184, XXVIII, 1459
cross sections, XXII, 1201, 1210
development of, GC, 665, XVIII, 520; XXII, 1189
flora, XXII, 1198
fossils, XXII, 1198
maps showing oil and gas productive areas, XXII, 1190, 1193
oil production, XXII, 1214
oil and gas productive area of, XXII, 1186
pertinent data, XXII, 1215
stratigraphic column, XXII, 1194
surface geology and structure of, XXII, 1195, 1197
subsurface geology and structure of, XXII, 1198
type well log of, XXII, 1196
Refugio pool, XXVI, 1006
Refugio Valley, MSC, 65
Regan, J. H., XXII, 1105
Reger, David B., PROB, 97; SBP, 357, X, 941; XI, 291, 581, 588, XII, 810, 815; XIV, 806; XXVII, 1200, 1215; XIX, 871
Copley oil pool of West Virginia, STR I, 440; XI, 581
gravity of oils in Appalachian province, PROB, 101
oil and gas development in West Virginia for year 1920, V, 80
recent oil and gas development in West Virginia, IV, 27
Shinnston oil pool, Harrison County, West Virginia, STRAT, 830
Regina basin, GAS, 7
Regional alteration, porosity and crushing strength as indices of, X, 939
Regional change in fixed carbon of same amount and in same direction in all of coal beds analyzed, XXVII, 1211
Regional geologic studies for oil and natural gas, XXVII, 1387
Regional geology of Dakota basin, XXVI, 1557
discussion, XXVII, 90
Regional geology of the earth, XXII, 929
oil possibilities of South America in light of, XXIX, 495
Regional magnetic anomalies, XVI, 1201
Regional map showing location of Amelia, XXIII, 1636
Regional mapping, XV, 369
Regional maps, generalized, XXIX, 1254
Regional metamorphism, PROB, 151, 167
causes of, in southeastern West Virginia, XXVII, 1215
method of representing, XXVII, 1209
Regional metamorphism of coal in southeastern West Virginia, XXVII, 1194
discussion, XXVII, 1225
Regional metamorphism of coal in West Virginia, references on, XXVII, 1223, 1227
Regional relations, Goldsmith field, (Regional)
XXIII, 1540
Regional relationship of siliceous residues in north-central Texas, XXIX, 424
Regional seismic velocity map, San Joaquin Valley, XXV, 1354
Regional seismic velocity variation, XXV, 1353
Regional sinking, PROB, 626
Regional stratigraphy of Mid-Continent, XXV, 1619
Regional strike, PROB, 257
Regional structural aspects in search for oil, XXI, 205
Regional structural basins, examples of, STR II, 703
Regional structural influence, Illinois basin, zones of, XXIII, 1360
Regional structure, importance of, STR II, 701
of Cretaceous on Edwards Plateau of southwest Texas, XVI, 691, 944
of Gondwana, CD, 205
Wyoming, Colorado, and New Mexico, PROB, 720
Regional studies, general scope of, SBP, 80-87
use of electrical logging in, XXIII, 1304
Regional subsidence, PROB, 627
Regional subsurface map, South Cotton Lake area, XXV, 1907
Regional subsurface stratigraphy and structure of Florida and southern Georgia, XXVIII, 1673
Regional surveys, XIX, 23
Regional unconformities, geologic conditions revealed below, XX, 527
Regional uplifts, examples of, STR II, 702
Regional variations in composition of natural gas in Appalachian province, XXII, 1153
Regional variation in reduction number of sediments of same color, XXV, 1930
Regina Oil Company, SD, 504
Regressions of sea in Baltic Sea, RMS, 300
Regressions and transgressions of sea, in Oligocene, MEX, 140
Regressive sand wave, RMS, 17
Reich, Hermann, XXII, 495
angewandte geophysik für Bergleute und Geologen, review, XVIII, 149
Angewandte Geophysik für Bergleute und Geologen, Zweiter Teil, review, XIX, 126
subsurface of Schleswig-Holstein in light of seismic refraction surveys, review, XXII, 494
Reich as background for prospecting for mineral deposits, geophysical survey of XXII, 494
Reiche, Parry, XX, 491, 492; XXVII, 192; XXVIII, 475, 495, 496, 498, 499, 513
review, XXVIII, 566
Reichenbach, XIX, 485, 486
Reid, XI, 34
Reid, A., and Evans, P., drilling mud: its manufacture and testing, review, XXI, 812
Reid, Harry Fielding, XI, 836; XVII, 710; XIX, 801; XX, 872; XXV, 2181
Reid, J. A., CAL, 95
Reid, Walter, GAS, 892
Reid, William McCormick, memorial

(Reid)

- of, XXVII, 1031
 Reid pool, XXV, 1080
 Reidsmeister, C., XXI, 1285
 Reiff, Allan Eugene, memorial of, XVII, 1156
 Reilly, P. J., GAS, 997; MEX, 200
 Reimers, Hans, and Lehnhard, P. J., XXIV, 1363
 Reinbeck stage of North Sea, RMS, 332
 Reinecke, L., XIX, 417
 Reiner, Markus, and Bingham, E. C., XVIII, 1181
 Reinhardt, Philip W., CAL, 139, MSC, 65; XII, 1023; XIII, 493, 494, 502, XXIV, 1771
 origin of Sespe formation of South Mountain, California, XII, 743
 Reinhardt, Philip W., and Schenck, Hubert G., MSC, 53, XX, 492
 Reinhardt, Philip W., Schenck, Hubert G., and Hobson, H. D., MSC, 53
 Reinhold, XIV, 567
 Reinhold camera for use in orientation of cores, XIV, 567
 Reinsch, P. F., XXV, 1245
 Reis, H., XIII, 594
 Reiser gas field, Texas, STR I, 406; XV, 765
 Reiss, John W., memorial of, XXVII, 1279
 Reistle, C. E., Jr., XIX, 1059
 Reistle, C. E., Jr., and Lane, E. C., XVI, 410
 Reitdebrook field, XXIII, 965
 Reitemeier, R. F., RMS, 535, 537
 Reiter, W. A., XVIII, 1508, 1519
 highest Taylor chalk in Jacksonville Embayment, Texas, XIV, 322
 Reiter Foster pool, PROB, 767
 Reith, Colin, XX, 780
 Reitlinger, E., Beljaev, G., and Rausser-Cernousova, D., Carboniferous foraminifera of the Samara Bend, review, XXV, 1943
 Rejuvenated structures in Rocky Mountains, XXVIII, 432
 Rejuvenation, effect of, XIII, 18
 Reklaw formation, XXIV, 1917
 Reklaw member of Mount Selman formation (Trk) (Eocene), SBP, 294, 335-349, 416
 Relation between crude oil and product prices, XXIII, 765
 between structure and production in Sallyards field, Kansas, V, 276
 of base of redbeds to oil pools in portion of southern Oklahoma, V, 173
 of buried granite in Kansas to oil production, IV, 255
 of drilling time per foot to porosity of Permian limestone in Goldsmith pool, XXIII, 1822
 of initial production to ultimate production of wells completed in Smithwick (Gray) limestone, Breckenridge field, Stephens County, Texas, XXV, 1589
 of micro-organisms to generation of petroleum, PROB, 35
 of mountain folding to oil and gas fields of southern Oklahoma, V, 32
 of oceanography to sedimentation, RMS, 48
 of organic matter to color of sedimentary rocks, XXV, 1921
 of phenomenal rise of water levels to a defective gas well, Harris County, Texas, XXIX, 253

(Relation)

- of porosity of quartz sandstone to carbon ratio of associated coals, XXI, 76
 of quality of oil to structure at El Dorado, Arkansas, VII, 350
 of radioactivity, organic content, and sedimentation, XXIX, 1470
 of Rough Creek fault of Kentucky to Ouachita deformation, XXII, 1682
 of Upper Cretaceous to Eocene structures in Louisiana and Arkansas, VII, 379
 Relations in origin between coal and petroleum, XIX, 937
 of stratigraphy and paleogeography to petroleum geology, III, 286
 Relationship between unconformities and petroleum, PROB, 783
 of accumulation of oil to structure and porosity in Lima-Indiana field, PROB, 521
 of crude oils and stratigraphy in parts of Oklahoma and Kansas, XXV, 1801, XXVI, 284
 of sediments to environment, South Atlantic Ocean favorable for study of, XXIII, 1666
 of unconformities to oil and gas accumulation, XXIV, 2022
 Relative age of major and minor folding and oil accumulation in Wyoming, V, 49
 Relative organic content, RMS, 434
 Relative porosity and permeability of producing formations of Hugoton field as indicated by gas withdrawals and pressure decline, XXIV, 1798
 Relative value of species of smaller foraminifera for recognition of stratigraphic zones, VII, 517
 Relative volatility, SBP, 63, 394-398
 California, SBP, 120-123, 140-142
 California outcrop samples, SBP, 179, 181
 central California samples, SBP, 140-142
 East Texas, SBP, 316-317, 321
 Gulf Coast, SBP, 340, 344
 Los Angeles Basin, SBP, 120, 122, 123
 Mid-Continent, SBP, 273
 Rocky Mountains, SBP, 227-229
 Rocky Mountains outcrop samples, SBP, 249, 250
 use of, in regional studies, SBP, 81
 variation of, among ancient sediments, SBP, 64
 West Texas, SBP, 287, 288
 Relativity, Einstein's theory of, XXVI, 766
 Relay Creek dolomite member of Whitehorse in Kansas, XXIII, 1804, 1805
 Relay Creek dolomites, XXI, 1542
 Relief off California Coast, RMS, 246
 surface, of particle, XXVI, 1714
 vertical, of production on structure, STR II, 674
 Relief models, value of, and a simple method for their construction, IX, 340
 Reliz Canyon, California, CAL, 10, 11; MSC, opp. iii, 1, 16, 17, 20, 28, 69, 81, 86, 98, 113, 116-118, 121, 123, 125, 127, 128, 165, 169, 170, 181, 184, 198-203, 205, 207, 208, 210-215, 219, 223-225, 229-231, 234-236, 239, 240, 242, 244, 247, 248,

(Reliz)

- 250, 252, 254-258, 260, 262, 265, 266, 269-272, 274, 276, 278-280, 283, 285, 288-291, 298-301, 303, 305-316, 321, 324-326, 329-342, 346-349, 352, 354, 355, Fig. 6 (in pocket)
 correlation and age of Monterey shale of, MSC, 20
 foraminifera from, MSC, 3, 17
 foraminifera from Luisian of, MSC, Pls. XI, XII, XIII, XIV, XV
 foraminifera from Relizian of, MSC, Pls. VIII, X, XI
 foraminifera from Saucian of, MSC, Pls. VII, VIII
 foraminifera from uppermost Luisian, lower Mohanian, and lower Delmontian of, MSC, Pl. XVI
 foraminifera in, indications of depth and temperature, MSC, 18
 lagenidae of, MSC, 15
 Miocene foraminifera in, CAL, 175; MSC, 56
Nonion zonule from, MSC, Fig. 14 (in pocket)
 outcrop section G, SBP, 167-194, 411
 phosphate rock in, CAL, 198
 Salinas shale in, CAL, 175
 section of Monterey shales, MSC, 1, Fig. 4 (in pocket)
 stratigraphic distribution of foraminifera in Miocene shale, MSC, Table I (in pocket)
 Temblor beds in, CAL, 175, 177
 Reliz Canyon assemblages, MSC, 16
 paleogeographic significance of, MSC, 3
 Reliz Canyon foraminifera, ecology of, MSC, 11; Fig. 5 (in pocket)
 Reliz Canyon foraminiferal fauna, MSC, 5, 171, 172
 relation of, to living faunas, MSC, 168
 Reliz Canyon fossils, MSC, 14, 15
 Reliz Canyon section, MSC, 1, 67, 123, 159, 160, 182
 biostratigraphic classification of foraminifera in, MSC, 9, 10
 map of, MSC, 2
 stratigraphy, MSC, 7
 Reliz Canyon shale, MSC, 172
 Reliz Creek, MSC, opp. iii, 1, Fig. 4 (in pocket)
 Relizian, MSC, opp. iii, 114, 128, 153, 158, 159, 162, 164, 183, Table I and Figs. 4, 5, 6, 14 (in pocket)
 lower, MSC, 196-199, 201, 202, 206, 208, 211, 213, 214, 223, 224, 229-231, 234, 241, 244, 247, 249, 251, 252, 257, 258, 260, 262, 264, 265, 268-270, 272, 273, 276, 281, 283, 285, 287-290, 299-302, 305, 310, 312, 315, 319, 324-326, 328, 330, 333-336, 340-342, 344, 352,
 lower and middle, and upper Saucian of Reliz Canyon, Foraminifera from, MSC, Pl. VIII
 Relizian, Luisian, and Mohanian foraminifera, MSC, 166
 Relizian, of Reliz Canyon, foraminifera from, MSC, Pl. X
 upper, MSC, 26, 190, 192, 195, 197-203, 205-208, 210, 212-215, 219, 221, 223-225, 227, 229-234, 236-238, 240, 243, 244, 247-252, 256-262, 264-266, 268-276, 279, 281, 284, 285, 287-290, 297-301, 305, 309-312, 314-316, 318, 319, 322-326, 328, 330-335, 339-341, 343-

- (Relizian)
349, 350, 352, 353
Relizian, upper, and Luisian stages, faunas of, MSC, 19
Relizian and Luisian foraminifera, MSC, 165, Pl XI
Relizian and Mohanian transgressions, MSC, 180
Relizian fauna, MS3, 120, 124
Relizian foraminifera, MSC, 154
Relizian-Luisian contact, MSC, 124
Relizian stage, MSC, 69, 91, 113, 115, 117, 119, 120, 121, 123, 154, 155, 160, 163, 172, 176, 181, 279, 305; XXVII, 1345
area of, MSC, 118
Luisian conformable above, MSC, 123
Relizian substage, lower, MSC, 159
Relizian zone of Klempell (Tmm) (Miocene), SBP, 92-95, 130-153, 167-194, 416
Remeli, Ramann, Shellhorn, and Krause, XIII, 1469
Remo pool, XXIII, 1038
Removal of electrolytes by washing, RMS, 537, 538
Remote source, PROB, 834
Renard, A. F., RMS, 383, 385, 519
Renard, A. F., and Murray, John, XV, 267; XIX, 1593, 1596
Renaud, C. L., memorial of Thomas Mann Prettyman, XXV, 346
Renault, B., PROB, 43; X, 869; XIII, 843
Renault, B., and Bertrand, C. E., VI, 339; XIII, 841
Renault formation, XXIV, 824
in Indiana, Paoli, Mooretown, and Beaver Bend, members of, XXIV, 825
in Kentucky, XXII, 271
Shederville member of, XXIV, 825
unconformable on Aux Vases sandstone and Ste. Genevieve limestone, XXIV, 820
Renault limestone, XXII, 273; XXV, 879
Rendham pool, XXV, 1077
Renewal of water in deeps, RMS, 377
Renfro, H. B., XXV, 438, 2158
Rengarten, V. P., XVIII, 605, 607, 609
Renick, B. Coleman, PROB, 911
airplanes for geologic explorations in inaccessible regions, IX, 947
recently discovered salt domes in East Texas, XII, 527, 677
Renick, B. Coleman, Meinzer, O. E., and Bryan, Kirk, XXI, 860
Renler, Armand, XXIV, 1755, 1757, 1771
Renn, C. E., RMS, 655
Renn bottom sampler, RMS, 655
Renner, O., IX, 1261
Renz, Hans H., *neue Cephalopoden aus der oberen Kreide vom Rio Grande del norte (Mexico und Texas)*, review, XX, 987
stratigraphy of northern South America, Trinidad, and Barbados, review, XXVII, 92
Renz, Hans H., and Sutter, H. H., XXIII, 1242
Reophacidae, MSC, 186
Reophacinae, MSC, 186
Repetto, MSC, 67, Fig. 14 (in pocket)
Bolivina angelina subzone of, SC, 49; XX, 1595
(Lower Pliocene) formation productive at Wilmington oil field, XXII, (Repetto)
1052
Repetto formation, a silt formation, CAL, 208, 254
Adams Canyon, CAL, 229, 231
age, CAL, 254
areal variation of properties of sediments in, SBP, 108, 109
California fields, GAS, 176, 181, 184, 185, 196, 203, 206, 212
correlation, CAL, 214, 230, 231, 236, 303
fauna of, CAL, 246
glauconite from, CAL, 259
outcrop sections N, R, S, SBP, 167-194, 411
San Pedro, CAL, 229, 238, 259, 261
(Tra, Trb, Trc, Trd, Tre, Tru) (Pliocene), SBP, 91-93, 97-130, 144-194, 416
type locality, CAL, 239
Wilmington oil field, XXII, 1056
Repetto Hills, CAL, 228, 240, 314; MSC, 168, SC, 49, 114; XX, 1595, 1660
Repetto Hills section, California, outcrop section S, SBP, 167-194, 410
Replaceability of ions, essential conditions of, RMS, 461
Replacement of oil by water, PROB, 286, 288
Replacement experiments, PROB, 287
summary, PROB, 290
Replacement order of cations, RMS, 537
Replacement theory of accumulation, PROB, 306, 307
of oil and gas migration, PROB, 258, 259
Replacing power of different bases, RMS, 454-456
Report of committee on sedimentation, 1936-1937, XXII, 223
1938-1939, XXIV, 386
1940-1941, XXVI, 1294
Report of medal award committee, XXVIII, 1230
suggested outline for consulting geologists, I, 127
type, on an oil field, outline for, I, 131
Reports, Study Group, XXIV, 363
Representative samples from Playa Del Rey field, California (well 35), SBP, 87-153, 403
from Van field, Texas (well 369), SBP, 292-335, 409
Repressuring, XXVI, 1039
application of permeability of reservoir sand body to, XXV, 1178
Big Sinking field, STRAT, 199, 204
Bush City field, STRAT, 54
Dora pool, STRAT, 433
Griffin field, XXVII, 820
Keokuk pool, XXIII, 243
northeastern Oklahoma fields, XXI, 1006
O'Hern field, STRAT, 738
Olympic pool, STRAT, 470; XXII, 1587
practical, XXII, 189
Shinnston pool, STRAT, 845
Repressuring and water flooding of old sand trends in eastern Kansas, XXI, 1003
Repressuring program at Cunningham field, Kansas, XXI, 524
Reptile bones from Rio Arriba County, New Mexico, XXI, 848
Reptiles, XXV, 135
Republic Oil Company, El Segundo 1 (Republic)
(well 37), SBP, 87-153, 403
Republic Petroleum Company, XXI, 979
Republic Production Company, SD, 443, 611
Fisher 1 (well 324), SBP, 292-335, 408
Republic Production Company-Lutcher Moore, XXIII, 877
Requa, Mark L., IV, 60; VII, 619; VIII, 231
Research, coöperative, problems in oil geology and their advancement through, VI, 509
geologic, in oil industry, XXI, 665
in exploration, outlook for, XXIX, 1203
in petroleum geology, XX, 619
need for, XXVIII, 907
on radioactivity of sedimentary rocks before 1921, XXIV, 1531
selected references on, XXIX, 1668
Research and American Association of Petroleum Geologists, XII, 939
Research and the research committee, discussion, XXIII, 343
Research committee at Los Angeles, March, 1937, XX, 1380
Research committee conference groups, XXIV, 401
Research committee program, XXIX, 1512
Research fellowships, national, XXIII, 1880
Research notes, XX, 612; XXIII, 757, 1868
announcement on, XXV, 177
Research opinion, survey of, XXIII, 436, 978
Research problems, XXIII, 757
Research program, XXVIII, 1543
Research study groups and conferences, XXVII, 1552
Research tool, new library, XXIII, 1567
Research work on fundamental problems most valuable for future advances in geophysical work, XXV, 1262
Resendez shale member, XXVI, 267
Reserve of Lisbon field, XXIII, 319
of oil and gas, discovered, XXIX, 858
of oil and gas, undiscovered, XXIX, 858
Reserve estimates of hydrocarbon fluids, application of, XXVIII, 630
Reserve Oil Company, XXI, 984
Reserve stocks of petroleum in Germany at start of war, XXV, 1280
Reserves according to published estimates compared with actual reserves, XXVI, 1215
Anse la Butte dome, XXVII, 1154
area along Gulf Coast from Mississippi River to south tip of Florida, XXVIII, 801
Arkansas and Louisiana, XXII, 726
Argentina, XXIII, 963
at the petroleum poles, XXVIII, 1502
availability of, XXVII, 726
Border-Red Coulee field, STRAT, 324, 325
British East Indies, XXIII, 964
British India, XXIII, 964
Brunei, XXIII, 964
Burma, XXIII, 964
California resulting from explorations in 1943, XXVIII, 744

(Reserves)

- Coastal Louisiana, XXVII, 738
 Colorado, Montana, and Wyoming in 1943, XXVIII, 789
 crude, of West Texas, additions in 1942, XXVII, 751
 crude-oil, in United States, XXI, 159-163
 decline in, since 1940, XXVII, 973
 developed petroleum, estimation of, XXII, 566
 discovered in California in 1942, XXVII, 865
 discovered in Kansas in 1943, XXVIII, 769
 discovered in north Texas in 1943, XXVIII, 840
 discovery of, in sandstones of Pennsylvanian Minnelusa formation in old Lance Creek field, Niobrara County, Wyoming, XXII, 677
 Dora pool, STRAT, 435
 East Indies, XXVIII, 1502
 Eola field, estimates of, XXV, 1395
 estimated proved, in United States, XXVII, 724
 estimated recoverable crude petroleum, XXVIII, 1496
 estimated total ultimate, number of fields discovered each year in 17-states area grouped according to, XXIX, 1591
 estimation of, XXII, 522
 estimation of natural gas, GAS, 1016, 1035, 1101
 future, in stratigraphic or lithographic traps, XXVIII, 910
 gas, GAS, 1102
 gas, Alberta fields, GAS, 18, 21, 24, 51
 gas, Amarillo district, GAS, 404
 gas, Arkansas Basin of eastern Oklahoma, GAS, 519, 522, 523-527
 gas, Big Horn Basin gas fields, GAS, 294
 gas, Big Lake field, New Mexico, GAS, 422
 gas, California, GAS, vii, 124, 139, 152, 166, 169, 173, 177, 180, 183, 188, 191, 195, 198, 201, 206, 209, 213, 215, 216
 gas, determination from reservoir size or sand thickness, area, and porosity, GAS, 1045
 gas, eastern Kansas, XXIV, 1781
 gas, effect of deviation from Boyle's law on calculation of, GAS, 1040
 gas, Gulf Coast fields, GAS, 696, 717
 gas, Hugoton field, XXIII, 1061
 gas, Interior Highlands of Arkansas, GAS, 564
 gas, Jackson field, Mississippi, GAS, 891, 895
 gas, Kansas, GAS, 507
 gas, locations, GAS, 1098, 1100
 gas, Lost Soldier district, Wyoming, GAS, 312-314, 318
 gas, methods of estimating, GAS, 1017, 1026, 1027
 gas, Michigan fields, GAS, 802, 805, 806
 gas, New Mexico fields, GAS, 434, 438
 gas, New York, XXVII, 838
 gas, Ontario fields, GAS, 82
 gas, Pennsylvania, GAS, 987
 gas, Texas Panhandle field, GAS, 401
 gas, Turner Valley, GAS, 18
 gas, West Texas and southeast New Mexico, GAS, 418, 450, 452
 gas, western Kansas, XXIV, 1781

(Reserves)

- Govenment Wells field, GC, 646, XIX, 1146
 Gulf Coast area, XIV, 1396; XXI, 1062
 Hugoton field, STRAT, 103
 in action, XXVII, 954
 Joe's Lake field, XXIV, 707
 Keokuk pool, XXIII, 245
 Lopez field, STRAT, 695
 maintaining, XXI, 714
 Mexico, XXVIII, 1497
 Middle East, XXVIII, 920
 national, increase of, in 1942, XXVII, 790
 new proved, currently attributable to exploratory drilling in 17 states area, XXIX, 1589
 Noodle Creek pool, STRAT, 716
 northeast Texas, XXI, 1063
 of natural gas in Gulf Coast, GC, xii
 of natural gas wells, estimation of, by relationship of production to closed pressure, VI, 444
 O'Hern field, STRAT, 740
 oil, XXIV, 1074
 oil, in California, XXII, 714
 oil, in California, additions to, during 1938, XXIII, 932
 oil, in south Texas, developments and status of, 1939, XXIV, 1069
 oil, in Ural-Volga district, XXIII, 956
 oil, maintenance of, XXIV, 1720
 oil, of United States mainly in seventeen states, XXIX, 1583
 oil, recognition of need for further, by Office of Petroleum Administrator for War, XXVII, 873
 on base of cumulative production, XXVI, 1216
 Oklahoma, decline in 1942, XXVII, 791
 Pennsylvania, Ohio, and West Virginia, estimates of, XXII, 430
 Persian Gulf, XXVIII, 1490
 Persian Gulf region, XXVIII, 1497, 1503
 petroleum, of Colombia, XXIX, 1139
 petroleum, of Roumania, XXVIII, 1499
 petroleum, of U.S.S.R., XXVIII, 1499
 petroleum, proved in known fields, XX, 3
 possible, in Oriskany in north-central Pennsylvania and south-central New York, XXII, 264
 proved, XXVII, 723
 proved, decrease of annual increment of, XXVII, 955
 proved, in area of eleven states, statistics on, XXVII, 725; XXVIII, 718
 proved, increases in, largely from extension of fields previously found, XXVII, 955
 proved, material additions to, in future years, XXVIII, 1503
 proved, and exploratory drilling in 17-states area, statistics on, XXIX, 1586
 proved crude-petroleum, and estimated new discoveries, XXVII, 974
 proved oil, in United States of America, XXI, 1088
 proved oil, statistics on exploratory drilling and, in area of eleven states, XXVIII, 714
 relation of extent of sand to, XXV, 1309

(Reserves)

- relation of porosity of reservoir rock to, XXV, 1311
 relation of saturation of sand to, XV, 1311
 relation of thickness of sand to, XXV, 1310
 relationship to great crustal depressions, XXVIII, 1503
 Russia, XXVIII, 1490
 Santa Maria Valley oil field, XXIII, 81
 Sarawak, XXIII, 964
 Schuler field, XXVI, 1508
 Six Lakes field, STRAT, 258
 south Texas, geological distribution of, XXIV, 1076, 1077
 south Texas, zones containing, XXIV, 1077
 South Texas fields, XXVII, 745
 statistics on proved, XXVI, 978
 Texas Panhandle, XXIII, 1041
 undiscovered, of partly explored areas, FOP, 1; XXV, 1433
 undiscovered, within producing areas, FOP, 1; XXV, 1433
 U.S.S.R., XXVIII, 1497
 United States, XXVIII, 1495
 United States in 1942, XXVI, 1201
 University field, STRAT, 216, 217, 220
 upper Texas Gulf Coast, XXVII, 734
 Ville Platte field, XXIV, 707
 Wilson Creek, Lance Creek, and Garland fields, XXII, 693
 world's, January 1, 1944, XXVIII, 1492
 Yates dome, XIII, 1550
 Reserves and production data in California, XXIV, 1717
 Reservoir, definition, PROB, 434
 depletion of, XXII, 1242
 determination of original content of, GAS, 1043
 factors determining gas content of a, GAS, 1102
 homogeneous sand, diagram illustrating, XXV, 1306
 irregular sand, diagram illustrating, XXV, 1307
 sulphur gas, GAS, 334
 varying sand-texture, diagram showing, XXV, 1305
 Reservoir and contents, physical properties of, XXVI, 101
 Reservoir beds containing commercial oil or gas, varied character of, XX, 1480
 size of openings in, PROB, 273
 Reservoir behavior, bibliographical summary on, 1931-1939, XXVI, 107
 Reservoir capacity, XVIII, 346
 Reservoir conditions, Amelia field, XXIII, 1653
 as related to well spacing, XXII, 1442
 Buckeye field, GC, 753; XIX, 397
 Carterville-Sarepta and Shongaloo fields, XXII, 1486, 1496
 Conroe field, GC, 806; XX, 753
 North Cowden field, XXV, 617
 oil and gas pools, symposium on, XVI, 861
 Sugarland field, GC, 726
 Reservoir control, GAS, 1029
 Reservoir energy, source of, XXVI, 101
 Reservoir-fluid content, dissimilarity of, XXV, 1315
 Reservoir fluids, properties of, XXVI, 109

- Reservoir groups, XXIX, 1543
 Reservoir mechanics and fluid flow, XXVI, 111
 Reservoir performance of limestone formations, introductory discussion, XXIX, 461
 Reservoir pressure, XXVIII, 230
 Amelia field, XXIII, 1655
 Conroe field, GC, 813, XX, 759
 determination of, XII, 363
 Gay - Spencer - Richardson trend, STRAT, 812
 in closed lenses, XII, 383
 in wells producing from Ellenburger dolomite, XXIV, 130
 maintenance of, XXII, 1238
 Music Mountain pool, STRAT, 504, 506
 North Cowden field, XXV, 617
 of Buckrange sand, XXII, 1496
 of Tokio gas sand, XXII, 1497
 of Tokio oil sand, XXII, 1497
 Ramsey pool, XXIV, 2003
 State Line gas field, XXII, 259
 Tubb pool, XXIV, 128
 Wayne-Dundee field, XXII, 260
 Reservoir pressure and gas-oil ratio versus cumulative oil production, XXVIII, 230
 Reservoir pressure map, Conroe field, GC, 812, 814, 818; XX, 760, 762, 764
 Reservoir-pressure maps, Jones sand, Schuler field, 1504
 Reservoir pressures, PROB, 314, 706
 Reservoir rock, character of, XXVI, 101
 Reservoir rocks, PROB, 18; GAS, 45, 75, 80, 81, 101, 227, 234, 283, 300, 314, 395, 489, 554, 555, 589, 614, 798, 993, 1084, 1085
 Artesia field, New Mexico, STR I, 118
 Bradford field, Pennsylvania and New York, STR II, 415, 420
 California oil fields, X, 895
 Cenozoic and Mesozoic, responsible for major part of oil, XXVIII, 1502
 closure of, at Houston field, Louisiana, STR II, 194
 Copley pool, West Virginia, STR I, 453
 Crinerville field, Oklahoma, STR I, 206
 Elk Basin field, Wyoming and Montana, STR II, 579, 584
 Fairport field, Kansas, STR I, 39
 Garber field, Oklahoma, STR I, 186
 Hugoton field, XXIII, 1058
 Illinois oil field region, porosity, STR II, 120
 Lance Creek field, Wyoming, STR II, 608
 limestone, in Mexican oil fields, PROB, 377
 list of, XXIX, 1541
 Lost Soldier district, Wyoming, STR II, 644
 Michigan fields, XXII, 414
 Nemaha Mountains region, Kansas, STR I, 68
 New York oil fields, STR II, 277
 occurrence in wedge belt of porosity, FOP, 4; XXV, 1436
 Osage County field, Oklahoma, STR II, 389
 Reservoir rocks, Persian oil fields, XVII, 229
 discussion, XVII, 563
 Reservoir rocks, Petrolia field, Texas, STR II, 552
 (Reservoir)
 physical properties of, GAS, 1084
 Pine Island field, Louisiana, STR II, 170, 178
 porosity, XI, 693. (See Porosity of reservoir rock)
 potential, in Stephens field, Arkansas, STR II, 11
 preservation of oil during erosion of, XVII, 827; discussion, XVII, 1271
 relation of source beds to, PROB, 291, 296, 461
 Rock River field, Wyoming, STR II, 617
 Salt Creek field, Wyoming, STR II, 594, 596
 Scenery Hill gas field, Pennsylvania, porosity of, STR II, 450
 Schuler field, XXVI, 1482
 Seminole district, Oklahoma, STR II, 352
 shoestring pools of Greenwood County, Kansas, STR II, 159
 some physical and chemical properties of, bearing on accumulation and discharge of oil, PROB, 825
 suitable, relation of oil and gas fields to occurrence of, PROB, 453
 Tri-County field, Indiana, STR I, 33
 Ventura Avenue field, California, STR II, 30
 West Columbia field, Texas, STR II, 461
 western Kansas, XXII, 676
 Yates field, Texas, STR II, 482
 Reservoir rocks and fluids, elasticity of, with special reference to East Texas oil field, XXVIII, 1032
 Reservoir rocks and stratigraphy, XXIX, 877
 Reservoir size, determination of, GAS, 1042
 Reservoir symbols, XXIX, 1548
 Reservoir traps, elementary, in section, XXIX, 1545
 proposed new classification of, and stratigraphic type oil fields, discussion, XXVII, 539
 Reservoir waters, PROB, 275
 Reservoir zones in Madison beds, XXVI, 326
 Reservoirs, GAS, 106, 121, 1083, 1084
 classification of Eastern Interior, PROB 563
 classification of oil and gas, PROB, 433, 442
 closed by change of porosity, PROB, 444
 closed by local deformation of strata, PROB, 443
 composite and complex, XXIX, 1549
 double trap and triple trap, XXIX, 1570
 fault block, XXIX, 1570
 fault segment, XXIX, 1570
 fault trap, XXIX, 1568, 1569
 fault wedge, XXIX, 1570
 for petroleum, sands of beaches suitable for, RMS, 215
 in zones of fracture, XXIX, 1562
 lateral sand, in West Columbia field, Texas, STR II, 467
 natural, XXIX, 1742
 natural, types of, XXIX, 1745
 on buried hill structures, XXIX, 1566
 overlap pinch-out, XXIX, 1568
 petroleum, classification of, XXIX, 1542
 petroleum, classification of, table, XXIX, 1580
 (Reservoirs)
 piercement trap, XXIX, 1574
 pinch-out trap, XXIX, 1563
 plunging synclinal environments of, XXIX, 1556
 respective, relations between stratigraphic wedge and unconformity conditions and the position of, XXIX, 1565
 sediments of, RMS, 641
 subsurface, fundamental data on, XXVIII, 1754
 typical, in fault segments, XXIX, 1571
 with asphaltic seals, XXIX, 1562
 Residual chert, XXVI, 42
 Residual currents, RMS, 112, 132, 133
 Residual-high oil fields as a result of overlapping rim synclines, XX, 1424, 1425
 Residual highs in southern Waller County area, Texas, XX, 1428
 Residual kaolins, RMS, 483
 Residual sediments on continental shelf, RMS, 243
 Residual theory of origin of oil in McMurray sands, XXII, 1141
 Residue gas, GAS, 1076
 Residue type, standard, for Kulnura grit and Ravensfield sandstone, XXIV, 645
 Residues of Dundee and Detroit River formations, XXI, 326, 330
 of Madison limestone, description of, XXVI, 332-335
 of St. Louis formation, XXIV, 231
 water-insoluble, XXI, 1594
 Residuim, PROB, 118, 122, 123, 129, 140
 Resins, RMS, 435, 443
 Resistance to motion, in Stokes' formula, RMS, 542
 Resistance thermometer, difficulties in use of, XXI, 791
 Resistivities of various kinds of rock, XVIII, 42
 Resistivity, measurement of, XXIII, 1303
 Resistivity and potential-drop-ratio methods in oil prospecting, XVI, 1260
 Resistivity contours, Anderson County, Kansas, area, XIX, 76
 Hebronville area, XIX, 74
 Resistivity curves, classification of resultant, XXIII, 1297
 interpretation complicated by deep invasion, presence of colloidal material, salinity of drilling fluid, XXIII, 1299-1302
 interpretation of, XIX, 37
 resultant, classification of, XXIII, 1297
 theoretical, XIX, 47, 50
 Resistivity diagram, factors affecting, XXIII, 1299
 of electrical log, XXIII, 1296
 Resolute Oil Company, XXI, 995
 Resourcefulness of geologists, significance of, XXIX, 859
 Resources and resourcefulness, XXIX, 857
 Respiration of organisms in sea, RMS, 92, 420
 Response to address of welcome, twenty-fifth annual meeting of the Association, XXIV, 1159
 Responsibilities, mutual, of American Association of Petroleum Geologists, XXIII, 1739

- Resser, C. E., XV, 1065; XXIV, 154
 Restin-Cabo Blanco district, Peru, XII, 36
 Restin formation in Peru, XII, 15
 Restriction of Domengine formation, XXIV, 1733
 of name "Carlos," Grimes County, Texas, XXIII, 1091
Résultats des récentes prospections de pétrole en Afrique équatoriale française, review, XV, 974
 Results from studies of properties of sediments, general summary of, SBP, 394-402
 of recent field studies in Osage, Washington, and Nowata counties, Oklahoma, XXIV, 716
 Results and prospects of deeper drilling in Rocky Mountain fields, VII, 400
 Résumé of development in East Texas during 1937, XXII, 727, 1111
 of Devonian system of West Virginia, XXIV, 1983
 of facts and opinions on sedimentation in Gulf Coast region of Texas and Louisiana, XXIX, 1304
 of geology of Gulf Coastal Plain, VIII, 21
 of oil shale industry, with outline of methods of distillation, IV, 59
 of past years' developments in Kentucky from a geologic standpoint, II, 38
 Retail outlets, overexpansion of, XXI, 186
 Retgers, J. W., XXVIII, 1517
 Retreat and advance of connate water as theory of oil and gas accumulation, XXI, 951
 Rettger, Robert E., SBP, 287; XIII, 1559; XVI, 189; XXI, Pl. A, opp. 1084.
 experiments on soft-rock deformation, XIX, 271
 interpretation of grain of Texas, XVI, 486
 minutes, twenty-ninth annual business meeting, XXVIII, 643
 report of committee for publication for 1939, XXIV, 936
 for 1940, XXV, 979
 Rettger, Robert E., report of committee on applications of geology for 1941, XXVI, 949
 report of secretary-treasurer for 1943, XXVIII, 648
 for 1944, XXIX, 583
 Rettger, Robert E., and Brace, Orval L., minutes of business committee, March, 1944, XXVIII, 677
 Rettger, Robert E., and Buchanan, George S., recommendations of business committee, XXIX, 597
 Rettger, R. E., and Collingwood, D. M., GAS, 664; PROB, 444; XI, 848, 851; XVI, 755, 756; XXI, 1491; XXIX, 1736
 Lytton Springs oil field, Caldwell County, Texas, X, 953
 Rettger, R. E., Carsey, J. Ben, and Morero, J. E., natural gas in West Texas and southeast New Mexico, GAS, 417
 Return to dynamic petroleum prospecting, XXIII, 1743
 Reuss, A. E., MSC, 338; SD, 111; XX, 222
 Reuszer, H. W., RMS, 418; XX, 260, 261
 Reuterskiöld, A., RMS, 313
 Revelle, Roger, RMS, 1, 101, 136, 246, 255, 258, 263, 276; SBP, 70; XXII, 1325; XXVI, 157
 Revelle, Roger, and Fleming, R. H., physical processes in ocean, RMS, 48
 Revelle, Roger, and Shepard, F. P., STRAT, 483; XXVIII, 325
 sediments off California coast, RMS, 245
 Reventadero, MEX, 164, 175
 Reversals of drift toward equator in Tethyc region, CD, 206
 Reverse diagonal shears, XXVII, 1252
 stress diagram, XXVII, 1252
 Reverse fault, XXVII, 1245
 Reverse fault theory of origin of regional upwarps in southeastern Utah, XIX, 1504
 Reverse faulting in Temblor Range, XXV, 1338
 Reverse faults in Black Knob Ridge, XXI, 21
 in faulted zone of Wind River Canyon area, XXIII, 485, 1480
 Reversing thermometer, RMS, 60
 Reverse thrust faulting in Rocky Mountain region, X, 105
 Revert, M., XXIV, 1550
 Review of development in new central Texas oil fields during 1918, III, 163
 Review of developments in Gulf Coast country in 1917, II, 16
 discussion, II, 36
 Review of developments in 1938, Gulf Coast of southeast Texas and Louisiana, XXIII, 871
 in 1940, Gulf Coast of upper Texas and Louisiana, XXV, 1004
 in 1941, Gulf Coast of upper Texas and Louisiana, XXVI, 983
 in 1942, Gulf Coast of upper Texas and Louisiana, XXVII, 730
 Review of exploratory drilling statistics, 1938-1944, XXIX, 1581
 of oil and gas development in northern Louisiana, II, 61
 of oil and gas pools in north Louisiana, VI, 179
 of oil and gas prospects of Australia, XI, 55
 Review of petroleum geology in 1942, XXVII, 1164
 in 1943, XXVIII, 877
 in 1944, XXIX, 1211
 Reviews, suggestions for writing, VII, 88
 Revision of stratigraphy of part of Cretaceous in Tyler basin, northeast Texas, XXIX, 170
 Revoltijo member, XXVIII, 22
Revue de Géologie, review, X, 98
 Reward conglomerate, CAL, 61, 62
 Rewards, system of, XXVI, 1248
 Reworking of sediments, RMS, 197, 201, 202, 214, 232, 235, 259, 269, 275
 in Baltic area, RMS, 310
 in North Sea, RMS, 337
 in old marine deposits, RMS, 234
 in tidal areas, RMS, 202
 on continental shelf, RMS, 235, 243
 Rex chert, XXIV, 629
 Rex chert member of Phosphoria formation in Idaho, Wyoming, and Utah, XXIII, 89; XXIV, 634
 Rey, P., and Oks, M., XXIX, 514
 Reyes, Cafedo, XXIV, 1686
 Reyes, Jorge Muñoz, XXIX, 513
 Reyes, Jorge Muñoz, and Ahlfeld, Friedrich, XXIX, 512
die Bodenschätze Boliviens, review, XXV, 333
 Reyes, Jorge Muñoz, de Paiva, Glycon, and Marlaça, Guillermo, geology of sub-Andean belt of Bolivia, review, XXIV, 1686
 Raymond, Edouard, XXIX, 1130
 Reynolds, D. H., XXVI, 51
 Reynolds, D. H., Means, Eldon A., and Morgan, Lindsey G., application of X-ray crystal analysis to a problem of petroleum geology, XXI, 1333
 Reynolds, Osborne, RMS, 75, 79; XXII, 491
 Reynolds, Roy A., XIII, 946
 memorial of, XXVII, 1169
 Reynolds, W. S., XXIX, 72
 Reynold's number, RMS, 75
 Reynolds oolite, XXIV, 1095; XXVI, 1473
 analysis of oil from, Schuler field, XXVI, 1508
 data on pressure, monthly production, and gas-oil ratio of, at Schuler field, XXVI, 1506
 Schuler field, water analysis, XXVI, 1513
 Reynolds oolitic limestone, XXVI, 1255
 Reynolds oolitic member of Smackover limestone productive in Dorcheat pool, XXIV, 739
 Reynolds oolitic porous zone, XXII, 724; XXVI, 1487; XXVIII, 266
 Reynosa, age relations of, GC, 578; XVII, 516
 Reynosa, Lissie, and Upland Terrace deposits of Coastal Plain of Texas, XVII, 453
 Reynosa, Lower, possible Pliocene age of, GC, 579; XVII, 517
 Reynosa, Oakville, and Lagarto formations, stratigraphy of, between Nueces and Guadalupe rivers, Texas, XVII, 523
 Reynosa caliche, XXI, 497; XXIX, 1715
 in South Texas, GC, 552; XVII, 490
 production of thick beds of, GC, 567; XVII, 505
 Reynosa conglomerate, MEX, 141, 145
 Reynosa continental bed, GC, 561; XVII, 499
 Reynosa Escarpment, Laredo district, Texas, GC, 560, 633; STR I, 393; VII, 537; XIII, 428; XVII, 498; XIX, 1133; XXI, 1422
 relation of, to oil and gas fields of Webb and Zapata counties, Texas, VII, 532
 Reynosa formation, GC, 253, 552; I, 36; IV, 130; XVII, 465, 466, 490, 1196
 Driscoll Ranch, GC, 622; XVII, 818
 (Pliocene and later) (Trn), SBP, 336-344, 416
 thickness, GC, 555; XVII, 493
 Reynosa limestone, GC, 551, 552; XVII, 464, 489, 490
 Reynosa Plain, topography of, GC, 251; XVII, 1194
 Reynosa Plateau, GC, 557, 559; XVII, 495, 497
 map, GC, 552; XVII, 490
 Reynosa problem of South Texas, and origin of caliche, GC, 550; XVII, 488, 1277, 1281, 1534; discussion, XVII, 1277
 Reynosa up-dip, GC, 558; XVII, 496
 Rhaetic beds, XXIX, 501

- Rhaetic formation, Argentina, X, 856
in Mendoza district, XXIX, 499
Rhaetic rocks at Potrerillos in foothills
of Andes, XXIX, opp. 508
Rhenish block, XVI, 173
Rhenish folding, effect of, SD, 192, IX,
1252
Rhenish lines of salt domes, SD, 199,
IX, 1259
Rhenish oil province, XII, 491
stratigraphic section in, XII, 492
Rhenish-Westfalian coal district, ge-
ology of, XXIII, 611
Rheostat, SBP, 52-54
Rhine, Elton, collapsible bit and coring
device for rotary drilling, V, 519
Rhine, RMS, 18, 345
delta of, RMS, 160, 344
Rhine graben, XVI, 1097; XXVIII, 543
Rhine Valley type of oil occurrences,
XVIII, 744
Rhinstreet shale, XV, 179
Rhizammidae, MSC, 184
Rhizopoda, reticularian and radiolarian,
of North Polar Expedition, MSC,
11
Rhoades, Roger, and Mistler, Alvin J.,
post-Appalachian faulting in west-
ern Kentucky, XXV, 2046
Rhodanic orogenesis cause of renewed
elevation of volcanic arc of Lesser
Antilles, XXIV, 1606
Rhodes, C. E., XIX, 833
Rhodes, George I., GAS, 1111, 1140
Rhodes, George L., and Hill, E. G.,
GAS, 1111
Rhodes area, XXVIII, 821
Rhodes sand, V, 404; XXVI, 205
of Strawn formation productive in
Sewell-Eddleman area, XXVI, 206
Rhomboid ripples, RMS, 16
Rhomboidal limestone, XXV, 71
Rhone, RMS, 25
Rhumbler, L., MSC, 13
Rhyolite, MEX, 9, 50
pre-Cambrian, discovered in well in
northwestern Arkansas, IX, 1115
Rhyolitic and andesitic flows, MSC, 115
Rhyolitic outbreaks of Sierra Nevada,
SC, 44; XX, 1590
Rhys Pryce, M. A. AP, XIX, 884
Rhythm in history of earth, XXIX,
1035
of diastrophism, erosion, and subse-
quent deposition, effect on oil
pools, XIX, 881
of Permian seas—a paleogeographic
study, XXVI, 217
of the ages. Earth history in the light
of pulsation and Polar control
theories, XXV, 1421
Riachio Doce district, Brazil, XXI, 307;
XXIX, 551
Riachuelos, fossils at, MEX, 39
Ribbon sand, Cut Bank field, STRAT,
362
Ribbed sandstone, STRAT, 286;
XXIX, 1268, 1284
Ribeyre Island field, XXVI, 1093
Ribolt limestone, XXVIII, 531
Ribstone-Blackfoot area of Alberta,
XI, 256
Ribstone Creek formation in Irma field,
GAS, 25
Ribstone Creek sandstone, XXIX, 1625
Ricardo formation, Barstow faunas, CAL, 222
Ricardo formation, California, CAL, 25,
188, 200, 203, 211, 212, 221, 223,
303, 304, 313
outcrop section U, SBP, 167-194, 411
Ricardo series, SC, 73; XX, 1619
Riccheri, Giuseppe, V, 662
Rice, C. M., dictionary of geological
terms, review, XXIV, 1499
Rice, Elmer, XXIX, 1417
Rice, Elmer M., and Thomas, Norman
L., GAS, 654
Cretaceous chalks, Texas and Arkan-
sas, XV, 965
Rice, F. O., and Rice, K. K., XXVIII,
940
Rice, George S., and Davis, John A.,
XIX, 887
Rice, K. K., and Rice, F. O., XXVIII,
940
Rice, Oliver W., and Thomas, Norman
L., XVIII, 1508
Rice County, Kansas, Wherry pool,
STRAT, 118
Rich, John Lyon, GAS, 485, 488, 490,
492, 494, 831, 915; PROB, 243,
248, 256, 309, 310, 345, 371, 400,
410, 560, 679, 689, SD, 43
a probable buried mountain range of
early Permian age east of present
Rocky Mountains in New Mexico
and Colorado, V, 605
application of principle of differen-
tial settling to tracing of lenticular
sand bodies, XXII, 823
carrier beds and oil accumulation, dis-
cussion, XVI, 260, 263, 421
corrections for temperature in baro-
metric surveying, XVIII, 133
dip construction, simplification of,
XIX, 903
discussion XX, 1496
discussion of burned hills of Ozarks,
XVI, 651
discussion of fluid mechanics of salt
domes, GC, 104, XVIII, 1200
discussion of limestone reservoirs in
Permian basin, XXII, 918
discussion of origin of Bartlesville
shoestring sands, XVIII, 1343
discussion of theories of origin of salt
domes, SD, 43; IX, 873
discussion of Wilson's paper on Glenn
pool, Oklahoma, STR I, 240
discussion on impossibility of vapor-
ization of petroleum under ordi-
nary geological conditions, XIII, 83
discussion on Salina basin, XII, 194
distribution of oil pools in Kansas in
relation to pre-Mississippian struc-
ture and areal geology, XVII, 793
fault-block nature of Kansas struc-
tures suggested by elimination of
regional dip, XIX, 1540
function of carrier beds in long-dis-
tance migration of oil, XV, 911
further notes on hydraulic theory of
oil migration and accumulation,
VII, 213
further observations on shoestring
oil pools of eastern Kansas, X,
568
generation of oil by geologic distilla-
tion during mountain-building, XI,
1139
geology of Glenn pool, Oklahoma, dis-
cussion, XII, 213
graphical method for determining
true dip from two components and
for constructing contoured struc-
tural maps from dip observations,
XVI, 92
graphical method for eliminating re-
gional dip, XIX, 1538
jointing in limestones as seen from the
(Rich)
air, XII, 861
mechanics of low-angle overthrust
faulting as illustrated by Cumber-
land thrust block, Virginia, Ken-
tucky, and Tennessee, XVIII,
1584
oil possibilities of South America in
light of regional geology, XXIX,
495
problems of origin, migration, and
accumulation of oil, PROB, 337
report of editor for 1926, XI, 548
report of editor for 1927, XII, 587
report of third vice-president for
1928, XIII, 549
reviews, XI, 517; XII, 217; XV,
1399; XVII, 1148, XVIII, 1208;
XXII, 1288; XXIV, 1686; XXV,
333
shoestring sands of eastern Kansas,
VII, 103
source and date of accumulation of
oil in Granite Ridge pools of Kan-
sas and Oklahoma, XV, 1431
Rich sand, XXVII, 34
Richards, A. H., XXVIII, 1456
Richards, A. R., Barr, K. W., and Mor-
ton, F., application of chemical
analysis of crude oils to problems
of petroleum geology, XXVII, 1595
Richards, Esther E., VIII, 425, 442,
547, XXV, 1221, 1222
Richards, George, CAL, 217
Richards, George L., Jr., MSC, 6, 23,
24, 25, 67, 86, 87, 164, 166, 167;
XXIII, 40; XXVII, 2
bibliography of, XXVIII, 890
memorial of, XXVIII, 889
Richards, George L., Jr., Gregersen,
A. I., and Klempell, R. M., MSC,
65
Richards, Horace G., RMS, 235;
XXIX, 71, 72
deep oil test at Salisbury, Wicomico
County, Maryland, XXIX, 1196
subsurface stratigraphy of Atlantic
Coastal Plain between New Jersey
and Georgia, XXIX, 885
Richards, Horace G., and Harbison,
Anne, XXIX, 895, 897
Richards, I. A., XXIX, 1516
Richards, J. G., XI, 1273
Richards, J. R., Clark, Stuart K., and
Daniels, Jas. I., logging rotary wells
from drill cuttings, XII, 59
Richards, J. T., IX, 984, 987; XVI, 655,
658, 1021; XX, 1087
formation samples from gun perfora-
tors, XXV, 752
Walter George Woolnough, honorary
member of A.A.P.G., XXV, 1954
Richards, L. W., and Richards, G. L.,
Jr., geologic history at a glance,
review, XVIII, 1213
Richards, Ralph W., XVIII, 1343;
XXVII, 1260; XXVIII, 1601
commercial oil geology east of the
Mississippi, V, 460
Richards, Ralph W., and Mansfield,
G. R., XVIII, 1655, 1656; XXIII,
95
Richards, T. W., CD, 43; XXIV, 1543
Richardson, I., 103; XV, 606, 635; XX,
933; XXII, 1133; XXV, 1009
Richardson, Carl B., XXIV, 1807
XXVII, 1101; XXVIII, 1355
Richardson, Clifford, XI, 399
Richardson, D. C., XIV, 745
Richardson, E. G., RMS, 24

- Richardson, E. S., Jr., XXIII, 1446
 Richardson, F. G. S., de Bockh, H., and
 Lees, G. M., XXVII, 1507, XXIX,
 1082
 Richardson, F. M., Mrs., XXV, 195
 Richardson, G. B., PTNM, 545, 556,
 560, 576, 610, 613, SBP, 356, VIII,
 739; X, 838, 848, XII, 906, XIII,
 645, 650, 913, 918, 919, 930, 973,
 976, 985, 986; XIV, 927, 977, 979,
 XVI, 95, 484; XIX, 224, 256, 268,
 864; XX, 1309, 1311, 1328; XXI,
 836, 840, 856, 863; XXIII, 86;
 XXIV, 145, 147, 148, 153, 154, 157,
 166; XXVI, 245, 545, 556, 560,
 576, 610, 613; XXVIII, 1613
 memorial of Marius R. Campbell,
 XXV, 546
 Richardson, G. B., Darton, N. H., and
 Garner, Julia, XVII, 491
 Richardson, H. T., XVII, 459; XXIX,
 1728, 1730
 Richardson, H. T., and Ferrando, A.I.
 Barataria field, Jefferson Parish,
 Louisiana, XXV, 322
 Richardson, L. J., and Wells, R. C.,
 XXI, 1198
 Richardson, R. K., X, 428; XVII, 231,
 237
*die Geologie und die Salsdome im
 südwestlichen Teile des Persischen
 Golfs*, review, XI, 765
 Richardson, S. W., XXIV, 1083; XXV,
 1365
 Richardson sand, Hardin field, STRAT,
 568
 Richburg field, New York, STR II, 269,
 279, 289
 Riche, XVI, 1111
 Richey, K. A., MSC, 157, 167
 Richfield field, California, PROB, 224,
 752, 982, 983; V, 458; VI, 303;
 XXI, 979
 Chapman zone at, GAS, 213-215
 (wells 193-196), SBP, 87-153, 406
 Richfield field, Michigan, XXVII, 831
 Richfield oil company, XXI, 979
 Elliott 1, 2 (wells 102, 103), Schrock
 1 (well 6), Wood 1 (well 38), SBP,
 87-153, 403, 404
 Richfield Oil Corporation, XXIII, 931,
 943
 Richfield-Sylvania zone, XXVII, 829,
 831
 Richfield-Western field, XXIII, 937
 Richland anticline in Mexia fault zone,
 Texas, STR I, 349
 Richland district, Texas, production,
 STR I, 361
 Richland field, Texas, PROB, 779-781;
 STR I, 319-365
 (well 387), SBP, 292-335, 410
 Richland gas field, Richland Parish,
 Louisiana, GAS, 773; XV, 939,
 942; XXII, 723
 Richland-Home gas area, XXV, 1129
 Richland Parish gas field, Louisiana,
 nepheline basalt in, XII, 985
 Richland pool, Kansas, XXIX, 706
 Richland pool, Texas, STR I, 349
 Richland Springs axis, XXIV, 105, 109
 Richmond, Maysville, and Eden groups
 in Ohio, XXIV, 681
 Richmond bed, Kentucky, GAS, 825
 Richmond dome, XXIX, 829
 Richmond formation, IV, 45; XXV, 817
 Big Sinking field, STRAT, 178
 Richmond fossils in Kansas Viola, XIV,
 1351
 Richmond limestones, XXIII, 1138
 Richmond structure, PROB, 276
 Rich's Passage, MSC, 77
 Richter, Max, XII, 496, XXI, 1148
 German Alps and their origin, review,
 XXII, 1112
 Richter, Rud., RMS, 203, XXIII, 1183
 Richtofen, Baron von, X, 1093,
 XXVIII, 1417
 Richton dome, XXIX, 829
 Rickard, IV, 15
 Rico, carbon dioxide at, GAS, 1061
 nitrogen at, GAS, 1061
 Rico formation, XXIV, 620, XXVII,
 467
 oldest Permian in northeastern Ariz-
 ona, southwestern Colorado, and
 southern Utah, XXIV, 309
 Rico marine fauna of Colorado com-
 parable to the faunas transitional
 from Pennsylvanian to Permian in
 Kansas XXIV, 620
 Riddle, W. P., XIX, 331
 Rideal, E. K., XVII, 1222
 Ridge, J. D., RMS, 38, 213
 Ridge Basin, California, XXIII, 517,
 1098
 areal gradation of sediments of,
 XXIII, 526
 bearing of, on age of San Andreas rift,
 XXIII, 556
 contact between Upper Miocene and
 Pliocene series in, XXIII, 548
 deepest graben in coastal California,
 XXIII, 524
 diastrophic history of, subsequent to
 deposition, XXIII, 551
 Eocene in, XXIII, 531
 origin and development of, XXIII,
 518, 522, 526, 549
 post-Oligocene stratigraphic columns
 for, XXIII, 531
 Pleistocene in, XXIII, 544
 post-deposition drainage systems of,
 XXIII, 555
 Ridge Basin and adjacent territory at
 various stages, maps, XXIII, 519
 Ridge Lake, XXIII, 554
 outlet of, XXIII, 530
 Ridge Route formation, XXI, 218
 Ridgeley fossils, XXIV, 1988
 Ridgeley sandstone, XXII, 178, 543;
 XXIV, 1988; XXV, 811
 main producing member of Oriskany
 sand in West Virginia, XXII, 175
 Ridges, buried granite, GAS, 13
 effect on circulation, RMS, 59
 in Baltic, RMS, 307
 organic content of sediments of,
 RMS, 263
 relation to sediments, RMS, 279
 sediments on, RMS, 246, 257
 submarine, RMS, 247, 248, 259, 268,
 445
 Ridgetop shale, Mississippian, of cen-
 tral Tennessee, age of, XX, 805
 Ridgeway, Bertrand S., memorial of,
 XXVI, 1172
 Ridgeway, Robert, XVIII, 1304
 Ridgeway, John L., scientific illu-
 stration, review, XXII, 500
 Rieber, Frank, XIII, 1150
 results of elastic-wave surveys in
 California and elsewhere, XIV,
 1557
 Riedel mine section, showing compli-
 cated folding, SD, 195
 Riedel shaft showing folding, SD, 152
 Riehle's testing machine, XVI, 1030
 Rierdon formation, XXIX, 1270
 along Rocky Mountain Front,
 (Rierdon)
 XXIX, 1279
 fossils and age, XXIX, 1279, 1280
 in Cut Bank and Kevin-Sunburst
 areas, XXIX, 1280
 in South arch, XXIX, 1280
 in Sweetgrass Hills, XXIX, 1280
 isopach map, XXIX, 1278
 lithologic character, XXIX, 1277
 thickness and distribution, XXIX,
 1277
 Rierdon Gulch, XXIX, 1272
 Rierdon Gulch section, XXIX, 1024
 through Ellis group, XXIX, 1291
 Rierson, J. R., Survey, Texas (well 381),
 SBP, 292-335, 409
 Ries, H., X, 1037; XII, 926, XIX, 271
 Riesenfeld, E. H., SD, 708; IX, 728
 Riffenburg, XI, 1289
 Rift, wide pre-Carboniferous, CD, 202
 rift basins, CD, 166
 Rift valleys, XXVIII, 552
 of East Africa, discussion, XXI, 113
 sketch of north polar region showing,
 CD, 169
 Rigg, G. B., XI, 1219
 Rigg, Augustin E., XXIX, 497
 Riggs, XXIII, 1551
 Riggs, George D., and DeFord, Ronald
 K., Tansill formation, West Texas
 and southeastern New Mexico,
 XXV, 1713
 Riggs, Robert J., XIV, 1516, 1517,
 XVI, 961; XXI, 1379
 memorial of Frank Parkes Latimer,
 XIII, 1237
 review, XXI, 815
 Rigid bodies, defined, PROB, 613
 Rigid-earth hypothesis, XXIX, 1633
 Rigidity, CD, 24, 25, 29, 199
 of earth, XXIX, 1641
 Riggsby, L. R., Survey, Texas (well 326),
 SBP, 292-335, 408
 Rill marks in Chicontepec, MEX, 99
 Rim Rock of High Plains, VII, 72
 Rim syncline surrounding salt core at
 Mount Sylvan dome, GC, 1046;
 XIII, 1365
 Rim synclines, PROB, 646, 657, 661;
 XX, 1415
 effect on oil migration, XX, 1418
 Rimini, MSC, 349
 Rincon, MSC, Figs. 6 and 14 (in pocket)
 (Temblor) clay shale, SC, 91; XX,
 1637
 at Elwood field, GAS, 167
 Rincon area, CAL, 214; MSC, 67
 Rincon field, PROB, 211, 755; XII, 655
 Rincon field deep zone, XXVI, 1152
 Rincon formation, MSC, 91, 100, 112,
 161, 163-165, 179, 180; XXIV, 1569
 Rincon-Monterey sequence, MSC, Fig.
 6 (in pocket)
 Rincon pool, XXVI, 1006
 Rincon shale, California, MSC, 32, 68,
 78, 109, 111-113, 162, 176, 185-
 189, 191, 192, 194, 195, 202, 204,
 208, 211, 213, 214, 216, 217, 222,
 225-228, 230, 233, 240-244, 248,
 251, 254, 258, 260, 261, 266, 275-
 277, 288, 290-292, 302, 304-307,
 311, 316, 317, 321, 323, 329, 331,
 333-335, 342, 344-346, 352, 353
 California, outcrop section M, SBP,
 95, 167-194, 411
 from below bentonite bed, Los
 Sauces Creek, MSC, Fig. 14 (in
 pocket)
 of Los Sauces Creek, MSC, Fig. 14 (in
 pocket)

- Rinconada fault, CAL, 30
 Riney, W. A., I, 93
 Ring, D. T., SBP, 357, XXII, 1183; XXV, 795
 Ring, D. T., Stout, W., Lamborn, R. E., Gillespie, J. S., and Lockett, J. R., natural gas in central and eastern Ohio, GAS, 897
 Ring compounds, condensed, conversion of, at high temperature, XXIV, 1882
 formation of, XXIV, 1881
 Ringbone shale, XXII, 531
 Ringgold pool, XXV, 1073
 Ringkjøbing, Fjord, RMS, 335
 Ringling anticline, PROB, 702
 Rinne, Frederick, SD, 148, 154, 160, 163, 164; I, 90; IX, 423, 429, 433, 435, 436; XIV, 1041; XIX, 806
 explanation of salt stocks in Germany, IX, 435
 Rinne, Frederick, and Hoffman, William, GC, 82; XVIII, 1178
 Rio Atrato Valley, Colombia, XXIX, 1132
 Rio Blanco and Moffat counties, Colorado, geologic map of Wilson Creek dome, XXVII, 454
 Rio Blanco County, Colorado (well 232), SBP, 194-243, 407
 Rio Bravo Company, pioneer work in micropaleontology, XXV, 1223
 Rio Bravo oil field, Kern County, California, XXIV, 1330
 deepest producing field in world, XXII, 705
 map, contours on top of Rio Bravo sand, XXIV, 1332
 reflection seismograph work in, XXIV, 1330
 Rio Bravo Oil Company, GAS, 700, 707, 708; GC, 884; SD, 437, 443, 502-504, 510, 518, 519, 547, 558, 611, 657, 677, 683; XX, 535; XXII, 1413, XXVII, 939
 Rio Bravo sand, XXII, 705; XXIII, 935
 depth of, in southeastern San Joaquin Valley, XXV, 1358
 Rio Bravo uplift, FOP, 95; XXV, 1527
 Rio Buenavista, MEX, 114, 120, 122, 124, 130, 217
 Alazán shales in, MEX, 131
 Rio Calabozo, MEX, 103, 142, 155, 156
 asphaltite in river banks, MEX, 155, 156
 Río Catatumbo basin, XXIX, 1124
 Rio Cazonas, Oligocene beds south of, MEX, 137
 Río Cimarrón region, XXIX, 1120
 Río Conchos area of eastern Chihuahua, XXVIII, 1183
 Río de la Plata, RMS, 225
 Río de la Puerta, type locality of Aragón formation exposed in, MEX, 105
 Río de Oro anticline, XXIX, 1127
 Río de Oro field, XXIII, 962
 Río de Oro formation, XXIX, 1090
 Río Grande, MEX, 54, 68, 161
 delta of, XXIX, 1311
 Río Grande basin, XXIV, 1894, 1913
 Río Grande City, and Laredo, Texas, stratigraphy of Eocene between, XXVI, 256
 Río Grande delta, clay dunes on, GC, 228; XVII, 934
 Río Grande Embayment, Texas, XX, 1300; XXI, 1042, 1086; XXVI, 384
 (Rio Grande)
 geologic section of, and implied history, XIV, 1425
 Río Grande Oil Company, GAS, 166
 Río Grande province, salt domes in, GC, 109, XX, 726
 Río Grande region, Starr and Hidalgo counties, Texas, Miocene, Pliocene, and Pleistocene formations in, XXI, 491
 Río Grande Swell, XXIII, 1667, 1670
 Río Grande trough, XXI, 1432, 1433
 Río Guayalejo, MEX, 77
 Río Magdalena Valley, XXIX, 1107
 Río Moctezuma, Temporal fauna in, MEX, 110
 Río Negro trough, XXIX, 506, 557
 oil possibilities, XXIX, 507
 Río Pánuco, MEX, 80, 109, 114, 136
 pools bordering, MEX, 163
 Río San Francisco, RMS, 225
 Río Santa Clara (Tamaulipas), MEX, 75, 250
 Río Sinu Valley, XXIX, 1131
 Río Soto la Marina, MEX, 6, 133, 136
 Río Tamesí, MEX, 52, 73, 75, 78, 138, 140, 157, 164, 172, 186, 195
 Río Tamesí pool, MEX, 197
 Río Tamuín, well on north bank of, MEX, 64
 Río Tancochín, dyke in, MEX, 213
 Río Temporal, MEX, 109, 117
 oil seepages near, MEX, 156
 Río Tuxpan, MEX, 24, 53, 105, 117, 126, 131, 206, 223, Fig. 32 (in pocket)
 Río Vista depression, XXIX, 996, 1002
 Río Vista gas field, XXI, 984, 985, XXIV, 1941, 1945
 an anticlinal accumulation, XXIV, 1948
 extended in 1938, XXIII, 945
 Ripley, William Z., GAS, 1104
 Ripley beds, XXVIII, 45
 Ripley field, PROB, 293, 435
 Ripley formation, I, 153; V, 492, 655; XXI, 806, XXII, 791, 1646, 1651; XXIX, 925
 Kentucky, Illinois, and Missouri, XIV, 851
 unconformable on Tuscaloosa formation in lower Tennessee Valley, XXV, 2047
 unconformably overlain by Prairie Bluff chalk, XXII, 1647
 Ripley-Midway break, MEX, 91
 Ripple marks, RMS, 4, 214, 525, 632
 amplitude of, means of measuring, RMS, 634
 giant, in Verden sandstone, XXIII, 567
 in Verden sandstone, XXIII, 571
 samplers, RMS, 633-634
 Ripples, RMS, 15, 17, 28
 current, RMS, 15, 18, 19
 linguoid, RMS, 16
 longitudinal, RMS, 17
 rhomboid, RMS, 16
 transverse current, RMS, 17
 Risen and Bunn, XIV, 548
 Rising Star field, IV, 160
 Rison, C. O., XIX, 800
 Riss glacial period, RMS, 411
 Riter, Samuel W., memorial of, XXV, 2100
 Rittenberg, S. C., XXVII, 1183
 Rittenhouse, Gordon, RMS, 643, 645
 textural standard for sample log work, XXIX, 1195
 Ritter, Carl, XIX, 471; XX, 905
 Ritter, E. A., MEX, 125, XX, 433
 Ritter, E. H., GAS, 997
 Ritter, John A., XIII, 1096
 Ritter, R., XXIV, 1550
 Rittman and Egloff, XXI, 1468
 Ritz, C. H., XXVII, 59; XXIX, 1330, 1331
 geomorphology of Gulf Coast salt structures and its economic application, XX, 1413
 Ritz, C. H., Barton, Donald C., and Hickey, Maude, XVIII, 1069; XXIII, 198, 199, 1620
 Gulf Coast geosyncline, GC, 192, XVII, 1446
 Ritz-Canton-Decker area, Kansas (wells 244-256), SBP, 255-285, 407
 Ritz oil field, PROB, 773
 Ritz pool, GAS, 475
 Rinku Islands, *Globigerina* ooze from, MSC, 13
 River aux Chenes, RMS, 160
 River Inn, Tyrol, RMS, 18
 River-mouth deposits in eastern division of Great Salt Lake, XXII, 1352, 1357
 Riverdale field, XXVII, 865, 872
 gravity of oil in, XXVI, 1147
 Rivers, RMS, 5-45
 channel sands in, RMS, 643
 influence of, on composition of ocean, RMS, 51
 tides in, RMS, 129
 Riverside field, XXIII, 867; XXV, 1128; XXVI, 1102
 Riverside sandstone, XXIV, 801
 Riverton dome, XXIII, 919
 Riverview terrace, XXIX, 1710
 Rixleben, B., memorial of William Weaver Keeler, XXVII, 565
 Roach, C. B., subsurface study of Jennings field, Acadia Parish, Louisiana, XXVII, 1102
 Roach Canyon, MSC, 37
 Roaches North pool, XXIX, 687
 Roane, Jackson, and Calhoun counties, West Virginia, Gay-Spencer-Richardson oil and gas trend, STRAT, 806
 Roane County, West Virginia, vertical variation of properties, SBP, 378-380
 (well 425), SBP, 349-379, 410
 Roanoke field, Jefferson Davis Parish, Louisiana, discovered by torsion-balance survey, XXVIII, 1289
 electric-log cross section, XXVIII, 1291
 Roanoke oil, PROB, 115
 "Roaring forties," RMS, 124
 Roark, Louis, memorial of Arthur W. Duston, XXII, 511
 Roark, Louis, and Bartram, John G., Healdton field, Oklahoma, V, 469
 Roark, R. B., XVI, 1026
 Robb and Taylor, PROB, 9
 Robb, Charles, XV, 600
 Robberson field, Oklahoma, PROB, 771, 776; V, 343; VI, 23; VII, 625
 Robberson field and Garvin County, Oklahoma, geology of, discussion, XI, 889
 Robberson pool, redbeds in, GAS, 587
 Robbins, L. S., STRAT, 327
 Robert, Maurice, V, 670
 Roberts, D. C., GAS, 185
 Long Beach oil field, Los Angeles County, California, STR II, 62
 Roberts, David, Survey, Texas (well 372), SBP, 292-335, 409

- Roberts, H. S., X, 866
 Roberts, John R., memorial of, XVIII, 277
 Roberts, Joseph K., XXV, 2049, 2054
 lower York-James peninsula, review, XVII, 748
 Roberts, L. C., Jr., XIV, 924
 Roberts, Morgan Evan, memorial of, XXVI, 513
 Roberts Island area, XXVII, 870
 Robertson, Glenn D., and Jensen, Joseph, PROB, 750
 development in southern California since 1925, XII, 625
 new development problems and their solution in southern California oil fields, VIII, 135
 Robertson, I. W., and Burrell, G. A., GAS, 1018, 1025, 1046; X, 903
 Robertson, J. B., SD, 308, 343; X, 256
 Robertson, P. A., MEX, x, 7, 8
 Robertson County, XXVIII, 850
 Robertson field, V, 343, 454; VI, 23
 Robertson pool, XXVII, 751
 Robinson and Fohs, IX, 873
 Robinson, Ernest Guy, XIV, 917
 triangulation targets, VIII, 512
 Upper Cretaceous paleogeography of Montana, VIII, 554
 Robinson, Ernest Guy, and Bauer, C. Max, PROB, 697; STRAT, 337; XV, 1134
 comparative stratigraphy in Montana, VII, 159
 Robinson, Edward, XX, 886, 891
 Robinson, G. W., RMS, 539, 544, 547, 548; XXVI, 51, 52
 Robinson, H. M., Powers, S., and Hopkins, O. B., PROB, 779; XV, 816
 Robinson, Hal, XXIII, 85
 Robinson, J. French, XXII, 1183; XXVIII, 1573
 Scenery Hill gas field, Washington County, Pennsylvania, STR II, 443
 Robinson, Van D., XXVII, 1410; XXVIII, 579
 Robinson, W., Survey, Texas (well 320), SBP, 292-335, 408
 Robinson, W. I., PROB, 538, 542; XX, 427
 care of well samples, VII, 432
 Robinson, W. I., and Eldridge, W. J., correlating gumbos, IX, 906
 Robinson, W. W., XXIV, 1368
 Robinson field, XIX, 518
 Robinson formation, CAL, 62
 Robinson limestone, XXVI, 1380, 1384
 Robinson syncline, Tanner Creek field, West Virginia, STR II, 573; PROB, 492
Robulus nikobarensis warmani zonule, MSC, 72
Robulus-Vavulineria zonule, MSC, 17, 18, Figs. 4, 14, and Table I (in pocket)
 Rocha, Fleury da, XXIX, 556
Rochas Gondwanicas e geologia do petroleo do Brasil Meridional, review, XIX, 1701
Rochas Oleigenas do Brasil e seu Aproveitamento, XXI, 120
 Roche d'Aillon, Father de la, XXII, 427
 Rochelle conglomerate, III, 142; XXIV, 90
Roches sedimentaires de France. Roches siliceuses, review, XV, 978
 Rock and time concepts, interrelation of, XXIV, 344
 Rock classification by drillers, review, VI, 390
 Rock coasts, RMS, 335
 Rock colors, XXVIII, 128
 Rock Creek anticline, XIII, 1282, XXVII, 436
 Rock Creek limestone, II, 122
 Rock Creek oil field, PROB, 936; IV, 37; V, 198, 200; XIII, 1281
 Muddy and Cloverly waters in, XXIV, 1261
 Sundance water in, XXIV, 1279
 Rock Crossing, Wilbarger County, Texas, new pay at, XXI, 525
 Rock Crossing field, Wilbarger County, Texas, XXI, 1023
 Rock Crossing fold, XXIV, 1052
 Rock Crossing pool, XXVI, 1047
 Rock Crossing structure, production on, XXI, 1024
 Rock distortion on local structures in oil fields of Oklahoma, VI, 228
 Rock dredges, RMS, 638
 Rock facies, chart showing change from east to west between New Jersey and Ohio, XXII, 422
 in Ouachita and Arbuckle mountains, Oklahoma, correlation of, XXI, 15
 Rock flour, RMS, 269
 Rock flowage, effect of, on kerogen of oil shale, IX, 158
 Rock-flowage experiment, IX, 1134
 Rock-flowage pressure, apparatus for measuring, XIV, 1043
 Rock fragments in sediments, RMS, 225, 252, 257, 258
 Rock gravel on continental shelf, RMS, 251
 Rock Island coal, XXIII, 1389
 Rock Island coal No. 1, XXIII, 1387
 Rock pressure, STRAT, 101; XII, 355, 360
 decline of, in Hugoton field, XXIV, 1801
 depth, and temperature, relation to vapor pressure, XIII, 77
 equal, in Hugoton field, Kansas, map showing lines of, XXIV, 1799
 Hugoton field, STRAT, 101
 O'Hern field, STRAT, 724
 Venango district, STRAT, 531
 versus gas in storage, Oakford storage pool, showing complete input and output cycle, XXVIII, 1576
 Rock pressure and amount of gas in storage, curve showing relationship between, XXIV, 1490
 Rock pressure coning effect versus gas in storage, XXVIII, 1592
 Rock pressure-production decline methods of estimating gas reserves, GAS, 1017, 1019
 Rock pressures, PROB, 732
 in Pulaski field, XXII, 97
 Rock River anticline in Rock River field, Wyoming, STR II, 616; XXI, 994
 Rock River field, Wyoming, STR II, 614
 (well 225), SBP, 194-243, 406
 Rock River pool, 343
 Rock salt, Gulf Coast, chemical composition of, XXI, 1300, 1301
 occurrence of, XXI, 1277
 of Gulf Coast salt plugs, data on water-insoluble residue in, XXI, 1271
 Louisiana salt plugs, water-insoluble residues in, XXI, 1268
 Rock salt and potash salts, XXII, 1284
 (Rock)
 geology, XXIII, 254
 Rock Springs uplift, FOP, 53; GAS, 327, 328, 332, 354; XIV, 1029, XXIV, 1274; XXV, 1157, 1485
 Rock-stratigraphic and time-stratigraphic units, difference between, XXIV, 1723
 Rock temperatures and depths to normal boiling point of water in the United States, XX, 270
 Rock types, identification of, on radio-activity logs, XXV, 1775
 Rock units, classification and nomenclature of, XXIII, 1068
 rules for classification and nomenclature of, XXIII, 1070, 1072
 Rockcastle sandstone, V, 648
 Rockdale formation, XXIV, 1893; XXVII, 621
 Rockford limestone, XXIV, 788
 Rockhouse shale, XXV, 669
 Rockies, ancestral, XXVI, 223, bet. 224 and 225
 lower boundary of Permian deposits along flanks of, in southern Wyoming and Colorado, XXIV, 512
 Rockingham County, Virginia, discovery of gas in, XXVI, 275
 Rockport gas field, Spencer County, Indiana, XXV, 1122; XXVII, 819; XXVIII, 758
 Rockport Quarry biostromes, XXVII, 586
 Rockport Quarry limestone, XXVII, 580
 fossils of, XXVII, 581
 Rocks, a handbook of, XXIV, 1498
 classes of, XXIII, 1073
 divisions or units of, XXIII, 1074
 exposed between Choctaw and Ti Valley faults, XXI, 14
 generation of oil in, by shearing pressures, XIII, 303, 329
 of Arbuckle Mountains, Oklahoma, XXI, 17
 of Black Knob Ridge, XXI, 17
 of debatable systemic affiliations, inadvisability of excluding from a standard section of a system, XXIV, 352
 Rockwell, Fred Gore, and Shannon, C. W., new oil and gas development in Oklahoma, IV, 277
 Rocky Arroyo, Eddy County, New Mexico, XXVI, 82
 lateral gradations in the Seven Rivers formation, XXVI, 80
 lithologic types in, XXVI, 92
 map of west end, XXVI, 83
 red calcitic limestone in, XXVI, 92
 redbeds exposed in, XXI, 1569
 Rocky bottom, RMS, 221, 223, 227, 228, 236, 247, 248, 254, 259, 276-279
 causes of, RMS, 267, 268
 in East Indies, RMS, 354
 in North Sea, RMS, 328, 336
 on continental shelves, RMS, 228
 Rocky Ford anticline, GAS, 532
 Rocky Gap sandstone, XXIV, 1987
 Rocky Gulch, MSC, 77
 Rocky Mountain and Colorado Plateau regions, Permian in parts of, XXIV, 617
 Rocky Mountain and Great Plains area, map showing Upper Cretaceous sea in United States and Canada, XXI, 900
 Rocky Mountain area, correlation chart

(Rocky)

- of Upper Cretaceous formations in, XXI, 904
- Rocky Mountain area, Upper Cretaceous of, XXII, 899
- discussion, XXI, 1592
- Rocky Mountain Association of Petroleum Geologists, field trip, XXII, 949
- Fox Hills formation, northeastern Colorado, XVI, 702
- possible future oil provinces in Rocky Mountain region, FOP, 37; XXV, 1469
- Rocky Mountain basin province, XIII, 431
- Rocky Mountain coals, PROB, 76
- Rocky Mountain district, PROB, 88, 97, 340, 686, 839, 931
- developments in 1940, XXV, 1149
- extensions to oil fields in, during 1940, XXV, 1151
- important dry holes drilling during 1940, XXV, 1153
- inapplicability of carbon ratios to, PROB, 76
- microscopic subsurface work in, XV, 740
- new producing zones found in oil fields in, 1940, XXV, 1150
- oil and gas fields in, PROB, 342, 681
- oil production in 1938, 1939, and 1940, XXV, 1158
- principal folding of, PROB, 722
- structural history, and its relation to accumulation of oil and gas in, PROB, 679
- Rocky Mountain fields, Cretaceous zones in, XXVII, 472
- deeper drilling in, VII, 400
- Eocene zones in, XXVII, 472
- gravity of oil in, XXVII, 473
- Jurassic zones in, XXVII, 472
- Oligocene zones in, XXVII, 472
- Permian zones in, XXVII, 472
- productive zones in, VII, 404
- results and prospects of deeper drilling in, VII, 400
- source beds in, PROB, 61
- Triassic zones in, XXVII, 472
- Rocky Mountain Front, XXIX, 1266
- Rlerdon formation along, XXIX, 1279
- Sawtooth formation along, XXIX, 1272
- Swift formation along, XXIX, 1283
- Rocky Mountain Front zone, PROB, 700
- Rocky Mountain Gas Company, GAS, 306; XXI, 998
- Rocky Mountain geology, summary of, XXIII, 1131
- Rocky Mountain outcrop samples, SBP, 243-255
- location, SBP, 192-195
- Rocky Mountain physiography, STRAT, 100
- Rocky Mountain quartzite, XXVII, 42
- Rocky Mountain region, VII, 95, 131
- age distribution of productive fields in, XXVII, 467
- Ancestral Rockies and Mesozoic and late Paleozoic stratigraphy of, XVII, 109
- application of water analyses to production of oil and gas in, XXIV, 1214
- Cambrian, in, XXVII, 421, 465
- character of oil and gas zones in, XXVII, 471

(Rocky)

- chart showing correlation of Jurassic formations in part of, XXIII, 1176
- columnar sections in representative oil and gas fields, XXVII, 468
- contribution to Jurassic stratigraphy of, XXIII, 1153
- correlation of Dry Lake and Deweyville sections with other sections in, XXIX, 1150
- correlation chart of geologic formations and formation members in, XXV, 1840
- Cretaceous in, XXI, 1262, XXVII, 424, 465
- crude oils of, XXVII, 1331
- developments in 1936, XXI, 986
- developments in 1937, XXII, 677
- developments in 1938, XXIII, 903
- developments in 1939, XXIV, 1100, 1347
- developments in 1942, XXVII, 854
- developments in 1943, XXVIII, 789
- developments in 1944, XXIX, 1593
- Devonian in, XXVII, 422, 465
- diagram showing rate of discovery of oil and gas fields in, since 1862, XXVII, 418
- diastrophic history of, XXVII, 421
- distribution of cementing minerals in sandstones from, XXV, 1868
- early Pennsylvanian in, XXI, 1247
- Eocene in, XXVII, 424
- extensions in 1944, XXIX, 1598
- extensions to old fields in, during 1939, XXIV, 1104
- faulting in, X, 105, 113
- fields of stratigraphic type in, XXI, 1244
- fields producing oil and gas from zones of different ages, XXVII, 476
- general character of oil-field waters in, XXVI, 1318
- geophysical prospecting in 1943, XXVIII, 799
- Jurassic in, XXVII, 424
- map showing oil and gas fields and important developments during 1937, XXII, 678-679
- map showing Paleocene and Eocene rocks in, XXIII, 1148
- maps showing outcrops of successive geological periods in, XXIII, 1132, 1133, 1135-1137, 1139, 1140, 1142, 1143, 1145, 1147, 1148, 1151
- Miocene in, XXVII, 425
- Mississippian in, XXVII, 422, 465
- new fields discovered in 1943, XXVIII, 792
- occurrence and types of crude oils in, XXVII, 1305
- oil and gas fields on faulted anticlines and domes in, XXVII, 455
- oil accumulation in, VII, 661
- oil fields of, XXVII, 1327
- oil production in, XXVII, 861
- oil shale of, review, VII, 454
- Oligocene in, XXVII, 425
- operations in, 1938, XXIII, 931
- Ordovician in, XXVII, 422, 465
- origin of light oils in, VII, 488
- origin of producing structures in, XXVII, 431
- paleogeography of Cretaceous in, XXI, 1263, 1266
- paleogeography of late Benton or Frontier time, XXI, 1265
- paleogeography of late Pennsylvanian and Permo-Pennsylvanian in, XXI, 1251

(Rocky)

- paleogeography of Lower Triassic in, XXI, 1257
- paleogeography of Permo-Pennsylvanian and Permian in, XXI, 1255
- paleogeography of Upper Jurassic, XXI, 1260
- Pennsylvanian in, XXVII, 422, 465
- Pennsylvanian zones in, XXVII, 471
- Permian in, XXVII, 423, 465
- photomicrographs of sandstones from, XXV, fol. 1854
- pipe-line construction in, XXI, 998
- pipe lines, XXVII, 860
- possible future oil provinces in, FOP, 37, 38; XXV, 1469, 1470
- producing zones from fields of, XXVII, 476
- production in, XXI, 998; XXIV, 1111
- production figures for, by states, for years 1936, 1937, and 1938, XXIII, 930
- quality of oil in, XXVII, 473
- references on oil prospects in, FOP, 39; XXV, 1471
- sections across Upper Cretaceous of, XXVII, 903
- Silurian in, XXVII, 422
- some ideas regarding oil accumulation in, VII, 661
- stratigraphy, VII, 159
- stratigraphy versus structure in, XXI, 1241
- structural features of, XXVII, 426
- structural noses in, XXVII, 464
- summary of operations, to end of 1936, XXI, 999
- Triassic in, XXVII, 423
- types of oil in, XXVII, 1307
- unconformities, VII, 62, 64
- United States, carbon ratios and oil gravities in, XIII, 1247
- United States, structural conditions of oil and gas accumulation in, XXVII, 417
- Upper Cretaceous in, XXVII, 902
- wildcats drilled in 1943, XXVIII, 793, 799
- Rocky Mountain samples, SBP, 27-31, 34, 35, 75, 80, 192-200, 202, 203, 207, 208, 210-243
- (wells 198-241), SBP, 192-243
- Rocky Mountain Section of American Institute of Mining and Metallurgical Engineers and American Mining Congress, joint meeting with American Association of Petroleum Geologists, X, 640
- Rocky Mountain sequence, XXII, 1633
- Rocky Mountain states, geophysical prospecting in, XXIX, 1604
- Mississippian limestone in, PROB, 158
- oil gravities in, PROB, 157
- structural conditions under which oil and gas have accumulated, XXVII, 466
- structure in, FOP, 37; XXV, 1469
- wildcat and semi-wildcat wells drilled below 1,500 feet in 1944, XXIX, 1601
- Rocky Mountain structures, production from, mostly from sands which wedge out, XXVII, 905
- Rocky Mountain system, PROB, 574
- map of oil and gas fields in, XXVII, 420
- Rocky Mountains, CAL, 35, 75, 76, 98, 114, 156, 199, 292, 299, 304; GAS,

- (Rocky)
 222; PROB, 57, 611; STRAT, 100
 Algonkian in, XXIII, 1134
 ancestral, PROB, 682; STRAT, 96,
 100, 101; XIV, 765
 Archean of, XXIII, 1133
 association of compression and ten-
 sion in, XI, 43
 built by stresses acting from west,
 XI, 866
 Cambrian in, XXIII, 1135
 carbon ratios in, PROB, 85
 Devonian in, XXIII, 1138
 frontal zone of major thrusting in,
 XXVII, 427
 Jurassic in XXIII, 1145
 Miocene in, XXIII, 1151
 Mississippian in, XXIII, 1138
 near International Boundary, oil
 seepages in Belt series of, XVI,
 786
 northern, and Northern Great Plains,
 geographic distribution of Mis-
 sissippian formations in, XXVII,
 1302
 oil- and gas-bearing horizons of,
 PROB, 932
 oil and gas fields on monoclines and
 structural terraces in, XXVII, 461
 Oligocene in, XXIII, 1151
 Ordovician in XXIII, 1137
 outer zone of major folding in,
 XXVII, 429
 Paleocene and Eocene in, XXIII,
 1150
 Pennsylvanian in, XXIII, 1140
 Permian in, XXIII, 1141
 Pliocene in, XXIII, 1151
 Silurian in geosyncline in, XXIII,
 1138
 subsurface structure of some un-
 symmetrical anticlines in, XIII,
 1275
 Tertiary igneous intrusions in,
 XXVII, 433
 thrust-faulted structures in, XXVII,
 433
 Triassic in, XXIII, 1143
 types of producing structures in,
 XXVII, 435
 Upper Cretaceous in, XXIII, 1146
 waters of oil- and gas-bearing forma-
 tions of, PROB, 927
- Rocky Mountains and Colorado
 Plateau region, composite correla-
 tion diagram showing relation of,
 Permian deposits in parts of,
 XXIV, 633
 Rod-shaped faecal pellets, RMS, 517-
 518
 Rodeo, California, MSC, 92, 128, 129,
 Fig. 14 (in pocket)
 outcrop section E, SBP, 167-194, 411
 Rodeo-Briones contact, MSC, 65
 Rodeo Creek, MSC, 65
 Rodeo shale, MSC, 65, 129, 165, 185,
 234, 235, 237, 255, 262, 263
 Rodeo shale faunules, MSC, Fig. 14
 (in pocket)
 Rodeo shale foraminifera, MSC, 66
 Rodnesy sand, XXVII, 744
 Rodessa, Caddo Parish, Louisiana,
 cores from deep well at, XXII, 764
 Rodessa and Pettit zones of lower Glen
 Rose formation, XXVII, 785
 Rodessa field, Cass and Marion
 counties, Texas, XXI, 1065, 1068
 XXII, 732; XXIII, 894; XXIV;
 1067; XXV, 1087
 Louisiana, XXII, 722; XXIV, 1099;
- (Rodessa)
 XXV, 1036
 Louisiana-Arkansas, XXII, 721
 South Arkansas, XXV, 1036
 Rodessa formation, XXVI, 1475;
 XXIX, 1419, 1449
 Rodessa limestone, XXVI, 1054
 Rodessa member, XXII, 970; XXIII,
 289
 Glen Rose formation in Louisiana,
 XXII, 725
 Rodessa-Pettit gas wells, XXVI, 1053
 Rodessa pool of Arkansas-Texas-
 Louisiana, XXII, 970
 Rodessa series, XXIX, 770
 Rodessa zone, XXIV, 1067; XXVII,
 784, 786; XXVIII, 844
 of Glen Rose, XXVIII, 843
 of lower Glen Rose productive in
 East Texas fields, XXII, 892-
 895; XXIV, 1064; XXVI, 1052
 Rodriguez, F., Survey, Texas, deep
 test in, XXV, 106
 Rodriguez (State of Nuevo León), MEX
 68
 (State of San Luis Potosi), MEX, 37,
 64, 66
 Rodriguez well, mixed facies in, MEX,
 43
 Roe, A., and Simpson, G. G., XXVI,
 1728
 Roemer, Ferdinand, XIX, 1508, 1511;
 XXVI, 13
 Texas, review, XX, 1376
 Rogala, W., XV, 2
 Rogatz, Henry, XXIII, 1679; XXIV,
 1798; XXV, 3; XXVI, 223, 229
 geology of Texas Panhandle oil and
 gas field, XIX, 1089; XXIII, 983
 Rogers, IX, 1228; XII, 1081
 Rogers, and Beede, XIII, 471, 885
 Rogers, A. F., XV, 257, 258; XVIII,
 1299; XXI, 1272; XXIII, 1798
 Rogers, Douglas, STRAT, 827
 Rogers, G. Sherburne, GAS, 1054,
 1055, 1057, 1059, 1060, 1066, 1067,
 1126; PROB, 142, 143, 145, 148,
 155, 840, 855, 891, 910, 954; SD,
 26, 168, 223-25, 358, 397, 704, 782;
 STRAT, 319; V, 230, 243; VII,
 351, 608, 616; VIII, 699; IX, 237,
 240, 243, 349, 570, 758, 852, 854,
 856, 864, 929, 932, 934, 935, 936,
 937; X, 1283; XI, 1290, 1301; XII,
 358, 361; XIV, 140; XV, 895;
 XVII, 729, 1481; XIX, 319; XX,
 170; XXI, 1258, 1270, 1296;
 XXIV, 1221; XXIX, 1492
 some oil-field waters of Gulf Coast,
 III, 310
 theory of origin of salt domes, IX,
 856
 Rogers, G. Sherburne, and Lee, Wal-
 lace, IX, 889
 Rogers, Henry D., PROB, 3, 4, 12,
 13, 70, 71, 76, 77, 81, 310; XIV,
 609; XVII, 549; XIX, 489, 593,
 596, 599, 606; XXII, 542; XXIX,
 596, 599, 606; XXII, 542; XXVII,
 1197; XXIX, 166, 1739
 Rogers, James K., XVII, 1007
 Rogers, Julia, XXIV, 1168, 1177
 Rogers, M. N., and Fan, C. Coleridge,
 GAS, 1061
 Rogers, O. J., III, 155
 Rogers, W. B., PROB, 2; XIV, 609
 Rogers, W. W., XI, 601; XIV, 425
 Rogers, western, Wagoner, and south-
 eastern Tulsa counties, Oklahoma,
 Broken Arrow coal and associated
- Rogers)
 strata, XXVIII, 1036
 Rogers brothers, XX, 932
 Rogers City formation, XXII, 398;
 XXVIII, 181
 limestones of, probably originally
 petrolierous, XXIV, 1977
 Rogers City limestone, XXIV, 1962;
 XXVIII, 178
 Rogers pool, Montague County, Texas,
 XXIV, 1836, XXV, 1065, 1070,
 1075
 production in, XXIV, 1050
 Rogers sand, XXV, 116
 Rohwer, Carl, XVIII, 1237; XIX, 170
 Rohwer, F. W., XV, 1265; XXIV, 2111
 Rohwer, F. W., and Mellen, W. P.,
 stratigraphy of Spring Coulee well,
 supplementary paper, ALTA, 151;
 XV, 1279
 Roig, Sanchez, XXVII, 1517
 Roland anticline, GAS, 525, 526
 Roland area, GAS, 526
 Role of cap rock in oil accumulation,
 discussion, XVIII, 1086
 of carbohydrates in formation of oil
 and bituminous coals, XXIV, 1865
 of stratigraphy in oil discovery,
 XXIX, 872
 Rolling of particles in streams, RMS,
 12-15, 17, 35, 36, 38, 271
 Rolshausen, F. W., SBP, 7; XII, 97;
 XIII, 1066; XIV, 1402; XVII, 527,
 1294; XIX, 206; XXIII, 1091,
 1093; XXIV, 435, 1537; XXV,
 752; XXVIII, 1355; XXIX, 1417
 occurrence of siderite in cap rock at
 Carlos dome, Grimes County,
 Texas, GC, 133; XVIII, 543
 Rolshausen, F. W., and Ellis, A. C.,
 STR II, 237, 238
 Roma sandstone tongue, XXVI, 268
 Roman, L., XVI, 1291; XVIII, 123
 Roman T., XVI, 1264
 Roman numerals, scheme of, with
 added letters for designation of coal
 seams in Indiana, XXIII, 1375
 Romanes, James, PROB, 329; XIX, 806
 Romanian exports of petroleum, 1938,
 XXV, 364
 Romanovsky, W., XXIX, 1739
 Romans, William, XXIII, 1553
 Romer, A. S., PTNM, 683, 690, 697;
 XXIII, 1756; XXIV, 94, 97, 282,
 303, 305, 306, 309, 313, 315, 316, 318,
 321, 323, 326, XXVI, 683, 690, 697
 early history of Texas redbeds verte-
 brates, review, XX, 832
 man and the vertebrates, review,
 XIX, 567
 Romine, Thomas B., GAS, 248, 269;
 PROB, 348, 692, 697; STRAT,
 273; VII, 176; X, 495; XV, 1153
 oil fields and structure of Sweetgrass
 arch, Montana, XIII, 779
 Rominger, Carl, XVI, 154; XXV, 725,
 731; XXVII, 572
 Romney shale, XXII, 549
 Rona, XXIX, 1483
 Rook, Stephen H., XIII, 683
 Rooney, W. J., XVI, 1264, 1344
 Rooney, W. J., and Gish, O. H., XVIII,
 40; XIX, 37
 Roop, C. W., XIV, 1517; XVI, 961
 memorial of Jesse Homer Derden,
 XXVIII, 1668
 Roosevelt County, New Mexico, south-
 north cross section from Pecos
 County through Ector County,
 Texas, to, XXIX, 15

- (Roosevelt)
south-north cross section from Pecos County through Winkler County, Texas, to, XXIV, 29
- Roots of mountains theory, XXI, 813
- Roper, Frank C. and Todd, John D., Sparta-Wilcox trend, Texas and Louisiana, XXIV, 701
- Ropianka beds, Europe, VI, 526
- Rosa Blanca limestone and shale, XXV, 1789, 1794
- Rosare, C. G., XVII, 1499
method for detection of overhang, GC, 148
- Rosaire, Esme Eugene, XVI, 1232; XXIV, 1353, 1399, 1465
geochemical prospecting for petroleum, XXIV, 1400
- Rosaire, Esme Eugene, and Adler, Joseph L., applications and limitations of dip shooting, XVIII, 119
- Rosare, Esme Eugene, and Lester, O. C. Jr., seismological discovery and partial detail of Vermilion Bay salt dome, Louisiana, XVI, 1221
- Rosaire, Esme Eugene, McDermott, Eugene, Fash, R. H., *et al.*, discussion of geochemical exploration (soil analysis), XXIV, 1434
- Rosalia field, V, 422
- Rosamond, CAL, 191, 221, 314
- Rosamond River, CAL, 164, 183
- Rosamond series, CAL, 25, 31, 40, 42, 176, 200-205, 211, 221, 237, 284; SC, 72; XX, 1618
demonstrates aridity of Upper Miocene, CAL, 203, 212, 223
faults in, CAL, 44
- Roscoe dome, XX, 1174
- Rose, B. and Leach, W. W., XIX, 1453
- Rose, D. E., GAS, 813
- Rose, H., XXIV, 1550, 1600
- Rose, Nicholas A., ground water and relation of geology to its occurrence in Houston district, Texas, XXVII, 1081
- Rose, Nicholas A., and Alexander, W. H., Jr., relation of phenomenal rise of water levels to a defective gas well, Harris County, Texas, XXIX, 253
- Rose Canyon, California, outcrop section T, SBP, 167-194, 411
- Rose City field, XXVII, 833
- Rose City structure, XXVII, 833
- Rose dome, GAS, 489; V, 73
- Rose dome intrusives, Kansas, extension of, XII, 757
- Rose Hill, carbon ratio variations, PROB, 90
- Rose Lake field, XXVIII, 763
- Rosebaum, J. O., XI, 601
- Rosebud horizon, CAL, 303
- Rosecrans field, California, GAS, 177-180; PROB, 217, 969, 970, 985; XII, 635; XXI, 979; XXII, 709; XXIII, 942
gravity of oil at, XXIV, 1123 (wells 44, 55-63), SBP, 87-153, 404
- Rosenberg field, Fort Bend County, Texas, XXIV, 1084
geochemical log, discovery well, XXIV, 1419
- Rosencranz area, Kansas and Colorado, use of thin bentonite beds in mapping structure, XIV, 1065
- Rosenkrans, R. R., XXV, 2023
- Rosenstein, Ludwig, GAS, 1118
- Rosetta stone, XXVII, 673, 627
geographic location area where (Rosetta) discovered, XXVII, 625
- Rosewarne, P. V., GAS, 1067
- Rosewarne, P. V., and Offord, R. J., GAS, 27, 46
- Rosewarne, P. V., Chantler, H. McD., and Swinnerton, A. A., STRAT, 308
- Rosiclare bed, XXIII, 1357
- Rosiclare-Fredonia contact in and adjacent to Hardin and Pope counties, Illinois, XXIX, 1654
- Rosiclare member of Ste. Genevieve formation, XXIII, 1503; XXIV, 229
- Rosiclare sandstone, XXV, 1116
contact of, on Fredonia limestone in core from Spar Mountain district, XXIX, 1659, 1661
productive in Roaches pool, Illinois, XXIII, 808
- Rosita Ranch, GC, 631; XIX, 1131
- Rosital analysis of cores from deep wells in Texas, XXIX, 1024-1033
- Rosital traverse, XXIX, 220
- Rosler, H., RMS, 485
- Roslyn formation, XXIX, 1393
- Ross and Shannon, XI, 1295
- Ross, C. C., XV, 1171
- Ross, Clarence S., RMS, 457, 468, 473, 484, 485, 596, 619, 625, 628, SD, 300; STRAT, 284; STR II, 425; X, 229; XI, 3, 362, 427, XXVII, 46, 47, 49; XIX, 206; XXI, 258, 260, 261, 874; XXIV, 497, 503; XXV, 297, 1749; XXVI, 57; XXVII, 328
altered Paleozoic volcanic materials and their recognition, XII, 143
beds of volcanic material as key horizons, IX, 341
evidences of slumping previous to consolidation in Pennsylvanian of Oklahoma, VIII, 505
method of distinguishing fused cores, VI, 372
- Ross, Clarence S., and Miser, Hugh D., pre-Cambrian rhyolite discovered in well in northwestern Arkansas, IX, 1115
- Ross, Clarence S., and Shannon, E. V., XVIII, 363
- Ross, Clarence S., Miser, Hugh D., and Stephenson, Lloyd W., STRAT, 615; XVII, 772
- Ross, Clyde P., XXIX, 1383
- Ross, Clyde P., and Cartwright, W. E., XXIV, 183, 187
- Ross, Clyde P., Umpleby, Joseph B., and Westgate, Lewis G., XVII, 118
- Ross, J. R., RMS, 656, 659
- Ross, J. S., VIII, 283; XVI, 941; XVII, 616
deep sand development in Cotton Valley field, Webster Parish, Louisiana, XIV, 983
preliminary report on Tonkawa, Oklahoma, oil field, review, VII, 197
- Ross, J. S., and Swendenborg, E. A., STRAT, 319
analyses of waters of the Salt Creek field, STR II, 601
- Ross, John C., XVII, 255
discussion of Permian of Logan and Lincoln counties, Oklahoma, XVII, 241
- Ross, Ralph B., where should young graduates in petroleum geology acquire field experience? Discuss (Ross) sion XXV, 1180
- Ross clamshell snapper, RMS, 656, 659
- Ross limestone, XXV, 670
- Ross pool, XXIX, 764
- Ross Sea, RMS, 225
- Rossbach Alberto, XXIX, 507
- Rossby, C. G., RMS, 79, 80, 103, 121, 125
- Rossini, F. D., XXVII, 1596; XXVIII, 927
- Rossiter, P. M., basic English for geology, review, XXIX, 1516
- Rostock, Germany, 496
- Rotali, XXIX, 133
- Rotalids, MSC, 169
- Rotalidae, Miocene, MSC, 12, 102, 307
- Rotalidae and lagenidae, Miocene, MSC, 14
- Rotalinae, Miocene, MSC, 317
- Rotan pool, XXIV, 42
- Rotary-Bohrmaschinen und ihre Antreiber, XXI, 631
- Rotary cuttings, samples of, SBP, 15
- Rotary-drilled cuttings samples, evaluation chart of, XVI, 669
- Rotary-drilled holes, interpretations from well drilled by, XXIV, 1370
- Rotary drilling, V, 519
in California, VII, 250; VIII, 135, 143
in Eola field, XXV, 1391
in Kansas gas fields, XXIV, 1785
in Lisbon field, XXIII, 319
review of paper on reverse return method, VI, 391
review of paper on use of calcium carbonate, VI, 390
- Rotary drilling equipment and power, XXI, 631
- Rotary drilling handbook, review, XX, 1498
- Rotary drilling rigs, standard, in use at Carterville-Sarepta and Shongaloo fields, XXII, 1500
steam-powered, XXIII, 1659
- Rotary method, logging wells drilled by, VII, 641; VIII, 641
- Rotary practice, drilling-time data in, XXIII, 1820
- Rotary speed, controlled, important in use of drilling-time method XXIII, 1821
- Rotary tools, core drilling with, in California, VII, 250
deep wells drilled with, on Baker-Glendive (Cedar Creek) anticline, XXIII, 461
- Rotary well cuttings, geologic interpretations from, XVI, 653
- Rotation, axial, status among giant planets and their satellites, CD, 173
its resulting centrifugal force an ideal cause for great horizontal migrations of continental crust-sheets and the making of mountains, CD, 174
- Rotation of earth, effect of, on circulation in sea, RMS, 106, 109
- Rotational stresses, probable cause of folds in Osage County field, Oklahoma, STR II, 388
in Appalachian deformation, XXV, 421
- Roth, XI, 1312; XIII, 885; XXV, 100
- Roth, E. E., STRAT, 385
- Roth, Fred, XII, 169
- Roth, Jacob, Survey, Texas (well 349), SBP, 292-335, 409

- Roth, Robert, PTNM, 547, 572, 698, 707, 743, PROB, 771, 776; XII, 1017; XIV, 1517, 1524, 1537, 1548; XVI, 189, 193; XVII, 1112; XXI, 1517, 1525, 1544, 1549, 1562, 1563, 1566, 1567, 1569, 1571; XXII, 925, 927; XXIII, 1089, 1697, 1699, 1791, 1799, 1802, 1806; XXIV, 8, 9, 41, 94, 306, 316, XXV, 437, 1683, 1690; XXVI, 50, 218, 547, 572, 698, 707, 743; XXVII, 751; XXVIII, 1015, 1018, 1021, 1645; XXIX, 1153
- Custer formation of Texas, XXI, 421
- origin of siliceous Dockum conglomerates, XXVII, 622
- regional extent of Marmaton and Cherokee Mid-Continent Pennsylvanian formations, XIV, 1249
- reviews, XVIII, 553; XIX, 300
- Simpson *versus* Detrital at Oklahoma City, XIV, 228
- type section of Hermosa formation, Colorado, XVIII, 944
- upper Pennsylvanian anhydrite, West Texas, XXVI, 1412
- Roth, Robert, and Pinkley, George R., an altered volcanic ash from Cretaceous of western Kansas, XII, 1015
- Rothé, E., *methodes de prospection du sous-sol*, review, XV, 713
- Rotliegende, PTNM, 548; XXVI, 548 of Germany, XXIV, 274
- Rotliegende plants, XXIV, 313
- Rotliegende series, lower Permian, XXIV, 293
- Rotliegendes, RMS, 332
- Rothpletz, A., XXII, 1384
- Rothrock, E. P., XI, 753
- memorial of Freeman Ward, XXVIII 692
- Rothrock, Howard E., XXIX, 152
- review, XVII, 1395
- Rothrock, Howard E., and Harlton, Bruce H., review, XVI, 268
- Rothrock, Howard E., and Knechtel, M. M., apparent recent crustal movement at western end of Ouachita Mountains, Oklahoma, XIX, 1219
- Rothrock, Howard E., Dane, C. H., and Williams, J. S., XX, 1355
- Rothwell field, Kentucky, GAS, 915, 943
- Rough Creek deformation, map showing, XXII, 1683
- Rough Creek fault, XIII, 1308; XVI, 232
- of Kentucky, relation of, to Ouachita deformation, XXII, 1682
- Rough Creek fault and uplift, GAS, 835
- Rough Creek fault system, characteristics of, XXII, 1683
- Rough Creek fault zone in Kentucky, GAS, 820; PROB, 518, 562; XIII, 420; XXI, 780; XXVII, 820
- Rough Creek uplift, PROB, 517
- Roughness, effect of, on turbulence in sea, RMS, 80
- of a boundary in sea, RMS, 79
- of stream bed, RMS, 13, 23, 28
- of surface of sea, RMS, 79
- of surface of sea, effect of, on currents, RMS, 118
- Roughness parameter, defined, RMS, 80
- Roumania, developments in, during 1938, XXIII, 960
- electrical investigation in, XIV, 1173
- (Roumania)
- geology of natural gas in, XVIII, 871
- geology of salt domes in Carpathian region of, IX, 1165
- Germany's imports of crude oil from, XXV, 1275
- hydrogen sulphide springs in, GAS, 1072
- methane in, GAS, 1072
- notes on natural gas fields of Transylvania, VIII, 202
- oil in, SD, 136-138
- petroleum in, IX, 152, 1188
- petroleum industry of, review, XII, 1039
- petroleum reserves, XXVIII, 1499
- production of crude oil in, XXV, 1272
- salt in, IX, 148
- stratigraphy, VI, 523
- Tertiary in, IX, 152
- Roumania and Gulf Coast, comparison of salt structures, SD, 139; IX, 155
- Roumanian and German salt domes, American salt-dome problems in the light of, SD, 167; IX, 1227
- Roumanian deposits, XVI, 1066
- Roumanian domes, theories of origin, SD, 183
- Roumanian oil district, southern, notes on geology of, XXIX, 1355
- Roumanian oil fields, IX, 145, 1089
- Roumanian petroleum industry, review, VII, 303
- Roumanian production, XXV, 1276
- Roumanian salt domes, PROB, 133
- Round and equidimensional bays, suggestive of possible salt-dome origin, GC, 230; XVII, 936
- Round Butte dome, V, 61
- Round Hill fault, XXVIII, 532
- Round Mountain, North, California, XXII, 704
- Round Mountain field, PROB, 205, 743, XII, 657
- waters in, PROB, 963, 964
- Round Mountain formation, *Gastrioceras* n. sp. from, XXII, 900
- Round Mountain silt, MSC, 201, 321, 328, Fig. 14 (in pocket)
- Edison field, STRAT, 3
- Kern Front field, STRAT, 11
- Round Prairie formation, XXII, 895
- Round Prairie shale, boulders in, XXII, 898
- Roundness, RMS, 39-44, 241, 608
- causes of, RMS, 41
- of constituents of beach deposits, RMS, 216
- of quartz, RMS, 392
- of sands, RMS, 33
- of wind-borne material, RMS, 498
- of zircon, RMS, 608
- Roundness, RMS, 35, 36, 37, 40, 41
- as defined by MacCarthy, RMS, 36
- data, size and scatter diagram of, RMS, 590
- definition of, RMS, 35
- degree of, RMS, 589
- determination of, RMS, 530
- of beach pebbles, RMS, 210, 589
- of grains in Bethel sandstone, XXVIII, 94
- Roundness analysis of grains, XXVI, 1711
- of transported fragmental components of crinoidal phase, Grand Tower limestone, XXVI, 1713
- Roundy, Paul Vere, V, 157; VI, 425; VII, 19; XIV, 1536; XV, 814;
- (Roundy)
- XVII, 971
- memorial of, XXI, 1368
- Roundy, Paul Vere, and Girty, G. H., XI, 1068; XIII, 885, 896, 898; XXV, 1667
- Roundy, Paul Vere, and Mansfield, G. R., XXI, 721, 729, 730
- Roundy, Paul Vere, and Woodring, W. P., GAS, 146
- Roundy, Paul Vere, Farnsworth, H. R., and Woodring, W. P., PROB, 747
- Roundy, Paul Vere, Woodring, W. P., and Farnsworth, H. R., GAS, 146
- Rouse, Hunter, RMS, 75
- Rouse, John T., XX, 1163, 1169; XXV, 2030, 2041
- correlation of Pecan Gap, Wolfe City, and Annona formations in East Texas, XXVIII, 522
- review, XXIV, 1499
- Rouseville field, PROB, 473
- Rousselot, N. A., GAS, 119; XXI, 602
- Routt County, Colorado, outcrop section k, SBP, 243-255
- (well 235), SBP, 194-243, 406
- Rouzer pool, West Virginia, Keener sand in, STR II, 575
- Rovereto, C., XXVIII, 1460
- Row, Charles H., XI, 851; XVII, 485; XX, 385
- an experiment with a drop auger, X, 722
- Darst Creek fault, Guadalupe County, Texas, XIII, 1387
- discussion of Coastal Plain deposits of Texas, XVII, 483
- report of general business committee, for 1936, XXI, 661
- report of resolutions committee, Mexico City meeting, 1935, XIX, 1839
- report of secretary-treasurer for 1936, XXI, 652
- Row, Charles H., and Storm, Willis, XXI, 1086, Pl. E, opp. 1087
- Row, V. P., and Hall, O., XIII, 1146
- Rowan, XXV, 1009
- Rowe, E. P., GAS, 60
- Rowe, J. P., XXIX, 1267
- possibility of oil and gas in Montana, IV, 313
- Rowe sand in Cement pool, XXIII, 824
- Rowland, Boyd, X, 703
- Rowley, R. R., XVIII, 1133; XXI, 1161; XXVI, 4
- Rowley R. R., and Keyes, C. R., XXIV, 779
- Rowntree, R. H., and Bowers, E. H., GAS, 1012
- Roxana Petroleum Company, SD, 602, 656, 677
- Roxana Petroleum Corporation, SD, 645, 651, 675
- Roxbury pool, FOP, 84; XXV, 1516
- Roxbury Southeast pool, XXVIII, 772
- Roxo, Mathias, XXI, 106
- Roy, Chalmers J., memorial of Nolan Anthony Fanguy, XXVI, 1854
- speakers service, XXIII, 1597
- type locality of Citronelle formation, Citronelle, Alabama, XXIII, 1553
- Roy, Chalmers J., and Glockzin, Albert R., tentative correlation chart of Gulf Coast, XXV, 742
- Roy, Chalmers J., and Mather, Kirtley F., laboratory manual of physical and historical geology, review, XIX, 418
- Roy, R. O., VII, 645; XXII, 1659

- Roy, S. K., and Crouse, Carey, XXVI, 860
- Royal Oil & Ref. Co., SD, 623
- Royce, Stephen, XI, 1287
- Royds, J. S., Clark, Stuart K., and Tomlinson, C. W., well spacing—its effect on recoveries and profits, XXVIII, 231
- Royer dolomite, XXV, 1630
- Royo y Gomez, Jose, XXIX, 1074, 1093
- Royston formation, XXI, 468
- Royston pool, XXIV, 42
- Ruaha graben, XXI, 114
- Ruark, A. E., XIII, 677; XVI, 1350
- Rubber, natural and synthetic, oxidized by marine bacteria, XXVII, 1178
- Rubel, A. C., XX, 950
- Rubey, Harry, engineering surveys, review, XIX, 1241
- Rubey, W. W., PROB, 619, 622, 811, 812, 815, 816; RMS, 37; STRAT, 849; IX, 1069; X, 1064, 1069; XI, 875, 884, 889; XII, 823; XIII, 641; XIV, 2, 14; XVIII, 1488, 1563; XX, 1196; XXI, 716; XXII, 1260, 1307; XXIII, 1068; XXIV, 769; XXV, 2172; XXVIII, 1205
- discussion of oil possibilities of Black Hills region, X, 1177
- discussion on gravitational compaction, XI, 875
- effect of gravitational compaction on structure of sedimentary rocks: a discussion, XI, 621, 1333
- review, XIX, 302; XXV, 902
- wildcat oil exploration in south-central Arkansas, VI, 350
- Rubey, W. W., and Bass, N. V., PROB, 812, X, 1070, XIX, 1406; XX, 1191
- Rubey, W. W., and Callaghan, Eugene, XXII, 1338, 1344
- Rubey, W. W., and Heald, Kenneth Conrad, El Dorado oil field in Arkansas not on an anticline, VI, 358
- Rubidium in sea water, RMS, 143
- relative exchange power, in base exchange, RMS, 535
- Rubidoux sandstone, I, 140
- Rubner, Max, PROB, 40
- Ruby, Glen M., XI, 112, XIX, 162, 164; XXIX, 503, 505
- oil saturation in certain sandstones, VII, 473
- Ruckman, J. H., XVII, 81, 84
- Ruckman, John, XIX, 1198
- Rudd, Eric A., XX, 1031, 1041, 1042, 1043, 1047, 1048, 1064; XXV, 378, 389, 391
- Rudd, Eric A., and Condit, D. D., XX, 1031
- Rudd, Eric A., Condit, D. D., and Raggatt, H. G., XXV, 374
- geology of Northwest Basin, Western Australia, XX, 1028
- Ruddell shale, XXVIII, 1627
- character, XXVIII, 1632
- distribution, XXVIII, 1631
- fossils and correlations of, XXVIII, 1633
- thickness, XXVIII, 1632
- Ruddell shale and Moorefield formation, Batesville district, Arkansas, XXVIII, 1626
- Ruddle, John, Survey, Texas (well 324), SBP, 292-335, 408
- Rudistae in Cretaceous, CD, 33
- Rudistid-bearing limestone, XXVIII, 1103, 1143
- (Rudistid)
- in Jalisco, XXVIII, 1122
- Rudistid fossils, XXVIII, 319
- Rudistid reefs, XXVIII, 1094
- Rudistids, MEX, 39, 40, 43, 59-62, 69, 71, 97, XXV, 640, XXVIII, 1106, 1160
- Rue, R. T., IX, 286
- Ruedemann, XIII, 646, 647, 648; XX, 984
- Ruedemann, Paul, XI, 944
- estimation of oil reserves, review, IX, 361
- some graphical methods for appraising oil wells, VI, 533
- Ruedemann, Paul, and Gardescu, Ionel, estimation of reserves of natural gas wells by relationship of production to closed pressure, VI, 444
- Ruedemann, Paul, and Oles, L. M., GAS, 1072; PROB, 778
- helium—its probable origin and concentration in Amarillo fold, Texas, XIII, 799
- Ruedemann, Paul, and Redmon, H. E., PROB, 762, 763
- Turkey Mountain lime pools, Oklahoma, STR I, 211; XI, 933
- Ruedemann, Rudolf, XI, 934; XIII, 26; XIV, 1498; XV, 175, 1061, 1070; XVII, 80, 1406, 1415; XX, 302, 303, 306, 310, 1254, 1256; XXI, 1144, 1148, 1149, 1151; XXII, 543, XXIII, 1181, 1183, 1188, 1189, 1190, XXVI, 124; XXIX, 13, 1045, 1512
- coralline algae, Guadalupe Mountains, XIII, 1079
- Paleozoic plankton of North America, review, XIX, 567
- Ruedemann, Rudolf, and Balk, Robert, editors, geology of North America, review, XXIV, 1134
- Ruedemann, Rudolf, and Decker, Charles E., XXVIII, 873, 874
- Ruedemann, Rudolph, and Wilson, T. Y., XXI, 27
- Ruffner, XIX, 480
- Ruffner, David, XXII, 1089, 1090
- Ruffner, David, and Ruffner, Joseph, XXII, 428
- Ruffner, Joseph, XXII, 1089, 1090
- Ruffner brothers, XIX, 479
- Rukas, Justin M., XXIX, 63
- Rukas, Justin M., and Gooch, D. David, exposures of Vicksburg Oligocene fauna in western Louisiana, XXIII, 246
- Rukwa graben, XXI, 114
- Rule of capture, XXII, 566
- Rule of ten dollar increase in barrel-day prices with every one cent increase in price of crude oil, criticism of, IV, 189
- Ruma formation, XXIV, 833
- Rumania. (See Roumania)
- geology of salt domes in Carpathian region of, SD, 87
- Rumanian, MSC, 174
- Rumanian oil fields, SD, 129
- Rumanische Salsonaufbrüche, über, review, XIII, 1493
- Rumanischen Erdölagerstätten, review, XIII, 1404
- Rumsey Hills, California, XXVII, 282; XXIX, 963
- (well 4), SBP, 130-153, 403
- Rundle formation, fossils of, XXVII, 43
- Rundle limestone, PROB, 158, 348
- Runner, J. J., XV, 188; XXIII, 465
- Runnymede sandstone, XXIII, 1774
- near type locality in Harper County, Kansas, XXIII, 1780
- Run-off, RMS, 271, 273
- from rivers, effect of, on currents, RMS, 118
- of water from land to sea, amount of, per year, RMS, 89
- Rupelian, MSC, Fig. 14 (in pocket)
- Rupelian transgression, MSC, 180
- Rush Springs formation, PTNM, 707; XXVI, 707
- Rush Springs member of Whitehorse sandstone, changes in color, XXV, 18
- Rush Springs sandstone, XXI, 1527
- in Anadarko basin, XX, 1471
- Rusk, W. W., GAS, 305
- Rusk, Cherokee, Smith, Gregg, and Upshur counties, Texas, East Texas oil field, STRAT, 600
- Rusk County, Texas (wells 335-351), SBP, 292-335, 409
- Russell, Henry Norris, XIX, 901, 902
- Russell, XII, 132; XIV, 1347; XXIII, 1851; XXVIII, 919, 926; XXIX, 1332
- Russell, B. P., XVIII, 1601
- Russell et al., Brooks 1 (well 376), SBP, 292-335, 409
- Russell, F. S., RMS, 104, 105, 145
- Russell, Gohr, and Voorhees, XX, 43, 48
- Russell, H. L., RMS, 417; XX, 260
- Russell, I. C., XI, 404; XII, 906, 918, 920, 921, 925; XVI, 2, 15, 44; XXIX, 1389
- Russell, Loris S., STRAT, 273, 281, 282
- Russell, Loris S., and Landes, R. W., XXIX, 1267, 1291
- Russell, P. J., XXIV, 1450
- Russell, Philip G., and Kendrick, Frank E., natural gas in Bend Arch district, Texas, GAS, 609
- Russell, R. Dana, CAL, ix, 124, 127, 128, 233; GAS, 882; XIX, 1628; XXI, 1270, 1276; XXIII, 1201; XXIV, 2101; XXIX, 1308
- effects of transportation on sedimentary particles, RMS, 32
- future of field geology, discussion, XXV, 324
- review, XXIII, 612
- Russell, R. Dana, and Anderson, Charles A., XXIX, 981
- Russell, R. Dana, and Russell, Richard Joel, XXIX, 1627
- Mississippi River delta sedimentation, RMS, 153
- Russell, R. Dana, and Taylor, R. E., XXVI, 1711
- Russell, R. Dana, and Vander Hoof, V. L., CAL, 233
- Russell, Richard Joel, CAL, 26; RMS, 174, 179; XX, 824, 825; XXIII, 198, 199, 203, 206, 210, 211, 1553; XXIX, 1308, 1325
- climatology of Brown's hypothesis on origin of Gulf Border salt deposits, discussion, XX, 821
- distinguished lecture tour, 1943, XXVIII, 171
- Louisiana stream patterns, XXIII, 1199
- Russell, Richard Joel, and Fisk, H. N., XXIX, 69
- Russell, Richard Joel, and Howe, Henry V., XXIII, 204
- Russell, Richard Joel, and Huner, J. Jr., XXVIII, 1250

- Russell, Richard Joel, and Russell, R. Dana, XXIX, 1627
Mississippi River delta sedimentation, RMS, 153
- Russell, Richard Joel, Howe, Henry V., McGurt, James H., Dohm, C. F., Hadley, Wade, Jr., Kniffen, Fred B., and Brown, Clair A., Lower Mississippi River Delta, report on geology of Plaquemines and St. Bernard parishes, review, XXI, 1213
- Russell, William L., GAS, 813, 824, 835; PROB, 74, 75, 89, 448, 450, 567, 814; SBP, 356; XI, 456; XII, 809, 810, 820; XIII, 677; XIV, 27, 28, 316; XVI, 915, 921, 1030; XVII, 719, 720; XVIII, 1499; XXI, 67, 76, 77, 78, 954; XXIV, 1442; XXVI, 1576; XXVIII, 1032
discussion of Branner's paper on sandstone porosities in Arkansas, XXI, 78
geology of oil and gas fields of western Kentucky, XVI, 231
is geologic distillation of petroleum possible? XIII, 75
local subsidence in western Kansas, XIII, 605
notes on origin of oil in Kentucky, XVIII, 1126
porosity and crushing strength as indices of regional alteration, X, 939
possibility of oil in western Ziebach County, South Dakota, review, X, 638
proofs of carbon-ratio theory, XI, 977
quick method for determining porosity, X, 931
relation of radioactivity, organic content, and sedimentation, XXIX, 1470
relation of Rough Creek fault of Kentucky to Ouachita deformation, XXII, 1682
some characteristics of organic content of rocks, XVIII, 1103
stratigraphy and structure of Smoky Hill chalk in western Kansas, XIII, 595
subsurface concentration of chloride brines, XVII, 1213
well logging by radioactivity, XXV, 1768
well logging by radioactivity, discussion, XXV, 2211
- Russell, William L., and Hartnagel, C. A., oil fields of New York State, IX, 798
New York oil fields, STR II, 269
- Russell County, Kansas, development, XXIV, 1002
(wells 242-243), SBP, 255-285, 407
Russell County, Virginia, deep well in, XXVII, 1543
- Russell Fork tear fault, XVIII, 1587
- Russell-Gealy tube, XVI, 916
- Russell pool, Gaines County, Texas, XXVIII, 815
gravity of oil at, XXVIII, 815
- Russell porosity apparatus, use of mercury for determination of volume of rock specimens in, XIII, 677
- Russia, CAL, 110, 112
Asiatic, production in, XI, 511
asphalt in, XI, 504
Baku district, XI, 501
Baku oil fields, XXI, 1075
beginning of rapid evolution of geo-
- (Russia)
syncline in, at beginning of Sakmarian time, XXIV, 278
bibliography, XI, 504, 512
bitumen in, XI, 504
boundary between Carboniferous and Permian in, XXII, 1015
Carboniferous in, XXIII, 956, 957, XXV, 1404
Carboniferous-Permian boundary in, XXIV, 294
Chokrak series of Miocene in XXI, 1077
classification of Artinskian series in, XXV, 1396
Comanche in XXIII, 496
Cretaceous in, XI, 507
Daghestan district, XI, 500
Devonian in, XXIII, 956
discovery of oil in Oural-Volga Permian basin, Perm province, XIII, 859
eastern, map XXV, 1398
eastern, paleogeography of sediments of, XXV, 1400
eastern, Paleozoic in, XXV, 1403
Emba Basin, XI, 509
Emba salt-dome region, XXIII, 492
Eocene in, XI, 510
European, production in, XI, 503
Ferghana Basin, XI, 510
geophysical methods of prospecting in, XIV, 93
Germany's imports of crude oil from, XXV, 1277
Grozny district, XXI, 1077
Izberbash oil field, Dagestan, XXI, 1076
Jurassic in, XXIII, 496
Kuban district, XI, 499; XXI, 1078
Kura Basin, XI, 503
Kutais Basin in, XI, 504
Lower Cretaceous in, XXIII, 496
Malkop district, XXI, 1078
Malkop field, XI, 499
Miocene in, XI, 501, 504; XXIII, 950
New Grosny field in, PROB, 912
oil and water content of oil sands, Grosny, XIII, 811
Permian in, XXIII, 956; XXIV, 249; XXV, 1396, 1404
petroleum industry in, VII, 447
petroleum resources of, XI, 493
Pliocene in, XI, 501; XXI, 1077; XXIII, 950
problem of Carboniferous-Permian boundary in, XXV, 1402
production at Pirsagat field, XXI, 1077
Putra district, XXI, 1077
radioactivity of oil-well waters in, XXIV, 1533
reserves of, XXVIII, 1490
review, VI, 384
section of later Carboniferous and Permian sediments in, at close of Kazanian epoch, XXV, 1401
south, MSC, 173
southern, oil shale in, XI, 495
Soviet, comparison of Permian ammonoid zones of, with those of North America, XXII, 1014
Soviet, youngest Paleozoic ammonoid fauna known in, XXII, 1019
structural trends showing oil fields and prospects in, map, XXIII, 952-953
Terek district, XI, 500
Tertiary in, XI, 507; XXIII, 496
Tertiary source beds in, XI, 501
- (Russia)
Transcasian Basin, XI, 510
(U.S.S.R.), natural gas occurrences in, XVIII, 746
Ural Permian basin, XXI, 1078
water problems in New Grosny oil field, XI, 1035, discussion, XII, 950
Russian lagoons, RMS, 199
Russian oil fields in 1936, XXI, 1074
in 1937, XXII, 758
Russian oil fields, water troubles in, review, VII, 586
Russian Platform, XI, 494, 495
Russian platform and Uralian geosyncline, type Permian in, XXIV, 237
Russian production of crude petroleum, XXV, 370
Russian River, CAL, 99, 314
Russian Sakhalin, geographic names of, discussion, XI, 307
Russian Sakmarian, Artinskian, Paragastrioceras, Prothalassoceras, Agathiceras, Marathionites, and Vidrioceras in, and in Texas Wolfcamp-Admiral beds, XXII, 1017
Russian section, tendency toward revision of Carboniferous-Permian boundary in, XXIV, 283
Russian therapeutic muds, RMS, 204
Russom, Vaughn W., XVII, 646; XXI, 1561, 1566, 1567, 1568, 1571; XXIII, 560, 566, 577, 581, 1753; XXV, 437
question of unconformity at base of Marlow, XXI, 1560
Rust, George, XX, 1106
Rust, W. M., Jr., evaluation of new geophysical methods, XXIX, 865
Rustler, type, section showing relationship of, to subsurface in Delaware basin and on Central Basin platform, XXVI, 244
Rustler and Salado unit of Permian of New Mexico, temperature tests on, XXI, 1194
Rustler anhydrite, XXV, 615; XXVI, 382
structure-contour map of top of XXVII, 502
Rustler beds, XXIII, 1676
Rustler carbonates, XXVIII, 1613
Rustler dolomite, V, 89
Rustler evaporite period, XXIII, 1693
Rustler formation, PTNM, 612, XXI, 876; XXIV, 49, XXV, 601; XXVI, 64, 612, 1635; XXVII, 488; XXVIII, 1612
in Delaware basin, XIX, 264
XXIII, 1692
in Midland basin, XXIV, 62
made up of anhydrite, siltstone, red-beds, and magnesium limestones, XXV, 156
near Pecos River, XXVIII, 1614
Sand Belt, STRAT, 752
unconformable on upper Castile, XXIV, 27, 35, 50
Rustler limestone, New Mexico, X, 848
Permian Basin of Texas and New Mexico, XIII, 942; XXIV, 342
Rustler section, two divisions, XXVIII, 1613
Rustler structure, XXVII, 501
Rustler time, PTNM, 762; XXVI, 762
paleogeography of, XXVI, bet. 240 and 241
Ruston gas field, Lincoln Parish, Louisiana, XXIX, 226

- Ruth dome, XXIX, 830
 Rutherford, H. M., XXIX, 79
 Rutherford, N. M., XXIX, 950
 Rutherford, Ralph L., GAS, 27; XI, 244; XV, 497; XVIII, 1391, 1413
 Rutherford, Ralph L., and Allan, John A., GAS, 12; XVIII, 1390
 Rutherford, Ralph L., and Warren, P. S., GAS, 22; XVIII, 1404, 1405, 1410, 1411; XIX, 296
 Rutherford and Royal Oil and Gas Corporation, XXV, 312
 Rutile, RMS, 498, 499, 602, 604, 609; XXII, 556; XXIX, 642, 643; XXVIII, 86
 Rutledge, J. J., XIX, 830, 835, 840
 Rutledge, Richard B., memorial of Richard Arthur Tarr, XXIV, 200
 Rutledge, Richard B., and Bryant, Howard S., Cunningham field, Kingman and Pratt counties, Kansas, XXI, 500
 Rutsch, R., XXIII, 1243, 1723, 1854; XXIV, 1550, 1559, 1565, 1607; XXVIII, 14
 Rutten, L., XXIV, 1550, 1570, 1571, 1596, 1601, 1606
 Rutten, L. M. R., XXII, 3, 11, 16, 43, 45, 52, 53, 57, 58, 60, 67; XXVI, 778; XXIX, 1091
 bibliography of West Indian geology, review, XXII, 1460
 Rutter, XXIX, 1081
 Ruzancev, V. E., XXII, 773, 774, 1015, 1017, 1018; XXIV, 253, 254, 258, 264, 269, 276, 280, 282, 289, 293, 294, 296, 297, 322, 323, 327, 354; XXV, 404; XXVI, 403
 Ryan, Paul S., GAS, 1142, 1143
 Ryan, Russell Fossler, memorial of, XX, 240
 Ryasovoff, W. D., IX, 812
 Rycade Oil Company, SD, 358
 Rycade Oil Corporation, SD, 169, 347, 412, 418, 419, 478, 492, 718
 Ryniker, Charles, XIV, 1537, 1545; XVIII, 266, 568; XXVI, 284
 reviews, XI, 765, 1123; XII, 868; XVI, 948
 Ryniker, Charles, and Galloway, J. J., XVIII, 1048
 Ryniker, Charles, Neumann, L. M., Bass, N. W., Gunter, R. L., Mauney, S. F., and Smith, H. M., relationship of crude oils and stratigraphy in parts of Oklahoma and Kansas, XXV, 1801
 Rypne field, Poland, XV, 24
 Rzehak, A., XXII, 1007
- S
- Saale glaciation, RMS, 331, 332
 Sabine arch, XVIII, 1264
 Sabine dome, XIII, 428
 Sabine formation in Louisiana, XVII, 618
 Sabine group, XXIV, 1893
 in Louisiana, GC, 386; XVII, 617
 inappropriateness of name Wilcox for, GC 389; XVII, 619
 Sabine Parish, section showing heavy-mineral zones from, to Jefferson Davis Parish, Louisiana, XXIV, 2076
 Sabine Peninsula, SD, 25
 Sabine region, Tertiary in, GAS, 654
 Sabine uplift, GAS, 656, 661; PROB, 276, 302, 332, 341, 403, 575, 579; SD, 217, 219, 220, 269; STRAT, 607; IV, 117; V, 552, 557; VI, 15, (Sabine)
 59, 182, 249, 252, VII, 179; XIV, 755; XV, 532, 533, XVII, 764, XVIII, 1073; XXI, 1066, 1067, XXVIII, 582
 an important regional structure, STR II, 702
 Caddo field, Louisiana, STR II, 184, 189, 195
 East Texas field on, XXVIII, 303
 Eocene in, XXIX, 60
 fields on and near, PROB, 578
 location of, XXIX, 51
 Louisiana, IV, 117
 Louisiana, Tertiary history of region of, XV, 531
 Louisiana and Texas, areal geology of Midway and Wilcox sediments of, XXIX, 48
 Louisiana and Texas, Midway-Wilcox surface stratigraphy of, XXIX, 45
 Louisiana and Texas, structural axes indicated by Midway and Wilcox surface sediments, XXIX, 49
 Lower Eocene in, XXIX, 52
 Midway-Wilcox inlier of, XXIX, 52
 Paleocene in, XXIX, 52, 56
 Pine Island field, Louisiana, STR II, 172
 section showing stratigraphic changes in Midway and Wilcox sediments across, XXIX, 50
 structural geology of, XXIX, 70
 Sabine uplift-Jennings-Sigsbee deep, GC, 194; XVII, 1448
 Sabine Wilcox beds, XXV, 1376
 Sabinetown formation, XXIV, 1893; XXIX, 63
 Sabinsville anticline, GAS, 978; XV, 684; XXII, 253, 257; XXV, 1143; XXVIII, 732
 Sabinsville field, XXV, 1144
 Sabinsville pool, Tioga County, Pennsylvania, XXII, 256; XXVIII, 732
 Sabinsville structure, XV, 927
 Sacacual group, XXVIII, 24
 Sacajawea formation, XXV, 130; XXVII, 1293, 1302
 Sacate formation, XXVII, 10
 Sacatosa field, XXIII, 865
 Saccharinic acid, coke formed experimentally from coalification of, XXIV, 1869
 Saccharinic acids and lactic acids, XXIV, 1871
 Sacco, Federico, XIX, 533
 Sachs, Alexander, GAS, 1140
 Saco pool, GAS, 260
 Sacramento, CAL, 35, 99, 314
 Sacramento Basin, California, map showing oil and gas seeps in, FOP, 34; XXV, 1466
 map showing test wells in, FOP, 33; XXV, 1465
 references on, FOP, 34; XXV, 1466
 table of formations in, FOP, 32; XXV, 1464
 Sacramento cuesta, XXI, 854
 San Andres limestone cover rock of, XXV, 83
 Sacramento escarpment, XIII, 967
 Sacramento monocline, XXI, 895
 Sacramento Mountains, New Mexico, XIII, 960; XXI, 844; XXIV, 178
 fauna of Caballero formation, XXV, 2124
 map showing four ranges of, XXV, 2108
- (Sacramento)
 map showing location of measured sections of Mississippian in, XXV, 2139
 Mississippian formations of, XXV, 2107
 Mississippian rocks in, XXV, 2114
 Permian in, PTNM, 687; XXVI, 687
 stratigraphic section in, XXV, 2111
 structure in, XXV, 2110
 Sacramento Mountains area, correlation chart of, XXV, 2154
 Sacramento River, CAL, 18, 314
 Sacramento River drainage utilization by Shasta Dam, XXVI, 1816
 Sacramento Valley, California, CAL, 16, 20
 a syncline, XXVI, 1816
 Cretaceous strata in, CAL, 14, 99, 117, 119
 east side, Shasta and Butte counties, California: Cretaceous, XXVII, 306
 Eocene beds of, CAL, 125, 131
 Knoxville series in, XXI, 1345
 limestone in Chico beds of, CAL, 107
 Marysville Buttes in, CAL, 18, 234, 261
 outcrop section C, SBP, 167-194, 411
 Pliocene in, CAL, 231, 234, 251
 preliminary study of source beds in late Mesozoic rocks on west side of, XVIII, 1346
 south of Willows, Glenn County, California, Upper Cretaceous stratigraphy of west side of, XXVII, 279
 Tehama formation of, CAL, 234, 285
 Tuscan tuff (Pliocene) in, CAL, 233
 Upper Cretaceous in, XXIX, 980
 (wells 2-5), SBP, 130-150, 403
 Sacramento Valley Cretaceous foraminiferal zones, XXIX, 963
 Saddle Creek bed, III, 143
 Saddle Creek formation, XXIV, 91
 Saddle Creek limestone, XXIII, 857; XXIV, 41
 Saddlehorse gypsum, IV, 270
 Saddles, submarine, sediments on, RMS, 245, 257, 259, 277, 279
 Sadie anticline, GAS, 531
 Saffo, O., XXIV, 1890
 Safford, XIX, 1114
 Safonov, Anatole, memorial of Ivan Mikhailovitch Goubkin, XXIII, 1283
 orogeny of the Urals, XXI, 1439
 Safranins, in bacterial studies, RMS, 419
 Sage, B. H., and Lacey, W. N., XXV, 1304, 1314
 Sage, L. C., XXVI, 1657
 Sage Breaks shale member of Niobrara, XX, 1195; XXVIII, 1205
 Sage Creek anticline, XXV, 148
 Sage Creek field, Wyoming, XXVII, 470
 Sage Creek seepages, XVI, 789
 Sage Hen limestone, V, 264
 Saginaw anticline, Michigan, structure map, STR I, 107
 Saginaw formation, Michigan, STRAT, 245; XXII, 394
 Saginaw group, XXIV, 1969
 Saginaw oil field, Michigan, STR I, 105; STR II, 676; XXII, 411, 662
 Devonian in, XI, 960
 geology of, and discussion of Michigan's oil prospects, STR I, 105; XI, 959
 Mississippian in, XI, 960

- Saginaw shales, XXVIII, 190
 Sagoc pipe line from Tibú field, XXIX, 1128
 Sahagún, Fray Bernardino de, MEX, 1
 Sahara dust, RMS, 499
 Sahcab beds, XX, 1300
 Sahelian troughs, MSC, 181
 Sahni, B., XXIX, 1232
 Sahul Shelf, RMS, 349, 350
 Sailor Canyon formation, CAL, 76
 Saint, S. J., XXIV, 1550
 St. Andrews beds, Barbados, XXIV, 1552
 St. Bernard and Plaquemines parishes, reports on geology of, Lower Mississippi River Delta, XXI, 1213
 St. Bernard Parish, La., RMS, 159
 St. Bernard subdelta, RMS, 159, 160, 165, 171-173
 St. Clair, Stuart, XI, 174
 oil and gas in Kentucky and Tennessee, PROB, 515
 oil geology of Warren County, Kentucky, VI, 24
 review, V, 100
 St. Clair, Stuart, and Weller, Stuart, XXIII, 1839; XXV, 675, 682
 St. Clair fault, GAS, 993; PROB, 510
 St. Clair limestone, XXV, 1644
 St. Clair marble, IV, 181; V, 121, 406
 St. Croix formation in Trinidad, XI, 205
 St. Croixian basal, and top of upper Keweenawan sandstones, contact between, XXIV, 744
 St. David limestone, XXVI, 1591
 St. Francois Mountains, Missouri, XVI, 630
 pre-Cambrian in, XXV, 1625
 St. Francois-Ozark area, Missouri, Cambrian in, XXV, 1632
 St. Gabriel field, Iberville Parish, Louisiana, XXVI, 989, XXVIII, 1277
 electric-log cross section, XXVIII, 1279
 faults at, XXVIII, 1302
 St. George district, Washington County, Utah, Beaver Dam Mountains fault block in, XXIII, 127
 Beaver Dam Wash fault block in, XXIII, 127
 Beehive dome in, XXIII, 144
 deep tests of Bloomingdom dome in, XXIII, 140
 geologic map of, XXIII, 126
 geologic structure of, XXIII, 121
 Harrisburg dome in, XXIII, 143
 history of drilling in, XXIII, 140
 Hurricane Cliffs fault block in, XXIII, 137
 igneous rocks in, XXIII, 126
 Leeds fault block in, XXIII, 136
 map showing location of, XXIII, 122
 oil and gas possibilities in, XXIII, 144
 Punchbowl dome in, XXIII, 143
 St. George fault block in, XXIII, 133
 structural history of, XXIII, 123
 White dome in, XXIII, 144
 St. George fault block in St. George district, Utah, XXIII, 133
 Saint Helena, RMS, 382
 St. Helens Oil Company (well 98), SBP, 97-153, 404
 St. Joe fault, section, GAS, 548
 St. Joe formation, XXV, 2113
 correlatives, XXIII, 327
 fauna of, XVIII, 1140; XXIII, 327
 Oklahoma, XXIII, 325
 St. Joe limestone, IV, 181, V, 122, 175
 St. Joe member, XXV, 1652
 St. John, II, 71
 St. John, O. H., XXIII, 1752
 St. John formation, VI, 116
 St. John pool, Kansas, XXII, 675
 St. John Township pool, XXIX, 706
 St. Johns County, Florida, west-east cross section through wells from Cedar Keys, Levy County, to St. Augustine, XXVIII, 1739
 St. Lawrence, Gulf of, MSC, 16
 Gulf and River, foraminifera from, MSC, 12
 St. Lawrence-Champlain faulting, GAS, 97, 110
 St. Lawrence formation, XXVIII, 115
 St. Lawrence geosyncline, CD, 130
 St. Lawrence lowlands, FOP, 125; GAS, 89-91, 94, 96, 97, 100, 102; XXV, 1557
 St. Lawrence lowlands and Gaspé Peninsula of Quebec, map, FOP, 124; XXV, 1556
 St. Laurent limestone, XXV, 683
 limits of, XXVIII, 1522
 St. Louis field, Oklahoma, STR II, 316-318; XXIV, 1029
 map of surface structure, STR II, 323, 324, 348
 St. Louis formation, eastern Kentucky, GAS, 935
 gypsum in, XXIV, 231
 St. Louis limestone, IV, 45; V, 100, 123, 168, 647; VI, 24; XXIII, 1357; XXIV, 813; XXIX, 1148
 Lee-Estlin-Powell field, Kentucky, STR I, 80, 81
 productive in Illinois, XXIII, 815
 productive in Martinsville pool, XXIII, 816
 productive in Westfield dome, XXIII, 816
 St. Louis-Pearson area, Seminole district, Oklahoma, diagram, STR II, 347
 St. Louis pool, PROB, 356, 411, 766
 extension to, XXIII, 831
 St. Martin Parish, Louisiana, Anse la Butte dome, XXVII, 1123
 Bayou Bouillon salt dome, SD, 345
 Section 28 salt dome, SD, 352
 (well 408), SBP, 335-349, 410
 St. Martin Parish field, II, 22
 St. Mary Parish, Louisiana, Belle Isle salt dome, GC, 1033
 late Recent history of Côte Blanche salt dome, GC, 1026
 St. Mary River formation, Alberta, ALTA, 10; XV, 1138
 Spring Coulee region, Alberta, ALTA, 139; XV, 1267
 St. Mary's Point, La., RMS, 169
 St. Marys sandstone, IV, 250
 St. Marys-Sistersville area, PROB, 490
 St. Maurice beds, Louisiana, SD, 333; X, 237, 281
 St. Maurice formation, IV, 130; VI, 180, 350
 Homer field, Louisiana, STR II, 201
 Urania field, Louisiana, STR I, 93
 St. Peter formation, XXV, 1120
 St. Peter group in Kansas, XIII, 451
 St. Peter horizon, XXV, 819
 St. Peter problem, present status of, in Kentucky, XXIII, 1836
 St. Peter sand, FOP, 134; XXV, 1566; XXIX, 707
 St. Peter sandstone, PROB, 314, 506, 519; RMS, 242; IV, 46; V, 122, 611-617; VI, 374; XXII, 1546; XXIII, 820, 1357; XXV, 1142; (St. Peter)
 XXVI, 1103, XXVIII, 113
 east-central United States, XXII, 1535
 interpretation afforded by fine to coarse sand ratio against eolian origin, XXIX, 218
 Kentucky, XXIII, 107, 1837; XXIV, 1644
 Kentucky, distribution of, XXIII, 1838
 Missouri, character of, XXIII, 1839
 Ohio, GAS, 909
 porosity determinations of, XXI, 69
 problem of, XXIII, 1837
 Tennessee, XXIV, 1642
 typical section below Trenton limestone showing position of, XXIII, 1839
 Upper Mississippi Valley, correlations up to 1934, of beds above, XIX, 1113
 St. Peter stratigraphy, résumé of, XIX, 1110
 St. Thomas field, XXV, 1122
 Saint Thomé, RMS, 382
 St. Vincent field, XXVIII, 753
 Ste. Genevieve and Chester, graphic section and lithology of, in Illinois Basin fields, XXIII, 1497
 Ste. Genevieve-Aux Vases sections, Illinois Basin fields, XXIII, 1501
 Ste. Genevieve fauna, XXVII, 1293
 Ste. Genevieve formation, IV, 45, 308; V, 123; VI, 24; XXII, 76, 275, 655, 785; XXIII, 1353; XXIV, 225; XXV, 879, 1116; XXIX, 687, 691
 eastern Kentucky, GAS, 934
 Illinois, XXIII, 1502
 McClosky limestone of, productive in Basin fields in Illinois, XXIII, 1495
 productive in Roaches pool, Jefferson County, Illinois, XXIII, 808
 Ste. Genevieve limestone, XXIII, 1357; 1367; XXIV, 815; XXV, 1122; XXVI, 1092
 Kentucky, Tennessee, Ohio, and Michigan, XXII, 1527
 (McClosky sand), XXII, 657
 most important producing formation in Illinois Basin fields, XXIII, 1500
 obolitic beds in, XXIII, 1844
 Ste. Genevieve obolitic limestone productive in Illinois, XXIII, 807
 Sakamoto, XIV, 475
 Sakhalin, RMS, 505; XI, 507
 North (Russian), geology of oil fields of, X, 1150
 oil prospecting on, by Japan in 1919-1925, X, 1163
 production in, XXV, 357
 Sakhalin district, Russia, XXII, 759; XXIII, 951
 Sakmarian beds, XXII, 1014; XXIV, 270
 correlated with lower Permian of Texas, New Mexico, Oklahoma, Kansas, and Nebraska, XXIV, 275
 most important key horizon in Permian-Carboniferous complex, XXIV, 255
 Orenburg region, XXIV, 258
 Shikhan Tra-Tau, a reef in, XXIV, 254
 Ufa Plateau, XXIV, 255
 Sakmarian horizon in limestone facies in Ufa Plateau and in detrital facies in geosyncline, XXIV, 261
 Sakmarian series correlated with Wolfcamp series in America, XXIV, 245
 definition, XXIV, 254

- Sakmarian time, beginning of rapid evolution of geosyncline in Russia at beginning of, XXIV, 278
- Sal del Rey, SD, 763, 766-768
geology, IX, 584
salt at, IX, 586
- Sal del Rey salt lake, Texas, IX, 581
- Sal Vieja, SD, 763-768
- Sal Vieja salt lake, Texas, IX, 581-588
- Salado correlated with Tessey formation in Glass Mountains, XXVIII, 1612
unconformable on Castile evaporites of Delaware basin and uppermost Guadalupian sediments of surrounding areas, XXVIII, 1612
- Salado and Castile time, paleogeography of, XXVI, bet. 240 and 241
- Salado anhydrites, XXVIII, 1611
- Salado arch, Mexico, MEX, 74
Mexico, structure, IX, 131
Nuevo León, and Tamaulipas, Mexico, reconnaissance study of, IX, 123
- Salado bed of Castile formation, XXIII, 1688
- Salado beds, XXIV, 342
- Salado formation, PTNM, 611; XXIV, 11; XXV, 601; XXVI, 611, 1637; XXVII, 489; XXVIII, 1608
- basal beds of, in Fletcher potash core test, near Carlsbad, New Mexico, XXVI, 63
composed of halite, anhydrite, polyhalite, and locally rich deposits of potash salts, XXV, 156
evaporites of, XXVIII, 1608
general features of, XXVI, 64
halite of, XXVI, 72
Permian basin, XXIII, 1569
- Salado halite, Delaware basin, XIX, 267; XXI, 876
potash deposits of upper, most economically important features of Ochoa series, XXVIII, 1625
- Salado lagoon, XXVIII, 1611
- Salado-Rustler movement, XXVII, 507
- Salado-Tansill contact, XXV, 1728
- Salado time, PTNM, 762; XXVI, 762
- Salamanca sandstone, V, 359
- Sale, J. W., and Skinner, W. W., PROB, 266
- Salem (Lake Centralia) field, Illinois, XXIII, 811
major structural development at, during Pennsylvanian, XXIII, 1367
- Salem and Warsaw faunas, XXIV, 808
- Salem anticline, Marion County, Illinois, XXIV, 965
- Salem area, surface stratigraphy in, XXIII, 1355
- Salem Church field, XXIX, 806
- Salem fold, asymmetrical character of, XXIII, 1367
- Salem formation on oolitic, fossiliferous limestone, XXIV, 232
- Salem limestone in Washington County, Indiana, XXIV, 811
- Salem microfossils, XXV, 1226
- Salem oil field, Allegan County, Michigan, XXIV, 982
- Salem oil field, Marion County, Illinois, XXIII, 1352
geologic structure of, XXIII, 1361
petroleum reserve data on, XXIII, 1372
producing zones in, XXIII, 1368
production data of, XXIII, 1371
seismograph exploration of, XXIII, 1372
- (Salem)
1353
south-north geologic cross section of, XXIII, 1365
stratigraphic section of discovery well, XXIII, 1356
subsurface contour maps of, on Bethel formation and on Devonian limestone, XXIV, 967
west-east geologic section of, XXIII, 1366
- Salem plateau, GAS, 546
- Salem pool, Allegan County, Michigan, XXII, 659, 664
- Salem pool, Illinois, XXIV, 961; XXV, 1116, 1119; XXVI, 1088
production from, XXIV, 966
- Salesmanship of ideas leading to discovery of new producing province, XXIX, 863
- Salesville formation, XXIV, 88
- Salfeld, H., XXIX, 536
- Salgado, M. L. M., XVIII, 363, 365
- Salani Steppes, Russia, XXI, 1077
- Salicornia herbacea*, RMS, 202, 204
- Salina and Forest City basins, Kansas, Nebraska, Iowa, and Missouri, FOP, 82; XXV, 1514
- Salina basin, north-central Kansas, GAS, 459, 461, 468; XII, 177; XIII 422; XIV, 1550; XXII, 676
leasing activity in 1943, XXVIII, 768
- Salina formation, GAS, 80, XXII, 399; XXIX, 678
eastern Ohio, GAS, 907
Peru, XII, 12
St Clair, GAS, 807
(SI) (Silurian), SBP, 351, 354
- Salina Guaranao, Venezuela, RMS, 449
- Salina series, XXV, 813
- Salinas, MSC, 135, Fig. 14 (in pocket)
Mexico, syncline through, PROB, 392
- Salinas basin, FOP, 31; XXV, 1463
- Salinas formation, MSC, 1
- Salinas pool, MEX, 164, 185
- Salinas River, CAL, 269, 314
- Salinas shale, CAL, 175, 177, 189, 214; MSC, 164, 165
northern California, PROB, 183
- Salinas shales (Monterey) in Pine Canyon, Monterey County, California, section of, VIII, 55
- Salinas Valley, California, CAL, 11, 12, 58, 191, 207, 314; MSC, 1, 7, 18, 50, 51, 136, 164, 218, 224, 227, 230, 234, 237, 243, 248, 251, 261-263, 267, 272, 276, 277, 281, 285, 306, 330, 344; SC, 13, 15, XX, 1559, 1561
fault-block theory awaits discoveries in, CAL, 59
granitic area, CAL, 37, 59, 70
King City fault in, CAL, 43, 44
limestone beds in, CAL, 175
Miocene in, XXI, 1340
Miocene fossils in, CAL, 208
Miocene seas in, CAL, 186
Monterey and Santa Margarita in, CAL, 189, 206, 279
Monterey shale on west side of, MSC, 1
post-Monterey disturbance in, MSC, 9, 88
type locality of Monterey-Santa Margarita unconformity, CAL, 206
type locality of Vaqueros, CAL, 164
Vaqueros sediments in, CAL, 169, 183
- (Salinas)
volcanic tufts of Santa Lucia Range and Miocene paleogeography of, XXI, 1340
- Salinas Valley district, California, diatoms in, CAL, 209
- Paso Robles beds of, CAL, 285
- some Eocene localities in, XVII, 81
- Saline basin, West Texas, an important regional structure, STR II, 702
anticlinal folding on the southwest margin, STR II, 483
- Saline Bayou formation at Esperson dome, GAS, 728
- Saline concentration in barred basins, XXI, 1128
- Saline deposits, SBP, 285
in Como Bluff anticline, XXVIII, 1212
Permian, distribution of, XXI, 884
- Saline domes, PROB, 20
- Saline domes of northwestern Europe, I, 85
- Saline irrigation water, RMS, 464
- Saline playas and clay dunes, GC, 232; XVII, 937
- Saline plugs, SD, 24
- Saline series of Salt Range of Punjab, symposium on age of, XXIX, 1232
- Saline springs of Rio Salado, review, XIV, 639
- Saline waters associated with petroleum producing horizons at Powder Wash, XXII, 1036
- Salineno sandstone, GC, 592; XIX, 1361
- Salineno sandstone tongue, XXVI, 267
- Salines, RMS, 463
- Salines in Louisiana, SD, 270; X, 218
- Salinia, CAL, 12, 31, 112, 113, 278, 292, 314; SC, 2, 14, 52, 75; XX, 1548, 1560, 1598, 1621; XXVII, 125; XXVIII, 496
diastrophism in, CAL, 284
in Cretaceous, CAL, 31, 92, 112-115, 117, 119, 292
in Eocene, CAL, 92, 142, 146, 292
in Jurassic, CAL, 74, 86, 91, 92, 96
in Miocene, CAL, 183, 223, 292
in Oligocene, CAL, 160, 292
in Tertiary, CAL, 31
provinces of, SC, 75; XX, 1621
- Salinity, PROB, 26, 893; RMS, 54, 61, 62, 64, 105, 115, 179, 236, 261, 292, 316, 326, 357, 359, 360, 504, 510
as means of measuring currents, RMS, 102, 104
changes of, adaptation of organisms to, RMS, 99
changes of, due to upwelling, RMS, 126
definition of, RMS, 61
differences of, due to currents, RMS, 105
displacing carbonate equilibrium in Baltic, RMS, 317
effect on currents, RMS, 118
effect on glauconitization, RMS, 510-512
effect on physical properties in ocean, RMS, 60
effect on sea water, RMS, 70
effect on specific volume, RMS, 113
effect on ventilation, RMS, 360
effect on vertical circulation, RMS, 90
effect on water at different temperature, RMS, 364
factors influencing, RMS, 88
increase with depth, PROB, 142

(Salinity)

- methods of determining, RMS, 61
of Baltic, RMS, 316, 317
of Blaine and Dog Creek seas, changes in, XXVIII, 1025
of Caspian Sea, RMS, 102
of deep water, RMS, 104
of Great Salt Lake, XXII, 1319
of Gulf of Karabugaz, RMS, 102
of North Sea, RMS, 326
of Norwegian fiords, RMS, 100, 360
of oceans, RMS, 64, 68, 142
of water and color of deposits in an epicontinental sea depositing saline sediments, XXI, 887
primary, common to all waters, XXIV, 1220
relation to calcium carbonate, RMS, 261
relation to chlorinity, RMS, 61
relation to currents, RMS, 236
relation to evaporation, RMS, 88
relation to glauconite, RMS, 504
relation to ionic concentration of sea water, RMS, 144
relation to water exchange at surface of ocean, RMS, 87
seasonal changes of, in North Sea, RMS, 326
symbol for representing, RMS, 62
variation in water, in relation to structure, PROB, 408
vertical distribution in sea and in basins, RMS, 93, 94
Salinity anomaly, shallow-water, XXIV, 1405
Salinity curve of Great Salt Lake, XXII, 1320
Salinity data, Corpus Christi structural basin postulated from, GC, 270; XIX, 317; discussion, XX, 315
Salinity requirements for experiments on hydrocarbon-oxidizing bacteria, XXVII, 1186
Salisbury, Rollin D., XIII, 161
memorial of, VI, 563
Salisbury, Rollin D., and Chamberlin, T. C., IX, 864; XVI, 34; XXIX, 128
Salisbury, Rollin D., and Darton, N. H., GAS, 299
Salisbury, Wicomico County, Maryland, deep oil test at, XXIX, 1196
Sahre, Mesón beds near, MEX, 133
Salkover, Benedict, III, 315
Salley's Ranch, semi-fenster at, XXV, 1737
Sallisaw sandstone, XXV, 1644
Sallyards field, V, 424; VI, 321
Kansas, relation between structure and production in, V, 276
Sallyards-Thrall-Madison trend in Greenwood County, Kansas, STR II, 151, 156
Sallyards trend, XVIII, 1331
Salmoiraghi, F., RMS, 595, 605, 607
Salmoiraghi scale of frequency, RMS, 605
Salmon and Abrams schists, XXVII, 186
Salmon prospect, Texas, XII, 535
Salomanica, P., and Picard, L., XXI, 531
Salomon, XII, 951
Salomon-Calvi, W., XXV, 409
Salomon member, XXVIII, 22
Salomonie, MSC, 173
Salsen von Beciu-Berca, Rumänien, review, XIX, 1075
Salt, PROB, 1, 241; SBP, 413; XXII,

(Salt)

- 964
age of, in Emba salt-dome region, XXIII, 497
Avery Island, Louisiana, SD, 368; IX, 768
Cane Creek and Shafer anticlines, XI, 816
Carpathians, age of, SD, 111; IX, 1189, 1194, 1196
concentration of, in Gulf of Mexico, XXV, 1201
distribution of, in water surrounding a circular salt dome, XXVIII, 1640
effect of differential uplift of, XX, 1429
Gulf Coast salt domes, sedimentary origin of, GC, 42, XVII, 1047
Gulf Coast salt domes, stratigraphic age of, GC, 43; XVII, 1049
High Island, GC, 930, XX, 581
High Island dome, contour map of top of, GC, 954; XX, 605
Hockley dome, PROB, fol. 642
hypotheses regarding the age and genesis of, SD, 118
in Arkansas-Louisiana-Texas area, XXII, 723
in eastern Ohio basin, XXII, 1541
in Salado formation, XXVIII, 1608, 1611
in Woodbine sand waters west of Mexia fault zone, distribution of, XXVIII, 1639
in Yates area, Texas, XXIV, 140
intrusion of, XXVII, 1151
Salt, natural gas, and gypsum in pre-Cambrian rocks at Edwards, New York, XVI, 727
Salt, of salt cores of Gulf Coast domes, theory of volume of, GC, 42; XVII, 1048
of southern United States and Mexico, origin of, in a single large basin, XXVII, 1438
origin of, PROB, 648
origin of, in southern Mexico, XXVII, 1510
overhanging, on domes of Texas and Louisiana, GC, 141; XVII, 1492
possible causes of abnormal concentration of, XXVIII, 1635
Salt, potash, and anhydrite in Castile formation of southeast New Mexico, XXIII, 1682
Salt, presence of, principal difference between marine and non-marine sediments, XXIV, 874
relative rise of, in salt domes due largely to subsidence of sediments, XXIX, 1327
removal of, in mechanical analysis, RMS, 539
rock, on coast of Jebel Usdum, Palestine, XX, 896, 898
Roumania, IX, 148, 1179
Rumania, nature and origin of, SD, 101, 134
Smackover field, Union County, Arkansas, XVI, 601
solution of, GC, 73
top of, found at 11,470 feet at Rodessa, Louisiana, XXII, 770
Salt and associated redbeds in Calhoun County, Arkansas, age of, probably Triassic or Jurassic, XXII, 724
Salt and gypsum, eastern Utah, PROB, 683
northwestern Colorado, PROB, 683
Rocky Mountain region, XXI, 1248

- Salt and oil, association of, XXI, 1154
relation between, SD, 137; IX, 152
Salt and redbed localities in Mexico and Central America, XXVII, 1503
Salt and redbeds, Jurassic, in Mexico, XXVII, 1437
Salt-anhydrite contact, Hockley dome, PROB, fol. 642
Salt-anhydrite-dolomite series in Kansas, XXI, 1557
Salt anticline, SD, 2, IX, 832
Salt anticline and salt dome provinces of North America, PROB, 634
Salt anticlines, Germany, SD, 149; IX, 424, 437
Salt basin, V, 24
Salt-bearing beds, Pennsylvanian, of southeastern Utah and southwestern Colorado, XIX, 1487
Salt-bearing Kungurian series, XXIV, 262
Salt beds, GAS, 74, 75, 84
effect of, on measurements, shown in an electrical log, XXIII, 1310
Germany, SD, 149; IX, 424
in Castile formation, XXVIII, 1607
Salt bodies, German, asymmetric folds with reference to, XVI, 169
Salt brine, V, 168
Salt brine analyses, published, map showing locations of, XXIV, 488
Salt brines, Appalachian, barium in, XXIV, 486, 887
from Pottsville sediments, map of western part of West Virginia showing percentage of barium in, XXIV, 489
Salt content of Atlantic sediments, RMS, 386
Salt contours and well locations, Jefferson Island dome, GC, 991; XIX, 1610
Salt core, IX, 832
Blue Ridge dome, SD, 604; IX, 308
Damon Mound, SD, 630; IX, 522
isostatic compensation of, GC, 30; XVII, 1035
of dome at West Columbia, Texas, STR II, 455
of Jennings dome, elliptical, XXVII, 1107
uplift of, at Brenham dome, GC, 787; XIX, 1337
upthrust of, GC, 23; XVII, 1029
Salt cores, SD, 2, 74, 103-106, 168, 392, 482, 526, 566, 578, 604, 630, 649
Five Islands, Louisiana, SD, 392; IX, 792
shapes of, PROB, 639
Texas and Louisiana, SD, 222
Salt Creek, CAL, 140, 173
California, outcrop section C, SBP, 167-194
Salt Creek and Teapot oils, analyses, STR II, 602
Salt Creek anticline, STR II, 591-601; V, 203; XXI, 998
Salt Creek area, Mosquito Range, Colorado, stratigraphy and structure of Pennsylvanian and Permian rocks in, XIX, 971
Salt Creek area, Wyoming, Frontier water in, XXIV, 1247
Lakota waters in, XXIV, 1266
Shannon waters in, XXIV, 1230
Salt Creek Canyon type locality of Blaine formation, XVIII, 1297
Salt Creek dome, crest of anticline, STR II, 591, 596
Salt Creek field, PROB, 275, 408, 681,

/Salt)

- 687, 689-691, 719, 720, 929, 932-937, 941, 945, 999, 1001-1003, STR II, 589-603; IV, 37; V, 51, 200-203; VI, 514; VII, 1000-1001; XXI, 1256; XXIII, 922; XXIV, 1227; XXVI, 328; XXVII, 455, 1321
- Salt Creek fold, V, 51, 52
- Salt Creek oil field, Natrona County, Wyoming, STR II, 589
- preliminary report on water conditions in First Wall Creek sand, VIII, 492
- shadowgraphic treatment of map of, XXV, bet. 2166 and 2167
- Tensleep water in, XXIV, 1299
- varying Sundance waters in, XXIV, 1282
- (wells 208-215), SBP, 194-243, 403
- Salt Creek oils, representative, index graphs of, XXVII, 1322
- Salt Creek pool, Okmulgee district, III, 273
- Salt Creek plug, XI, 117
- Salt Creek section of Upper Cretaceous, Colusa County, XXVII, 292
- Salt Creek structure, PROB, 839
- Salt Creek uplift, XXIV, 1227
- Salt crystals on mud flats during Flowerpot and Dog Creek time, XXI, 1559
- Salt deposition in upper Castile time from Roosevelt County, New Mexico, south into Pecos County, Texas, XXIV, 36
- upper Castile, XXIV, 18
- Salt deposits, age of Gulf Border, XVIII, 1227; XXIII, 193
- major primary, of past, generated under circumstances entirely lacking under present day conditions, XXI, 1104
- without formation of domes, GC, 103; XVIII, 1199
- Salt diffusion in Woodbine sand waters, East Texas, XXVIII, 1635
- Salt dome, Bayou Bouillon, St. Martin Parish, Louisiana, SD, 345; IX, 1283
- Arcadia, Louisiana, SD, 277, 280; X, 225, 228
- Avery Island, Louisiana, SD, 361; IX, 761
- Barbers Hill, Texas, SD, 530; IX, 958
- Batson, Texas, SD, 524; IX, 1277
- Bayou Bouillon, Louisiana, SD, 345; IX, 1283
- Belle Isle, Louisiana, SD, 383; IX, 783
- Big Hill, Jefferson County, Texas, SD, 497; IX, 590
- Big Hill, Matagorda County, Texas, SD, 691; IX, 711
- Bistineau, Louisiana, SD, 304, X, 252
- Blue Ridge, Texas, SD, 600; IX, 304
- Brooks, Texas, SD, 237; X, 29
- Bryan Heights, Texas, SD, 678; IX, 613
- Butler, Texas, SD, 262; X, 54
- Cedar Creek, Louisiana, SD, 334; X, 282
- Chapeno, Mexico, SD, 772; IX, 134
- Clay Creek, Washington County, Texas, XV, 43
- Coochie Brake, Louisiana, SD, 338; X, 286
- Cote Blanche, Louisiana, SD, 380; IX, 780
- Damon Mound, Texas, SD, 613; IX,

(Salt)

- 505
- downbuilding of, GC, 24; XVII, 1029
- Drake's, Louisiana, SD, 323; X, 271
- East Hackberry, Cameron Parish, Louisiana, XV, 247
- Edgerly, Louisiana, SD, 470; IX, 497
- experiments in connection with, review, XIV, 107
- faulted, PROB, 579
- Goose Creek, Texas, SD, 546; IX, 286
- Grand Saline, Texas, SD, 225; X, 17
- Hockley, Texas, SD, 570, VII, 297; IX, 1031
- in Oligocene potassium basin of Upper Rhine, review, XII, 101
- Jefferson Island, Louisiana, SD, 358; IX, 758
- Jennings, Louisiana, SD, 398; X, 72
- Keechi, Texas, SD, 243; X, 35
- King's, Louisiana, SD, 308, X, 256
- McFaddin Beach, Jefferson County, Texas, Upper Cretaceous chalk in cap rock of, XXIII, 339
- Many, Sabine Parish, Louisiana, IX, 170
- Palestine, Texas, SD, 253; X, 45
- Pine Prairie, SD, 419; IX, 738
- prerequisite conditions for formation, GC, 26; XVII, 1032
- Price's, Louisiana, SD, 317; X, 265
- Piothro, Bienville Parish, Louisiana, SD, 297; IX, 904, X, 245
- Rayburn's, Louisiana, SD, 312; X, 260
- Saratoga, Texas, SD, 501, IX, 263
- Section 28, St. Martin Parish, Louisiana, SD, 352; IX, 1290
- South Dayton, Texas, SD, 558; IX, 655
- Spindletop, Texas, SD, 478; IX, 594
- Steen, Texas, SD, 231; X, 23
- Stratton Ridge, Texas, SD, 644; IX, 1
- Sugarland field, Texas, GC, 709; XVII, 1362
- Sulphur, Louisiana, SD, 452; IX, 479
- Vacherie, Louisiana, SD, 290; X, 238
- Welsh, Louisiana, SD, 437; IX, 464
- Winnfield, Louisiana, SD, 328; X, 276
- Salt-dome and oil field, West Columbia, Texas, STR II, 451, 453, 682
- Salt-dome and oil-field names, Mississippi, XXVIII, 1046
- Salt-dome alignment, SD, 41; IX, 871
- Salt-dome area, natural gas of Gulf Coast, GAS, 683
- of Gulf Coast, section from fault zone fields of northeast Texas to, XXI, 1085
- of Texas and Louisiana, SD, 205
- Salt dome basin in central Mississippi, XXII, 822
- Salt-dome cap rock, SD, 50; IX, 42
- hauteite in, X, 531
- list of minerals in, GC, 120; XVIII, 213
- petrography of, SD, 50, 83; XIV, 1573
- sequence of types of rocks, SD, 83; IX, 75
- Salt-dome cap-rock minerals, Texas and Louisiana, GC, 119; XVIII, 212
- Salt-dome cap rocks, gold, silver, and other elements in, XXV, 750
- Texas and Louisiana, aragonite in, XXII, 217
- Salt-dome development in Mississippi in 1944, XXIX, 828

- Salt-dome developments in northeastern Texas, XIII, 613
- Salt-dome discoveries in north Louisiana in 1942, XXVIII, 561
- Salt-dome district, use of electrical prospecting in, XIV, 1157
- Salt-dome exploration, refraction method of, XV, 1316
- Salt-dome fields, PROB, 329
- of Gulf Coast, PROB, 60
- Salt-dome formation, experiments showing mechanics of, XXIX, 1652
- recent experimental and geophysical evidence of mechanics of, XXVII, 51
- relation to competency of beds overlying salt, GC, 103; XVIII, 1199
- tectonics of, XIII, 1368
- Salt-dome forms, variety of, GC, 101; XVIII, 1197
- Salt-dome gravity anomalies of salt domes, GC, 101; XVIII, 1197
- Salt-dome intrusion, tectonics of, SD, 101; IX, 1179
- Salt-dome line of Rio Grande embayment, parallelism with north-south series of fractures, GC, 265; XVII, 1208
- Salt-dome material, SD, 5
- Salt-dome materials, secondary, of Coastal Plain of Texas and Louisiana, XIV, 1469
- Salt-dome mechanics, applications of thermodynamic theory of flow in stressed solids to, XXVII, 57
- effect of pressure on, XIX, 802
- Salt-dome model, fluid, quantitative analysis of, XXVII, 52
- Salt-dome model and its prototype in nature, relations between, XXVII, 53
- Salt-dome oil, Gulf of Mexico potential source of, XXV, 1007
- Salt Dome Oil Company, XXIII, 880
- Salt Dome Oil Corporation, XXV, 1898
- Salt-dome oil fields, production in, GC, 117; XX, 734
- Salt-dome origin, American theories, SD, 4; IX, 835
- Salt-dome problem, XIV, 1041
- Salt-dome problems, American, in light of Roumanian and German salt domes, SD, 167; IX, 1227
- American, outline, SD, 172; IX, 1232
- Salt-dome region, PROB, 431
- of south Texas, XXI, 1042
- Salt-dome regions of Texas and Louisiana, structural interpretation, XXI, 207
- Salt-dome statistics, GC, 109; XX, 726
- Salt-dome structures, experiments relating to, XIV, 483
- relation of geophysics to, GC, 170; XIX, 356; discussion, XIX, 1069
- Salt-dome studies, chronology of, SD, 45
- European, chronology of, SD, 45; IX, 326
- Salt dome waters, chemical relations of, SD, 777; IX, 38
- Salt domes, SBP, 229; I, 54; II, 16; III, 243, 310; V, 28, 91, 92, 102, 212, 216, 226, 334, 397, 495, 512, 569; VI, 58, 252, 259; VII, 297; IX, 1, 42, 134, 263, 304, 326, 348, 417, 479, 536, 590, 594, 613, 655, 711, 738, 756, 831, 958, 1031, 1165, 1227, 1277, 1283, 1290; X, 72, 217; XVII, 550
- American, structure, SD, 730; IX, 548

(Salt)

- anhydrite caps on, SD, 75
 associated with anticlines, SD, 206;
 IX, 1266
 characteristics, SD, 403; X, 77
 classification of, XXVIII, 1250
 coastal, I, 34
 coastal Louisiana, XX, 732
 coastal Texas, XX, 729
 Colorado-Utah, XI, 111
 coral reefs developed during Analuac
 time around, XXVIII, 1357
 deposition from solution, SD, 5, 12-
 14, 20, 26, 31
 distribution in the Carpathians, SD,
 96
 distribution in the Transylvanian ba-
 sin, SD, 98
 East Texas, XII, 527, 677
 map, STR I, 306
 Salt domes, East Texas geosyncline,
 alignment of, GC, 265; XVII, 1208
 effect of, on accumulation of petro-
 leum, XV, 61
 Emba region, U.S.S.R., XXIII, 502
 European, SD, 3, 45-49, 87-128, 132,
 139, 148, 177-206; I, 85; IX, 328
 faulting in, I, 84, 89
 Five Islands, Louisiana, SD, 356;
 IX, 756
 Salt domes, fluid of mechanics, GC, 79;
 XVIII, 1175, 1712
 discussion, XVIII, 1712
 Salt domes, formation of, by plastic
 flowage of sedimentary salt beds
 under differential pressure, GC, 21;
 XVII, 1026
 formation of, by tangential compres-
 sion, GC, 35; XVII, 1040
 found by early oil wells in Texas,
 XXIII, 1604
 geology of Gulf Coast, PROB, 629
 Germany, V, 227; IX, 1252
 grabens, in XXVIII, 551
 Gulf Coast, XIV, 1390
 Gulf Coast, age of, I, 75
 Gulf Coast, hauerite associated with,
 XIII, 177
 Gulf Coast, Texas, Cretaceous on,
 XIII, 1065
 Gulf Coastal Plain, Louisiana and
 Texas, X, 1
 in Carpathian region of Rumania,
 geology of, SD, 87; IX, 1165
 in Carpathians, age of, SD, 116
 interior, of Louisiana, SD, 269; X,
 217
 interior, of Texas, SD, 209; X, 1
 interior, table of characteristics, SD,
 276; X, 224
 intra-formational, STR II, 705
 Isthmus of Tehuantepec, X, 1; XX,
 1306
 Louisiana, X, 14, 227
 Louisiana, interior, SD, 269; X, 217
 Louisiana, location of, SD, 269
 Louisiana, stratigraphic section of,
 SD, 279
 mechanics of formation of, with spe-
 cial reference to Gulf Coast salt
 domes of Texas and Louisiana,
 GC, 20; XVII, 1025
 meteor craters, and cryptovolcanic
 structures, XXI, 629
 Mexico, VI, 60
 morphology of, GC, 27; XVII, 1033
 newly discovered, map of northeast-
 ern Louisiana showing location of,
 XXIV, 484
 North German plains, SD, 187

(Salt)

- North German province, XII, 467
 northeastern Texas, review, XI, 58
 northwest Europe, structure of, as
 revealed in salt mines, SD, 45;
 IX, 326
 of South Texas, SD, 718; IX, 536
 origin of, SD, 13, 15, 16, 17, 18, 19, 24,
 25, 26, 27, 30, 43; IX, 561, 846, 850,
 855
 origin of North American, SD, 1; IX,
 831
 Permian and Pennsylvanian, in
 southeastern Utah, and their influ-
 ence on oil accumulation, XI, 373
 piercement, in Mississippi, XXVIII,
 804
 pressure, SD, 19, 23, 26, 27, 34, 35, 41
 relations to folds and fracture lines of
 Carpathian Mountains, SD, 100;
 IX, 1178
 relationship to structural zones of the
 Carpathians, SD, 92
 review, VI, 385
 rim synclines on, GC, 74; XVII, 1079
 rôle of, STR II, 682
 Roumanian, IX, 1237
 rounded form suggestive of flow
 rather than of fracturing, GC, 81;
 XVIII, 1177
 significance of algae in, SD, 218
 south Louisiana, XXVIII, 1255
 south Texas, SD, 718; XXVII, 1244
 south-central Louisiana, map, GC,
 984; XIX, 1603
 southeastern Texas, STR II, 452
 structural, SD, 5, 23, 27, 34, 36, 38
 sub-Carpathians, SD, 94, 112
 sulphur water in, SD, 774; IX, 35
 symposium on, review, XV, 1297
 Texas, III, 86-90; IX, 536; X, 14,
 1171; XXVII, 1234
 Texas age, SD, 742; IX, 560
 Texas, interior, SD, 209; X, 1
 Texas and Louisiana, map, GC, 110;
 XX, 727
 Texas and Louisiana, similar in struc-
 ture to German and Roumanian
 salt domes, SD, 202
 theories of origin, SD, 4, 5, 30, 31, 34,
 42
 thickness of salt, I, 83, 89
 three new interior, in northeast Lou-
 isiana, XXIV, 483
 Transylvania, SD, 114; VIII, 205;
 IX, 1165, 1176, 1192, 1246
 Tyler basin, XXVII, 1234
 uplift by growing salt crystals, SD, 16
 use of geophysical methods in locat-
 ing, STR II, 683
 volcanic, SD, 6, 18, 20, 28, 29, 32, 33
 Salt domes and oil fields, south Texas,
 descriptions of, GC, 620
 Salt domes and saline springs, SD, 92
 Salt exploration and development at
 Jefferson Island, GC, 988; XIX,
 1607
 Salt facies of Eagle Mills formation
 widespread in Gulf Coast region,
 XXVII, 1431
 Salt Flat (Bruner) fault, electrical map
 of, XIV, 1161, 1182
 Salt Flat oil field, Caldwell County,
 Texas, PROB, 328, 354, 419; XIV,
 1177, 1401
 application of Sundberg method of
 surveying in, XIV, 1181
 electrical survey of structural condi-
 tions in, XIV, 1177
 (well 398), SBP, 292-335, 410

Salt flowage, XXVII, 58

- due to differential loading, XI, 816
 inception of, PROB, 657
 Salt-flowage theory of origin of North
 American salt domes, SD, 31
 Salt Fork division of Cimarron series,
 XXIII, 1766
 Permian system, in Kansas, XXI,
 1557
 Salt formation, Europe, VI, 526
 Salt-induced structural movements as-
 sociated with Sugarland, GC, 722;
 XVII, 1375
 Salt industry, relation to genesis of well-
 drilling operation, XXII, 1088
 shift from, to petroleum industry,
 XXII, 1091
 Salt intrusion, deep-seated, cause of
 Tepetate structure, XXII, 295
 time of, PROB, 667
 Salt lagoons in Peninsula of Lower Cali-
 fornia, XX, 1281
 Salt Lake field, California, GAS, 120,
 220; PROB, 213, 752; VI, 303
 ground-water contours, XVI, 346
 Salt lakes, RMS, 362, 447
 in and regions, RMS, 362
 isohaline, RMS, 357
 Salt lenses in Castile formation,
 XXVIII, 1620
 Salt map of Darrow dome with data on
 wells, XXII, 1417
 Salt Marsh Canyon, PROB, 193
 Salt mass, Anse la Butte dome, XXVII,
 1140
 Salt masses, domes formed by intrusion
 of, STR II, 681
 intrusive, in Arabia, XXII, 1606
 intrusive theory of origin, XIV, 1041
 of Germany, present forms of occur-
 rence, SD, 148
 of Germany, tectonic deformation,
 SD, 144
 of Germany, theories in explanation
 of the upthrust, SD, 153
 of Germany, upthrust of, SD, 142;
 IX, 417
 of Gulf region of Mexico and United
 States of Divesian age, XXVII,
 1438
 of Rumania, distribution, SD, 132,
 133
 tectonic problems of, SD, 117
 Salt mines, structure of salt domes of
 Northwest Europe, as revealed in,
 SD, 45
 Salt Mountain division of Vicksburg
 group, GC, 359; XIX, 1163
 Salt Mountain limestone, XXIV, 1915;
 XXVIII, 53
 Salt Mountain limestone, age of, GC,
 359; XIX, 1163
 Salt Mountain limestone fauna,
 XXVIII, 1700
 Salt movement, PROB, 330
 Salt movements at Clay Creek salt
 dome, XV, 52
 Salt overhang, difficulties in drilling,
 GC, 150; XVII, 1501
 High Island, GC, 940; XX, 591
 Salt overhang and cap rock of High Is-
 land dome, Galveston County,
 Texas, geology and geophysics
 showing, GC, 909
 Salt overhangs, causes of, GC, 145;
 XVII, 1496
 distribution, GC, 143; XVII, 1494
 Salt Plain formation, II, 74
 of Kansas Cimarron section, XXIII,
 1786

- Salt Plain measures, XXI, 1558
- Salt Plain strata, typical, in Harper County, Kansas, XXIII, 1786
- Salt plug at West Columbia field, Texas, STR II, 454
- Salt plugs along Gulf Coast, important oil territory, XXV, 1006
- Louisiana, water-insoluble residues in rock salt of, XXI, 1268
- weight-percentage of water-insoluble residue in, XXI, 1280
- without anhydrite caps, SD, 76
- Salt precipitation in Great Salt Lake, sequence of, XXII, 1323
- Salt production, Avery Island, Louisiana, IX, 773
- Jefferson Island, Louisiana, IX, 761
- Texas and Louisiana domes, SD, 361, 373, 379
- Weeks Island, Louisiana, IX, 779
- Salt sand, III, 265; V, 126, 129, 400, 404, 561; VI, 318; PROB, 292, 501, 506, 507, 511
- eastern Ohio, STR I, 143
- Ohio, XI, 1028
- Salt sand field, PROB, 465
- Salt sand formation, Gay-Spencer-Richardson trend, STRAT, 810
- Salt sands, XXV, 797
- Salt sandstone formation in eastern Kentucky, GAS, 933
- Salt series in Emba area, XXIII, 496
- plastic flowage of, XVII, 1027
- sedimentary, differential pressure a cause of, GC, 22
- Salt solution in Ochoa section, XXVIII, 1622
- Salt spine, former, at Côte Blanche, GC, 1030; XX, 183
- Jefferson Island dome, GC, 993; XIX, 1612
- Salt spines, Belle Isle dome, GC, 1037; XIX, 648
- Salt springs, PROB, 2, SD, 272
- Salt stock, evidence of erosion of, in Gulf Coast salt plug in late Oligocene, XXIII, 604, 1576
- in Gulf Coast salt plug in late Oligocene, evidence of erosion of, XXVII, 85
- Salt stock and spine at Jefferson Island dome, origin of, GC, 1011; XIX, 1630
- Salt stocks, Germany, SD, 149, 150; IX, 424
- Salt structure cycle, PROB, 656
- modifying factors, PROB, 657
- Salt structure province of Texas-Louisiana-Arkansas, PROB, 632
- Salt structures, SD, 1, 2, 3; XXI, 205
- American, geological distribution of, PROB, 630
- Gulf Coast, geomorphology of, and its economic application, XX, 1413
- intrusive origin of, SD, 782
- Isthmus of Tehuantepec, Mexico, IX, 834
- outside of North America, IX, 833
- Texas-Louisiana, IX, 832
- theory of formation of, XX, 1415
- Salt structures and oil fields in Hanover area of north German basin similar to Emba domes in U.S.R., XXIII, 513
- Salt-type structure, shallow, in Permian of north-central Texas, XVI, 577
- Salt Valley anticline, PROB, 645; XI, 786
- Salt water, V, 82, 490
- association of, with oil fields, PROB, (Salt)
- 142
- below fresh water in rivers, RMS, 327
- chlorides in, review, VI, 387
- connate in sandstone, IV, 33
- effect on accumulation of oil and gas, II, 172
- effect on oil production, MEX, 230
- evaporated by gas, PROB, 470
- from North Cowden field, analysis of, XXV, 623
- Gulf Coast region, III, 310
- in fissure above oil level, MEX, 191
- in Pánuco field, shallow, MEX, 178
- rise of, MEX, 165, 168, 176, 207
- Tancoco district, MEX, 190
- underground, distribution of, and its relation to accumulation of oil and gas, II, 170
- Urschel pool, VI, 426
- Salt water and carbon dioxide gas, MEX, 179, 200, 201, 209
- Salt-water gusher, MEX, 52, 179, 181
- Salt-water level in Northern fields, MEX, 165, 190, 209
- in Southern fields, MEX, 5, 204, 214, 217
- Salt-water line in Lima-Indiana field, PROB, 527
- Salt water marsh sediments, RMS, 166
- Salt-water temperatures in Mexican oil fields, MEX, 226, 228, 229
- Salt well, first drilling of, XIX, 478
- Salt well and shaft sections in New York, XXI, 1587
- Salt-wells, PROB, 2
- Salt-Works salt dome, I, 81, 84
- Saltation, RMS, 12, 14, 15, 17, 35, 271
- Saltito, Jurassic rocks in mountains southeast of, XXVII, 1490
- Mesón beds at, MEX, 112
- Saltito Flats, GC, 240, 241; XVII, 947, 948
- Salton Basin, MSC, 2
- Salton Sea, CAL, 1, 22-24, 65, 190, 237, 314; FOP, 35; XXV, 1467
- Salts, higher concentration of, in Woodbine waters along faults, XXVIII, 1635
- Salty and fresh waters encountered along Atlantic and Gulf coasts, analyses of, XXVI, 842
- Salty ground waters along Atlantic and Gulf coasts, base-exchange and sulphate reduction in, XXVI, 838
- Salvasuchi, MEX, 32, 164, 170
- Salvasuchi-Western San Manuel anticline, MEX, 172, 176, 178
- Salvatori, Henry, correlation of reflection seismograph records in California, XVII, 257
- Salzach River, Austria, RMS, 40
- Salzgletscher in Persien*, review, XIV, 1358
- Sam Creek limestone, STRAT, 445
- Saman anticline, XII, 31
- Saman formation in Peru, XII, 16
- Samara Bend, XXIV, 243, 248
- Carboniferous foraminifera of XXV, 1943
- Samarinda oil fields of lower Mahakam River Basin, Borneo, production at, XXVIII, 1448
- Samarsky-Luki range, XXI, 1078
- Samland coast, Germany, RMS, 298
- Samson foraminifera, MSC, 12
- Samples, Charles H., XXII, 1185
- Sample, Charles H., and Martyn, Phil F., XXVI, 57
- Oligocene stratigraphy of East White (Sample)
- Point field, San Patricio and Nueces counties, Texas, XXV, 1967
- Sample and gamma-ray logs, combination of, XXV, 1782
- Sample formation in Francisco pool, Indiana, STR II, 139
- Sample lag, determining by use of radioactivity logs, XXV, 1782
- in connection with drilling progress, correction of, XXIII, 1824
- Sample sandstone in Breckinridge County, Kentucky, XXII, 273
- Sample splitters, RMS, 600, 601
- Samples analyzed in study of source beds of petroleum, designation of basic data on, SBP, 412
- from wells used in study of Devonian and Silurian in Kentucky, descriptions, XXV, 701
- nature of, SBP, 12-17
- Sampling, RMS, 178, 526-528
- a sulphur-bearing formation, GC, 851; XX, 173
- Sampling apparatus, RMS, 182, 631-664
- Sampling grid, RMS, 178
- Sampling intervals in wells, SBP, 403-412
- Samplograph, XI, 867
- Sampson, XVIII, 1133
- Samwel Cave, CAL, 266
- San Ambrosio ranch, Midway at, GC, 597; XIX, 1366
- San Andreas bioherm, XXV, 2148, 2150
- San Andreas Canyon section, XXV, 2147, 2148
- San Andreas fault, CAL, 11-13, 30, 31, 33, 35, 38-44, 52, 53, 55, 113, 115, 122, 257, 263; PROB, 736, 787, 804; SC, 53, 55, 76, 79, opp. 80, 132; XI, 35, 615; XX, 872, 1599, 1601, 1622, 1625, opp. 1626, 1678; XXVII, 1261, 1371
- branch faults from, CAL, 37, 39, 44
- problem of origin, SC, 84; XX, 1630
- San Andreas fault zone, XIII, 209; XXVII, 1370
- San Andreas limestone, V, 568, 607; VI, 211, 224
- Artesia field, XV, 1090
- San Andreas rift, XIII, 434; XVI, 24; XXIII, 539, 545; XXV, 239, 1332; XXVI, 1823; XXVII, 1262
- bearing of Ridge Basin on age of, XXIII, 556
- horizontal shifts along, XXV, 210
- San Andreas rift fault, XXIII, 518
- San Andres, Cherry Canyon reef contemporaneous with, XXV, 94
- correlated by Lewis with lower and middle subdivisions of Delaware Mountain group of Delaware basin and with Word formation of Glass Mountains in Guadalupe series, XXV, 73
- correlated with Bone Spring formation in Leonard series, XXV, 73
- Ector County, Texas, XXV, 1051
- of Guadalupe Mountains correlated with middle Delaware Mountain, XXI, 855
- of Sacramento cuesta correlated with Bone Spring and Leonard, XXI, 855
- of Sacramento cuesta correlated with Kaibab limestone of Arizona and Utah and Blaine of Texas and Oklahoma, XXI, 855

- (San Andres)
relationship of, to standard marine section of trans-Pecos Texas, XXVI, 238
structure-contour map of top of, XXVII, 498
upper, cross sections of, Wasson field, XXVII, 494, 495
upper, pay zone, XXVI, 1022
San Andres beds, PTNM, 668; XXVI, 383, 668
San Andres Canyon, San Andres Mountains, faunal list from the blue-gray marl facies, XXV, 2156
San Andres deposition, summary of, XXV, 102
San Andres dolomite, XXIX, 751
of Central Basin platform, cross section showing relation of, to Dog Creek-Blaine of Texas and Oklahoma panhandles, XXVI, 236
San Andres formation, PTNM, 688; XXIII, 1677, XXV, 1050; XXVI, 688, 1022; XXVII, 753, 756, 769; XXIX, 745
fossils of Leonard type in, PTNM, 694; XXVI, 694
of Texas correlated with Flower Pot, Blaine, and Dog Creek of Oklahoma and Kansas, XXVI, 233
production from, XXIX, 746
productive in Lovington area, New Mexico, XXIII, 839
San Andres-Grayburg contact, XXVII, 491
San Andres group, XXIV, 7, 33; XXV, 82, 1682; XXVI, 1023, 1028
Central Basin platform, XXIV, 23; XXV, 96
correlated with Leonard of Glass Mountains of Texas, XXIV, 43
correlation with Blaine of Texas, XXIV, 42
correlation with lower part of Guadalupe series, XXV, 83
eastern Midland basin, XXIV, 57
equivalent to Delaware Mountain group, XXV, 83
equivalent to El Reno group of Oklahoma, XXV, 83
equivalent to Word formation of Glass Mountains, XXV, 83
fossils of, XXV, 97
lower divisions of Delaware Mountain group equivalent to, XXV, 81
type section of, in San Andres Mountains of New Mexico, XXIV, 54
Wasson field, XXVII, 492
West Texas and New Mexico, position of, XXV, 73
San Andres limestone, XXI, 844
composition of, XXI, 852
cover rock of Sacramento cuesta, XXV, 83
San Andres limestone member of Chupadera in New Mexico, XXI, 850
San Andres Mountain area, XXV, 2153
San Andres Mountains, XXIV, 161
New Mexico, Paleozoic formations in, XXIV, 1680
San Andres movement, XXVII, 506
San Andres oil and gas production in Andrews County, XXV, 1051
San Andres problem, XXV, 82
paleontologic evidence used to help solve, XXV, 81
San Andres structure, XXVII, 498
San Andres time, XXVI, 232
San Andres Tuxtla, lavas of, MEX, 145
San Angelo, Blaine, and Dog Creek formations, correlation of, PTNM, XXVI, 697
San Angelo beds, XXV, 84
San Angelo conglomerate, Noodle Creek pool, STRAT, 702
San Angelo formation, III, 117; XXIII, 1705
West Texas, XIII, 950
San Angelo sandstone, PTNM, 695; XXIV, 58, 98; XXVI, 695
San Angelo sandstone and conglomerate XXV, 83
San Antonio, State of San Luis Potosí, Tanlajás beds at, MEX, 103, 104
San Antonio area in Texas, conditions in 1940, XXV, 1041
San Antonio Creek, MSC, 264
San Antonio district, oil and gas fields of, XXII, 752-753
pre-Eocene production in, XXIV, 1077
San Antonio formation, XXVIII, 11
San Antonio Geological Society, geologic road log in Tamaulipas and Nuevo León, Mexico, XX, 467
geologic road log of Pan-American Highway, Laredo to Mexico City, XX, 457
San Antonio Geological Society and W. C. Morse, memorial of Paul Franklin Morse, XIII, 1501
San Antonio Hills, CAL, 11, 44, 314
San Antonio platform, XXI, 1432
San Antonio Range (northern Mexico), Papagayos shales along, MEX, 68
San Antonio Section of American Association of Petroleum Geologists, annual meetings. (See American Association of Petroleum Geologists)
San Antonio Section papers, abstracts of, XIX, 138; XX, 1513
San Augustine Canyon, CAL, 288
San Benito County, CAL, 149; MSC, 108, 114
outcrop section H, SBP, 167-194, 411
thrust faults in, MSC, 114
San Bernardino County, CAL, 21; MSC, 28
San Bernardino Mountains, CAL, 9, 25, 42, 64, 96, 314; SC, 1, 71; XX, 1547, 1617
Whittier conglomerates in, XXIV, 665
San Bernardino valley, SC, 115; XX, 1661
San Carlos, State of Coahuila, MEX, 54
State of Tamaulipas, MEX, 18, 91
San Carlos Mountains, Tamaulipas, Mexico, MEX, 5, 11, 22, 23, 25, 55, 56, 90, 97, 144, 161; XXVIII, 317
geology and biology of, XXII, 318
major zone of cross-folding of, XXVIII, 319
San Cayetano fault, PROB, 194; SC, 99, 104; XX, 1645, 1650
San Cayetano formation, Cuba, XXVII, 1420, 1515
fossils of, XXVII, 1517
origin of, XXVII, 1520
San Cayetano formation and overlying Viñales limestone, unconformity between, XXVII, 1517
San Cayetano thrust, SC, 102; XX, 1648
San Clemente Island, CAL, 3, 5, 8, 314; RMS, 255, 256, 259, 267, 268
San Clemente Oil Company (well 42),
- (San Clemente)
SBP, 87-153, 403
San Clemente Trough, RMS, 257, 264, 266
San Cristobal limestone, XXVIII, 1119
San Diego, SC, 21, XX, 1567
Velasco (Tames) at, MEX, 83
San Diego County, California, CAL, 21, 141
outcrop section T, SBP, 167-194, 411
San Diego de la Mar, basaltic dykes in, MEX, 206, 208
San Diego district, CAL, 314
Cretaceous near, CAL, 22, 98
Domengine fauna found from northern California to, CAL, 138
Eocene beds of, CAL, 22, 125
Pliocene in, CAL, 22, 227, 228, 238, 244, 246, 249
southern fauna still dominant in, CAL, 304
San Diego formation, CAL, 248, 291
San Diego streams, RMS, 272
San Diego Trough, RMS, 255, 256, 257, 264, 268
San Diego well No. 3, MEX, 3, 208
San Diego zone, CAL, 232
San Dieguito, MEX, 18, 36, 60
San Emigdio, MSC, Fig. 14 (in pocket)
San Emigdio area, MSC, 108
San Emigdio Canyon, CAL, 314
San Emigdio district, MSC, 102
San Emigdio foothills, MSC, 109, 115
San Emigdio formation, CAL, 148, 156, 160, 303; MSC, 160
San Emigdio Mountains, PROB, 203
San Emigdio Ranch, CAL, 123, 156
San Emigdio region, MSC, 101, 160; SC, 29; XX, 1575
San Emigdio-Tejon contact, MSC, 101
San Felipe, Reventadero sector, production from, MEX, 175
(State of Hidalgo), Chicontepec beds at, MEX, 99
San Felipe and Méndez formation, gas in, MEX, 201
San Felipe brecciated limestone, MEX, 67, 166
San Felipe fault breccia from Tancoco, Cacahual, MEX, opp. 167
San Felipe formation, MEX, 19, 26, 33, 35, 44, 46, 49, 58, 59, 63, 68, 71, 99, 100, 108, 119, 167, 172, 190, 194, 195, 201, 203, 207, 210, 223, 224, Fig. 12 (in pocket); PROB, 382, 383, 385, 388, opp. 390, 396; XXVIII, 1103, 1129, 1146, 1149
Aguada, MEX, 235
argillaceous facies of, MEX, 172
Barcodón, MEX, 235
change of facies in Northern fields, MEX, 65, 66
Chocoy, MEX, 66
correlation with Brownstown marl of Texas, MEX, 59
Garrucho pool, MEX, 186, 189
laminated shales of, MEX, 67
Mexico, X, 675
Naranjo well, MEX, 235
Northern fields, MEX, 62-65
overlap on El Abra limestone, MEX, 204
pebbles of, in Tanlajás formation, MEX, 100
restricted sense, MEX, 58, 59
Southern fields, MEX, 67, 204
thickening of, east of South fields ridge, MEX, 223
west of Tampico, XXVIII, 1134
San Felipe limestone, MEX, 47, 103,

- (San Felipe)
165, 188, Figs. 9, 10 (in pocket);
PROB, 378, 390, 394; XXVIII,
1144
- San Felipe salt dome, rim syncline at,
XX, 1417
- San Felipe series, VI, 91
- San Felipe shales, PROB, 386
- San Fernando beds, MEX, 133
- San Fernando Pass, MSC, 135
- San Fernando Valley, CAL, 9, 314, SC,
17, 115; XX, 1563, 1661
- San Francisco, CAL, 31, 314
- faults in Miocene near Point Reyes,
north of, CAL, 44
- fossils in vicinity of, CAL, 89
- Northern Franciscan area, in vicinity
of, CAL, 37
- San Andreas fault zone near, CAL, 35
- upper Chico best known from San
Francisco southward, CAL, 111
- San Francisco area, SC, 1; XX, 1547
- San Francisco Bay, CAL, 1; MSC, 180;
RMS, 650
- breccia in mountains east of, CAL,
173
- classification of Miocene in district
east of, CAL, 163
- Coast Ranges north of, CAL, 11
- Coast Ranges south of, CAL, 64
- fauna of, CAL, 217, 246
- foraminifera of, MSC, 12, 13
- Pliocene strata near, CAL, 232, 233
- Pliocene trees near, CAL, 251
- section from, to Great Valley, CAL,
58
- Templor in mountains east of, CAL,
173
- San Francisco Bay region, California,
map of, fossils showing type of
habitat, XXIV, 1761
- San Francisco earthquake, result of slip-
page along San Andreas fault,
CAL, 33; XXVII, 1262
- San Francisco Folio (Lawson), CAL, 35,
82, 84, 87, 118, 190, 193, 243, 251
- San Francisco Peninsula, CAL, 11, 292
- Calera limestone of Franciscan on,
CAL, 81, 89
- Pilarctos thrust fault on, CAL, 36, 42
- Pliocene fossils of, CAL, 245
- Pliocene strata of, CAL, 232
- San Francisco region, Franciscan-
Knoxville contact in, CAL, 86
- lavas of, CAL, 82
- Monterey group of, CAL, 193, 215
- San Francisco-Santa Cruz peninsula,
MSC, 73
- San Francisco fault, XXI, 225
- San Gabriel Canyon, CAL, 271
- San Gabriel fault, XVI, 783; XXIII,
521, 527, 539, 545, 550
- San Gabriel fault and Liebre fault, sec-
tion along axis of syncline between,
XXIII, 525
- San Gabriel Mountains, Los Angeles
County, California, CAL, 29, 34,
49, 314; SC, 1, 71, 115; XX, 1547,
1617, 1661
- banded metamorphic gneisses in,
XXIV, 666
- biotite granite in, XXIV, 667
- dacites in, XXIV, 668
- fossils of, CAL, 64
- occurrence of oil in metamorphic
rocks of, XVI, 777
- Tertiary age of, XXIV, 669
- Transverse Ranges, CAL, 9, 64
- San Gabriel Valley, CAL, 9; SC, 115;
XX, 1661
- San Gerónimo, MEX, 204, Fig. 32 (in
pocket)
- San Gerónimo field, MEX, 209
- Cretaceous in, GAS, 999
- San Gerónimo-Zacamitla-Tierra Amar-
illa-Tampache area, Tuxpan out-
crop in, MEX, 138
- San Ignacio-Sauz section, GC, 612;
XIX, 1381
- San Isidro, MEX, 36, 67, 105, 118, 136,
140, 163, Fig. 32 (in pocket)
- San Jacinto fault, CAL, 39
- San Jacinto Mountains, CAL, 20, 314
- Sao João well in Alagôas, logs, XXI, 306
- San Joaquin and Sacramento valleys,
geological and geophysical explora-
tion in 1942, XXVII, 865
- San Joaquin Basin, California, MSC, 2,
136, 180, Fig. 14 (in pocket);
PROB, 790, 804; SC, 49, XX, 1595
- an important regional structural
basin, STR II, 703
- San Joaquin Bay, CAL, 165
- San Joaquin clay, California, SC, 63;
XVIII, 476, XX, 1609
- Buena Vista Hills, GAS, 149, 151
- Kettleman Hills, GAS, 129
- San Joaquin clay formation, CAL, 235,
236, 242, 245, 303, 314
- San Joaquin Embayment, SC, 14, 24,
53, 65, 85; XX, 1560, 1570, 1599,
1611, 1631
- San Joaquin Hills, SC, 114, 116; XX,
1660, 1662
- geologic map of part of, SC, 121; XX,
1667
- San Joaquin River, CAL, 16-18, 315
- San Joaquin Valley, California, CAL,
16, 20, 43, 88, 101, 102, 106, 133,
136, 139, 140, 172, 193, 213, 315;
GAS, 120; MSC, 27, 38, 55, 57, 78,
101, 109, 111, 114-116, 119-121,
133, 135, 136, 158, 165, 184-189,
191-194, 197, 198, 203-205, 209-
211, 213, 215-226, 228, 231, 233,
239, 240, 242-246, 249, 251, 252,
256, 257, 259, 261, 266, 274, 276,
290-296, 302, 305, 306, 316-319,
322, 328-330, 332, 333, 337, 341,
343, 344, 346, 349, 350, 352-356,
Fig. 14 (in pocket); PROB, 183,
203, 228, 229, 738, 740, 743, 787,
839, 891, 954; SC, 1, 50, 52, 55, 64,
70, 71; XII, 656; XIII, 435; XIV,
411; XVIII, 436; XX, 1547, 1596,
1598, 1601, 1610, 1616, 1617; XXI,
983; XXII, 702; XXIV, 1112,
1333; XXVI, 1141; XXIX, 982
- central, XXIV, 1334
- Cretaceous at Oakdale, CAL, 99
- Cretaceous at Quinto Creek, CAL,
100
- deep wells of, CAL, 19
- diatomite beds of, CAL, 245
- enclosed during Pliocene, CAL, 290
- first Tejon fossils at south end of,
CAL, 121
- flooded in Eocene, CAL, 146
- foraminifera from, MSC, 72
- foraminiferal correlation in Eocene
of, XXIV, 1923, 2049
- geology of, XI, 611
- heavy-mineral data at the southern
end of, XI, 369
- importance of unconformities to oil
production in, PROB, 785
- Kettleman Hills 1,000 feet above val-
ley floor, CAL, 46
- lacustrine deposits of, CAL, 257
- (San Joaquin)
location of largest Pliocene sea, CAL,
251
- Miocene sections in, CAL, 216
- Moreno shale in Cretaceous of, CAL,
106
- oil districts of, CAL, 20
- oil fields in, XXI, 982
- oil seeps near McKittrick in, CAL,
258, 266
- oil-well waters of, PROB, 910
- Oligocene and Eocene beds missing
in, CAL, 45
- organic shales in southern end of, IX,
228
- Pliocene in, CAL, 19, 234, 242, 244,
246, 253
- regional seismic velocity map, XXV,
1354
- San Emigdio region of, CAL, 156
- Santa Margarita in, CAL, 190
- seismic velocity variations in, XXV,
1343
- Sespe beds in, CAL, 147, 148
- southeastern, seismic velocity studies
in, XXV, 1347
- southern, map showing oil fields,
XXII, 703; XXIII, 936; XXIV,
1114
- structural feature of east side of,
XIII, 101
- structure and history of, CAL, 18, 19,
43, 45
- subsidence at an end by close of
Pliocene, CAL, 285
- Tejon strata in, CAL, 123
- Templor formation in, CAL, 219
- Templor Range west of, CAL, 30
- thickness of sediments in, CAL, 242
- thickness of Vaqueros in, CAL, 166
- unconformities, VIII, 31
- Upper Miocene continental deposits
in, CAL, 188, 191
- Valuineria californica* fauna in,
CAL, 163, 190, 219
- variations of velocities in, XXV, 1350
- Wheeler Ridge oil field in, CAL, 199
- San Joaquin Valley oil fields, PROB,
194, 744; V, 458
- comparative study of, VIII, 29
- extensions during 1939, XXIV, 1125
- San Joaquin Valley samples (wells
5-24), SBP, 130-153, 403
- San Joaquin valley structure, XIII, 205
- San Jorge basin, oil in, XXIX, 505
- San Jorge Valley, XXIX, 1092
- San José de las Rúsas, MEX, 1, 2, 23,
24, 28, 37, 132, 133, 149, 150, 153
- San José de las Rúsas region, asphalt
seepages at contacts of plugs and
dykes with sedimentary rocks,
MEX, 152
- igneous rocks in, MEX, 146, 149, 227
- San José de las Rúsas well, tempera-
tures in, MEX, 227
- San Jose field, XXIII, 865
- San José Hills, MSC, 22, 36, 166, 270,
273, 283, 328; SC, 115; XX, 1661
- San Juan and Atrato rivers, valley of,
XXIX, 1077
- San Juan and Raton basins, XXI, 1254
- San Juan anticline, carbon dioxide in,
GAS, 1066
- San Juan Basin, New Mexico, PROB,
172, 409, 680, 683, 684, 732, 932,
933
- Cretaceous waters of, PROB, 950
- hydraulic accumulation of oil in, VII,
216
- production in, XXI, 999

- San Juan Basin, New Mexico and Colorado, FOP, 72; XXV, 1504
New Mexico and Colorado, map, FOP, 73; XXV, 1505
references on oil prospects in, FOP, 75; XXV, 1507
structure section, FOP, 74; XXV, 1506
structures in, FOP, 75; XXV, 1507
San Juan Basin area, Cretaceous formations, GAS, 367
San Juan Bautista, CAL, 148, 315; MSC, 124
San Juan Bautista area, MSC, 108, 115
San Juan Bautista formation, CAL, 149; MSC, 160, 161
San Juan Capistrano. (See Capistrano)
San Juan County, New Mexico, XXI, 994
San Juan limestone, MEX, 54, 55
San Juan oil field, Utah, VI, 48, 211, 213, 217, 224, 245; XXVII, 464
an example of synclinal accumulation, STR II, 704
oil from Permian and Pennsylvanian strata in, FOP, 67; XXV, 1499
Pennsylvanian production in, XXI, 1250
San Juan Raya formation, XXVIII, 1092
San Juan sandstone, XXVIII, 12
San Lazaro anticline, XXVIII, 1143
San Lorenzo formation, CAL, 149, 151, 315; MSC, 26, 53, 72, 85, 108, 111, 160, 164, 172, 185, 186, 188-190, 198, 203, 204, 208, 213, 216, 221, 233, 240-242, 258-260, 266, 276, 291, 306, 316, 319, 323, 332, 356, 341, 342, 346, 355, Fig. 14 (in pocket)
correlation, CAL, 148, 303
first California Oligocene fossils from, CAL, 149
foraminifera from, CAL, 154; MSC, 51
Santa Cruz Mountains, CAL, 148, 149, 154, 156
time of deposition of, CAL, 158
type, MSC, 161, 188, 190, 196, 197, 199, 209, 216, 221, 222, 240, 242, 244
type, foraminifera from, MSC, 56, 72, Fig. 14 (in pocket)
upper, MSC, 53
San Lorenzo group, MSC, 101
San Lorenzo molluscan fauna, MSC, 72
San Lorenzo molluscan faunas, typical, MSC, 152
San Lorenzo River, MSC, 53
San Lorenzo series, MSC, 66, 172
San Lorenzo-Vaqueros contact, MSC, 53, 61
San Luis, MSC, 115
San Luis Folio, SC, vii; XX, 1533
San Luis Obispo, CAL, 89, 107, 118, 189, 288, 315; MSC, 86, 109
San Luis Obispo area, MSC, 115, 120
San Luis Obispo County, California, MSC, 23, 48, 49, 74, 86, 107, 109, 117, 121, 122, 127, 128, 197-202, 205, 206, 210, 212, 214, 219, 223-225, 227, 229, 230, 232-234, 236-238, 240, 243, 244, 247, 248, 250, 251, 256, 258, 261, 264-266, 273-275, 284, 287, 288, 290, 291, 299-301, 304, 308-315, 322-326, 330, 333, 339, 343, 345-347, 349, 353, Fig. 14 (in pocket)
fauna of, MSC, 22, 168
outcrop section L, SBP, 167-194, 411
San Luis Obispo-Huasna district, MSC, 165
San Luis Obispo Valley, PROB, 741
San Luis Potosí, MEX, 27, 78
Neocomian, Valanginian, and Hauterivian in Sierra de Catorce, XXVIII, 1141
Turonian rudistid-bearing limestones in, XXVIII, 1140
Valanginian and Hauterivian limestones in, XXVIII, 1140
San Luis Potosí-Tampico railway, MEX, 46, 48, 69
San Luis Quadrangle, CAL, 89; SC, 1; XX, 1547
San Manuel, MEX, 16, 32, 65, 164, 172, 175
San Manuel fault, MEX, 175, 203
San Manuel fault pool, production from, MEX, 176, 178
San Marcos arch, XXI, 1085; XXIX, 1734
San Marcos Creek, MSC, 49
San Marcos field, temperatures of oil at, MEX, 226, 227
San Marcos Pass, CAL, 10
San Marcos quadrangle, Texas, geology of, XI, 825
San Martínez-Chiquito Canyon, XXVI, 191
San Miguel, CAL, 44, 315; SC, 106; XX, 1652
Hacienda in Southern fields, MEX, 138, 210, Fig. 32 (in pocket)
San Miguel and Escondido formations, faunal break between, XXVIII, 1180
San Miguel beds, V, 26
San Miguel formation, fossils from, XV, 796
of Maverick County, Texas, Taylor age of, XV, 793
San Miguel Island, CAL, 5, 6, 122, 148, 315; MSC, 109
San Miguelito field, California, XXIX, 651
San Miguelito oil, PROB, 212
San Nicolás, State of San Luis Potosí, transition between Tamasopo and Méndez, MEX, 73, 250
San Nicolas Basin, RMS, 255, 257, 264, 266
San Nicolas Island, CAL, 5, 8, 122, 315; RMS, 255
San Onofre breccia, CAL, 3, 102, 126, 166, 168-171, 173, 174, 184, 194, 238; MSC, 114, 119; SC, 114, 117, 123, 131, 134; XX, 1660, 1663, 1669, 1677, 1680
characteristics and problems of interpretation, SC, 120; XX, 1666
deposit compared to fanglomerate, CAL, 184
Franciscan rocks in, CAL, 84
Middle Miocene, SC, 40; XX, 1586
Middle Miocene, west side of Palos Verdes Hills, outcrop of, SC, opp. 120; XX, opp. 1666
San Onofre formation, MSC, 164
San Onofre Mountain, CAL, 170, 315; MSC, 119
San Pablo, MSC, 92, 166, Fig. 14 (in pocket)
typical, MSC, 167
San Pablo Bay, California, MSC, 127
correspondence of Briones, Cierbo, and lower Neroly at Bitter Creek with these substages at, XXV, 249
marine upper Miocene of, XXV, 248
outcrop section E, SBP, 167-194, 411
San Pablo Bay region, MSC, 66
San Pablo beds, XXV, 231
San Pablo Creek, MSC, 129, 284, 287, 328
San Pablo Dam, MSC, 65, 263
San Pablo formation, CAL, 163, 193, 194, 203, 205, 210, 215, 278, 315, MSC, 71, 130, 133, 166, 170
typical, MSC, 167
San Pablo group, California, MSC, 23, 66, 167
fauna of, MSC, 172
(Tum) (Miocene), outcrop section E, SBP, 94, 167-194
San Pablo sandstone, MSC, 133
San Patricio and Nueces counties, Texas, Oligocene stratigraphy of East White Point field, XXV, 1967
San Patricio County, GC, 665
oil and gas producing fields, map of Gulf Coastal Texas showing, XXV, 1970
San Pedro, CAL, 315; MSC, 221, 252, 257, 275, 308, 337, 338, 342
exposures of Pleistocene beds at, CAL, 47, 256
Lomita formation at, CAL, 259, 261
Recent foraminifera from off, MSC, 12
submerged valleys near, CAL, 270, 273
San Pedro Basin, RMS, 257, 264
San Pedro beds, SC, 49; XX, 1595
San Pedro del Gallo area, eastern Durango, Cretaceous section, XXVIII, 1167, 1168
San Pedro epoch, CAL, 267
San Pedro field, MEX, 4, 226
temperatures of oil, MEX, 227
temperatures of salt water, MEX, 228
San Pedro formation, VI, 306
conformable on Timms Point horizon, CAL, 260
correlation, CAL, 303
fossils from, CAL, 304
in Gale's classification, CAL, 249, 268
of Arnold, CAL, 260
San Pedro Hill, CAL, 8, 260
breccias of San Onofre type in, CAL, 171
San Pedro Hills, XX, 125
diatoms, diatomaceous formations of, CAL, 209
Franciscan series in, CAL, 31
Miocene siliceous shale of, CAL, 195
Pleistocene in, CAL, 256, 259, 262
Pliocene in, CAL, 228, 238-240, 249
Repetto formation of, CAL, 229, 238, 239
structure section, CAL, 259
San Pedro-Mier-Gral. Trevino section, GC, 614; XIX, 1383
San Pedro Pliocene, possibly Pleistocene, CAL, 249
San Pedro Point, CAL, 35
San Pedro sand (Qsp) (Pleistocene), SBP, 91-93, 97-130, 145-153, 167-194, 415
San Pedro Valley, CAL, 315
San Rafael and Diablo uplifts, similar histories of, XXI, 550
San Rafael and Santa Ynez Mountains, SC, 86, opp. 90; XX, 1632, opp. 1636
San Rafael Axis, SC, 89; XX, 1635
San Rafael beds, MEX, 54, 132, 133, 137, 139
San Rafael Kaibab Swell formation fossils in, XXIV, 622

- San Rafael Mountains, CAL, 11, 99, 142, 160, 183, 251, 293, 315; MSC, 114, 119, 124, 197, 198, 224, 228, 269, 276, 287, 289, 299, 301, 319, 325, 334; SC, opp. 80, opp. 86, 88; XX, opp. 1626, opp. 1632, 1634
- San Rafael region, during Upper Miocene, SC, 46; XX, 1592
- San Rafael Strait, CAL, 164, 165
- San Rafael swell, FOP, 67; XXI, 998; XXV, 1499, 1758
- San Rafael uplift, SC, 14, 15, 86, 92, 99, XX, 1560, 1561, 1632, 1638, 1645 axis of, SC, 138; XX, 1684
- San Ramon foraminiferal localities, MSC, 66
- San Ramon formation, CAL, 148, 156, 157, 315; MSC, 65, 163, 180, 188-190, 222, 228, 323, 343
- San Ramon horizon, MSC, 152
- San Ramon shale, faunules from, MSC, Fig. 14 (in pocket)
- San Saba axis, XXIV, 105
- San Saba limestone formation, XXIV, 71
- San Sebastian, PROB, 397
- Agua Nueva and San Felipe beds in, MEX, 52, 223
- San Simon syndine, XXIV, 32, 40, 49; XXV, 77, 96
- San Timoteo formation, CAL, 303
- Sanchez, D., Survey, Texas (wells 316, 319), SBP, 292-335, 408
- Sanchez sandstone tongue, XXVI, 269
- Sand, RMS, 38, 155, 156, 165-174, 183, 188, 195-202, 208, 214, 221, 225, 227, 234-259, 264-277, 286, 450, 533
- at distance from shore, cause of, RMS, 240
- beach, size distribution of, RMS, 208
- blown across barrier beach, RMS, 583
- covering late-glacial clays, of Baltic, RMS, 312, 321
- definition of, in terms of textural units, SBP, 71
- distribution of, in river, RMS, 24
- effect on erosion, RMS, 11
- effect on properties of sediments, SBP, 160-165
- eolian, RMS, 279, 583
- from channels, size-distribution of, RMS, 185
- frosted, RMS, 44, 241
- glauconitic, size-distribution of, RMS, 510
- in Baltic, RMS, 307, 311, 312
- in North Sea, RMS, 328, 329, 337, 344
- late-glacial, in Baltic, RMS, 307
- littoral, of Baltic, RMS, 312
- on deltas, RMS, 165
- rounding of, RMS, 40
- Sand, silt, and clay fractions in Great Salt Lake bottom, XXII, 1349
- Sand, size distribution of, in some dunes, beaches, and sandstones, XXIX, 215
- wind-blown, in sediments on continental slope, RMS, 240
- Sand analyses for correlation, application of method of, XXI, 1323
- mechanical, for correlation purposes, use of, XXI, 1311
- mechanical, use of index charts in determining cycles of deposition, XXI, 1332
- Sand bar, South Burbank pool, XXI, 565
- Sand bars, RMS, 450
- (Sand bars)
- Austin field, STRAT, 250-258
- Dora pool, STRAT, 419
- Hardin field, STRAT, 590-591, 595-597
- Music Mountain pool, STRAT, 496-497, 499, 506
- Olympic pool, STRAT, 461-463
- possible origin of Bartlesville sand deposits in shoestring pools of Greenwood County, Kansas, STR II, 159
- Six Lakes field, STRAT, 258-265
- Vernon field, STRAT, 265-266
- Sand Beach terrace, XXIX, 1710
- Sand Belt area, accumulation of oil, STRAT, 758, 759
- of Ward and Winkler counties, Texas, and Lea County, New Mexico, STRAT, 750
- Sand Belt pools of West Texas, XXVII, 898
- Sand bodies, STRAT, 49
- origin of, STRAT, 819
- Sand body, erratic condition of, in Cromwell field, Oklahoma, STR II, 311
- Gay - Spencer - Richardson trend, STRAT, 819-825
- Sand correlation, index chart of, XXI, 1319
- Sand Creek formation, XXI, 561
- Sand crystals in Whitehorse sandstone, XXIII, 1809
- Sand dunes, RMS, 271
- Sand fields, estimation of oil reserves in, XVIII, 343
- factors governing estimation of recoverable oil reserves in, discussion, XVIII, 1078
- Sand Flat field, Smith County, Texas, XXVIII, 1647
- Sand-grain distribution in Bethel sandstone, mean size of, XXVIII, 96
- Sand grains, rounding of, in beaches, RMS, 41
- velocity of, with respect to transporting agent, RMS, 13
- view illustrating concepts of sphericity and roundness, XXIX, 1236
- Sand Hill, North Carolina, RMS, 471
- Sand Hills arch, XXV, 78
- Sand Hills area, Crane County, Texas, XXIII, 842; XXIV, 119
- Devonian in, XXIV, 126
- Lower Ordovician (Ellenburger) in, XXIV, 119
- map showing location of pools, XXIV, 120
- Ordovician development in, XXIV, 129
- Ordovician-Permian unconformity in, XXIV, 131
- Permian in, XXIV, 126, 131
- production of oil and gas in, XXIV, 127
- section of formations penetrated in, XXIV, 121
- section of Middle Ordovician of, XXIV, 124
- Silurian in, XXIV, 126
- stratigraphy of, XXIV, 119
- structure in, XXIV, 131
- structure of pre-Permian sediments in, XXIV, 132
- Upper Ordovician of, XXIV, 125
- Sand Hills field, XXVI, 1028, 1398
- upper San Andres zone, XXIX, 746
- Sand Hills McKnight pay, XXIX, 746
- Sand Hills pool, XXV, 1057; XXVI, 1030
- Yesso formation productive in, XXIV, 23
- Sand Hills structure, Crane County, Texas, XXII, 695
- Ordovician development, XXI, 1575
- Sand lens at South Burbank pool, Oklahoma, XXI, 579
- of porosity-lens type of storage pool, XXVIII, 1585
- Sand-lens trapping of oil, XV, 64
- Sand-lens pools, XX, 528
- Sand lenses, PROB, 20, 510, 691, 729
- many discoveries in south Texas, results of, in areas of monoclinical dips, XXIV, 1072
- Sand masses, migration of, in North Sea, RMS, 336
- Sand reefs in rivers, RMS, 18
- Sand reservoirs, XXIX, 1538
- Sand retentivity, XXV, 1319
- Sand samples, mechanical analyses of, XXIX, 216
- Sand spit and lagoon, view of Estero Bay and Morro Rock showing, XXVI, bet. 154 and 155
- Sand Wash structural basin, XIV, 1030
- Sand waves, RMS, 18
- Sandballs in Whitehorse sandstone, XXIII, 1808
- Sander, B., SBP, 2; XX, 53
- Sander, G., XVIII, 69
- Sanders, C. F., XXVIII, 1355
- Sanders, C. W., XXIX, 1542, 1748, 1749
- Emba salt-dome region, Union of Socialist Soviet Republics, and some comparisons with other salt-dome regions, XXIII, 492
- Sanders, C. W., geology of Two Buttes dome in southeastern Colorado, XVIII, 860; discussion, XVIII, 1546
- Sanders, C. W., stratigraphic type oil fields, discussion, XXVII, 1392
- stratigraphic type oil fields and proposed new classification of reservoir traps, discussion, XXVII, 539
- Sanders, C. W., Jr., XIX, 503
- Sanders, J. McConnell, XXIV, 2181; XXV, 567, 1248
- Sanders, M., SBP, 2
- Sanders, U., XXIII, 1091
- Sanders, W. E., XVII, 17
- Sanderson, James O. G., GAS, 20; STRAT, 277; XI, 248; XV, 502, 1233, 1265; XXIX, 1267, 1291
- an Ellis (Upper Jurassic) section at East Butte, Sweetgrass Hills, Montana, ALTA, 29; XV, 1157
- Fox Hills formation in southern Alberta, ALTA, 123; XV, 1251
- Sanderson, J. O. G., and Allan, J. A., XI, 248
- Sanderson, R. T., XXIV, 1452; XXVII, 1188
- Sandford area, XXIII, 925
- Sandholt Ranch, MSC, 8
- Sandia Mountains, XXI, 1086
- Sandridge, John R., XXI, Pl. B, opp. 1085; XXIX, 1417
- Sandiger Schlick of North Sea, RMS, 328
- Sandoval and Centralia oil fields, Illinois, structure of, STR II, 120
- Sandoval anticline in Centralia-Sandoval area, Illinois, STR II, 123
- Sandoval field, PROB, 567; XXI, 782, 785

- Sandoval pool, Marion County, Illinois, XXIV, 965
- Benoist sand, STR II, 126-128
- correlation of subsurface Devonian of, with Devonian outcrop of southwestern Illinois, XXVIII, 1528
- Sandoval producing structures, XXIII, 1361
- Sandoz, SD, 350
- Sands, J. Melville, MEX, 98; PROB, 593, 775; XVI, 886
- Burbank oil field, Osage County, Oklahoma, STR I, 220; VIII, 584, XI, 1045
- Kettleman Hills, California, heavy-mineral studies on correlation of, XVIII, 1559
- Sands, depleted, useful in volumetric estimation of reserves, XXV, 1305
- influence of connate water on permeability of, to oil, XXII, 1248
- laboratory and field observations of effect of acidizing oil reservoirs composed of, XXV, 850
- lenticular, in Hiawatha dome, Colorado, STR II, 114
- producing from synclines in West Virginia, STR II, 704
- productive in Ohio, XXVII, 850
- productive, in Saxet field, XXIV, 1812
- ratio of fine to coarse, XXIX, 217
- Sands and shales, magnetic susceptibility and magnetite content of, XIV, 1187
- Sandstone, RMS, 215; SBP, 413
- at base of Tamest formation, MEX, 81, 83, 85
- before and after partial solution of quartz grains, XXV, opp. 1855
- cementation process in, IV, 33
- Sandstone and shale units, alternating, of western half of Rocky Mountain area, in Upper Cretaceous, XXI, 905
- Sandstone beds, best map units in Arkansas coal field, XXI, 1420
- Sandstone cliffs, RMS, 334
- Sandstone cores, tests for effectiveness of acidizing, XXV, 851
- Sandstone dikes as conduits for oil migration through shales, XIV, 411
- genesis of, as indicated by heavy minerals, XII, 271
- Sandstone faunas and floras of Pennsylvanian, XIII, 477
- Sandstone inclusion in salt in mine on Avery's Island, VIII, 674
- Sandstone lenses, GAS, 589
- Sandstone porositites in Paleozoic region in Arkansas, XXI, 67
- Sandstone production in New Mexico, 1936, XXI, 1038
- in Texas, 1936, XXI, 1037
- Sandstone sections, porosity decreased by interlocking grains and precipitation of quartz, XXV, 1860
- Sandstone tongues along eastern side of Cordillera, XXI, 910
- in Upper Cretaceous in Rocky Mountain area, XXI, 906
- Sandstones as source beds, PROB, 63
- California, occurrence of feldspar in, discussion, XII, 1023
- causes of decrease in porosity of, XXV, 1878
- cementing materials in, and their probable influence on migration and accumulation of oil and gas, XXV, 1839
- (Sandstones)
- certain, peculiar phases of oil saturation in, VII, 473
- dunes, and beachers, some, size distribution of sand in, XIX, 215
- Franciscan, XXVII, 131
- from Rocky Mountain region, photomicrographs of, XXV, fol 1854
- in Arbuckle limestone, Oklahoma, XIII, 1477
- most common reservoirs, PROB, 10
- productive, acid solubilities of, XXV, 864
- productive in Michigan, XXII, 414
- productive, in Wyoming oil fields, VII, 491
- Sandstrom, J. W., RMS, 50
- Sandy bottom, RMS, 278
- Sandy coquina in Cuicutepec, MEX, 99, 104
- Sandy Creek gas field, XXII, 92
- Sandy deposits, RMS, 257
- Sandy field, XXVII, 851
- Sandy Gray dolomite in Goldsmith field, XXIII, 1533
- Sandy Hook, V, 477
- Sandy Hook dome on Paint Creek uplift, GAS, 927
- Sandy islands of North Sea, RMS, 335
- Sandy limestones, plugging in, XXI, 625
- Sandy muds, RMS, 195, 327-329
- Sandyville field, XXVI, 1126
- Sanford, Grace, SBP, 6
- Sanford, John T., Thorold sandstone, discussion, XIX, 1390
- Sanford, Ross T., and Grebe, J. J., XXIV, 1361; XXV, 850
- Sanford, Samuel S., PROB, 894; RMS, 283; XXIX, 73
- Sanford-Merchant and Yake pools, XXIII, 1022
- Sanga-Miri oil field, V, 417
- Sangamon interglacial stage, CAL, 268
- Sangkoeirang Bay region, XXVIII, 1449
- Sangre de Cristo conglomerates, Colorado, origin of, XIII, 177
- Sangre de Cristo Range, PROB, 682, 683; XXVII, 430
- Sanidine, RMS, 382
- Sanitation in oil camps, review, VI, 389
- Santa Amalia, El Abra limestone and San Felipe beds in, MEX, 223
- Santa Ana Bay, CAL, 165, 166
- Santa Ana Canyon (Yorba) field, PROB, 224
- Santa Ana foothills, MSC, 109, 114, 127, 260
- Santa Ana gas field, XXVII, 772
- gravity of oil in, XXVII, 774
- Santa Ana-Laguna area, MSC, 119
- Santa Ana Mountains, CAL, 3, 20, 22, 68, 70, 100, 102, 103, 125, 166, 168, 170, 184, 194, 238, 315; PROB, 212, 214; SC, 6, 11, 13, 114, 116; XX, 1552, 1557, 1559, 1660, 1662
- Cretaceous on flanks of, CAL, 98, 99
- Cretaceous fauna of, XXVI, 180
- Cretaceous formations of, XXVI, 166
- Cretaceous-Tertiary contact in, XXVI, 175
- Elsinore fault along scarp of, CAL, 39
- Eocene beds of, CAL, 122, 125, 126
- Eocene sandstones in, CAL, 126
- generalized columnar sections of Upper Cretaceous of, XXVI, 177
- granite intrusion of Triassic in, CAL, 30, 94
- Lower Chico in, CAL, 111
- (Santa)
- Martinez and later Eocene beds in, CAL, 122
- northern, Orange County, California, Upper Cretaceous deposits of, map, XXVI, 168
- Trabuco conglomerate of, CAL, 100
- Triassic fossils collected in, CAL, 68
- Triassic sedimentary rocks of, CAL, 7
- Vaqueros in, CAL, 168, 169
- Vaqueros formation in, CAL, 168
- Whittier conglomerates in, XXIV, 665
- Santa Anita, Cañada de, MSC, 100
- Gaviota Creek, MSC, Fig. 6 (in pocket)
- Santa Anita Canyon, Upper Cretaceous in, XXVII, 6
- Santa Anita formation, XXVIII, 12
- fauna of, XXVIII, 13
- Santa Barbara, CAL, 51, 122, 148, 315; MSC, 109, 128, SC, 89, XX, 1635
- angular discordance at, Santa Barbara-Sespe formations, CAL, 244
- faulting near, CAL, 51
- Monterey shale, CAL, 189, 192
- Pliocene in, CAL, 268
- Santa Barbara area, MSC, Fig. 14 (in pocket)
- Santa Barbara Channel, RMS, 246, 257, 264, 272
- Santa Barbara Coast, MSC, 119, 124, 128, 131; SC, 29, 138; XX, 1575, 1684
- intraformational breccia in Upper Miocene Monterey shale of, SC, 46; XX, 1592
- Santa Barbara coast fields, PROB, 756
- Santa Barbara coastal plain, CAL, 9
- Santa Barbara County, California, MSC, 28, 33, 49, 51, 100, 101, 103, 108, 111, 114, 115, 117, 123, 127, 129, 131, 135, 184, 186, 188-190, 192, 195, 201, 203, 206, 207, 212, 213, 217, 219, 221, 222, 224, 225, 228, 237, 241, 244, 245, 247, 249, 250, 252, 255-257, 259, 262, 265, 267-272, 275-278, 280-282, 286, 289, 290, 295, 297, 299, 300, 303, 304, 307-309, 311, 313, 318, 319, 321, 323, 324, 327, 329, 331-333, 335, 337-342, 344, 347-351, 353, 354; XXI, 931
- check list of foraminifera from coastal bluffs west of Naples, MSC, 29
- clay shale member of Miocene in, CAL, 179
- distribution of Sespe in, CAL, 147
- Eocene stratigraphy in western Santa Ynez Mountains, XXVII, 1
- geologic map of Cañada de Santa Anita and vicinity, XXVII, 4
- Modelo in, CAL, 199
- oil shale in, VIII, 459
- outcrop section M, SBP, 167-194 (wells 25-27) SBP, 130-153, 403
- Santa Barbara County and Ventura County, oil fields in, XXI, 780
- Santa Barbara County field, California, cross-faulted anticlines, STR II, 680
- Santa Barbara district, diatoms in, CAL, 209
- facies of Sespe formation in, XIII, 491
- Franciscan in conglomerate beds of, CAL, 125
- Miocene breccias of, MSC, 131
- Miocene seas in, CAL, 186

- (Santa)
phosphate rock in, CAL, 198
Tembler in, CAL, 171, 177
Santa Barbara earthquake, CAL, 50
Santa Barbara embayment, CAL, 165, 166; SC, 14, 24, 86, 104, XX, 1560, 1570, 1632, 1650
Santa Barbara formation, CAL, 244, 248, 249, 254, 268, 278, 293, 304; (Qs) (Pleistocene), SBP, 93, 168-194, 415
Santa Barbara Islands, CAL, 5, 6, 70, 207, 315; MSC, 164
Santa Barbara Mesa, PROB, 756
Santa Barbara Potrero, unconformity on Alamo Creek near, SC, 94, XX, 1640
Santa Barbara strait, SC, 98; XX, 1644
Santa Barbara-Ventura district, MSC, 114
Santa Barbara zone, CAL, 232
Santa Catalina Island. (See Catalina Island)
shallow-water foraminifera near, MSC, 11
Santa Clara and Los Posas faults, SC, 104; XX, 1650
Santa Clara County, California, MSC, 21, 26, 198, 199, 206, 207, 212, 215, 218, 225, 227, 229, 232, 243, 247, 248, 251, 261, 271, 273, 289, 310, 322, 330, 340, 347
Monterey shale faunules from, MSC, Fig. 14 (in pocket)
Santa Clara fault, CAL, 42; SC, 99, 104; XX, 1645, 1650
Santa Clara formation, CAL, 249
Santa Clara Valley, CAL, 9, 229, 249, 315; PROB, 190, SC, 98, XX, 1644
Santa Clara Valley pools, PROB, 192
Santa Cruz, MSC, 85, 119; SC, 1, 106; XX, 1547, 1652
Pilarcitos fault, CAL, 36
Santa Cruz Basin, MSC, 2, 136, 167, 180, Fig. 14 (in pocket); RMS, 257, 264, 266
Santa Cruz County, MSC, 72, 103, 108, 111
Santa Cruz Creek, MSC, 119, Fig. 14 (in pocket)
Santa Cruz district, Vaqueros in, CAL, 165, 166, 169, 183
Santa Cruz foraminiferal assemblages, MSC, 85
Santa Cruz Island, CAL, 3, 6, 7, 68, 270, 316; MSC, 49, 114, 230, 303, 308; SC, 13, 15, opp. 90, 105, 109, 140; XX, 1559, 1561, opp. 1636, 1651, 1655, 1686
breccias of San Onofre type on, CAL, 171
Eocene on, CAL, 122
fossils from, CAL, 288
granite intrusion of Triassic (?) schist on, CAL, 5, 30
Paleocene strata of, SC, 107; XX, 1653
schists equivalent to those in Santa Ana Mountains, CAL, 68
Santa Cruz Island faunule, MSC, Fig. 14 (in pocket)
Santa Cruz Mountains, CAL, 11, 316, MSC, 72, 109, 120, 124, 133, 135, 152, 161, 185, 187, 188, 191, 196-198, 204, 205, 208-210, 213, 216, 218, 221-223, 231, 233, 240-242, 246, 249, 258, 259, 269, 276, 292, 294, 306, 316, 323, 327, 328, 332, 336, 342, 346, 355; PROB, 185
- (Santa)
check list of foraminifera from, MSC, 52
correlation of Oligocene in, CAL, 148
crystalline limestone and schist in, CAL, 64
Eocene in, CAL, 124
Franciscan limestone in, CAL, 82
Monterey formation in, CAL, 190
Oligocene San Lorenzo formation in, CAL, 148, 149, 154, 156, 158
Pliocene fossils of, CAL, 245
Pliocene strata of, CAL, 232, 249
volcanic rocks with Miocene in, CAL, 205, 206
Santa Cruz-San Francisco peninsula, MSC, 73
Santa Elena area of eastern Chihuahua, Cretaceous section in, XXVIII, 1172
structure section of, XXVIII, 1173
Santa Elena peninsula, Ecuador, South America, Eocene oil production on, XXIX, 536
observations on geology of, review, XI, 1238
Santa Elena ranch, Tamesí beds at, MEX, 86
Santa Elena region, stratigraphy, XIV, 277
Santa Eulalia and San Pedro Conchos, central Chihuahua, Cretaceous section in, XXVIII, 1183
Santa Fé, MEX, 118, 138, 180, 181
Santa Fe Railway Company, SD, 502
Santa Fe Springs, SC, 116; XX, 1662
percentage of oil in core logs from wells in Bell zone at, XXI, 1483
Santa Fe Springs anticline, SC, 133, XX, 1679
Santa Fe Springs field, California, VIII, 178; XXI, 979
Santa Fe Springs oil field, California, CAL, 228, 316; GAS, 201-204; PROB, 226, 229, 312, 404, 742, 752, 980, 981, 985; VI, 303; VIII, 10, 178
ground-water contours, XVI, 343
location of wells in, SBP, 89
proportion of organic matter converted into oil in, XX, 245
review, VI, 390
(wells 100-188), SBP, 5, 34, 69, 165-167
Santa Flora tension fault east of Palo Seco field, Trinidad, XXIV, 2113
Santa Inés formation, XXIX, 525
a flysch formation, XXVIII, 21
molluscan fossils in, XXVIII, 24
unconformably overlapped by Sacacual group, XXVIII, 23
Santa Lucia granodiorite, XXVII, 186
Santa Lucia intrusives, XXVIII, 453
Santa Lucia Mountains, California, CAL, 11, 12, 316; MSC, 101, 109; SC, 1, 11; XX, 1547, 1557
Cretaceous in, CAL, 99
crystalline limestone and schist in, CAL, 64
distribution of Eocene rocks in, XX, 491
Eocene in, CAL, 124; MSC, 101, 162
fault in, CAL, 44
land during Pliocene, CAL, 251
section across, CAL, 59
Slate's Springs district in, CAL, 86
Tembler of Sur region in, CAL, 173
Santa Lucia orogeny, XXVIII, 484; XXIX, 1004
- Santa Lucia Range, California, MSC, 7, PROB, 741
Cretaceous and Paleocene of, XXVIII, 449
foraminiferal faunule from, XXVIII, 507
fossils of Paskenta stage, XXVIII, 459
location and extent of, XXVIII, 451
map showing distribution of Marmolejo formation in, XXVIII, 460
pre-Cretaceous rocks of, XXVIII, 455
progress of geologic mapping in, XXVIII, 455
quadrangle map, XXVIII, 456
relief map of California showing location and relief of, XXVIII, 452
status of geologic mapping in, XXVIII, 455
topographic map, XXVIII, 454
Upper Cretaceous in, XXVIII, 471
volcanic tuffs of, and Miocene paleogeography of Salinas Valley, XXI, 1340
Santa Lucia series, CAL, 64
Santa Margarita, CAL, 191, 192, 316; MSC, 128
Santa Margarita (?), Vaqueros, and Tejon formations, section of, along west side of Big Tar Canyon, XXIII, 30
Santa Margarita ash bed, lower, MSC, Fig. 14 (in pocket)
Santa Margarita beds, MSC, 9; XXV, 1331, 1334
Santa Margarita fanglomerate lenses, origin of, XXV, 1340
Santa Margarita formation, CAL, 106, 163, 164, 187, 189, 191, 193, 194, 224; MSC, 23, 88, 121-123, 132, 163, 165-167, 250, Figs. 6, 14 (in pocket), SC, 59, 60, 77; XVI, 137; XX, 1605, 1606, 1623; XXVI, 1617
angular discordance at base of, CAL, 206
Arnold and Anderson's, Reef Ridge shale upper part of, XXIII, 26
ash beds in, near Coalinga, CAL, 205
Coalinga district, CAL, 190, 212, 215, 242, 279
correlation, CAL, 212, 214, 216, 303
diatomite, CAL, 190, 192
fossils from, CAL, 182, 224, 288
four lithologic facies, XXVI, 1629
intertonguing of schistose facies of, with coarse conglomerate and sand facies, XXVI, 1619
Kreyenhagen Hills section, CAL, 236
Malaga Cove beds, CAL, 195
"Maricopa" formation, CAL, 190
megafauna, CAL, 210
mollusks in Temblor Range, CAL, 217
Monterey contact, CAL, 206, 207, 217, 279
outcrop section N, SBP, 94, 167-194, 411
petrology of, CAL, 191
Salinas Valley, CAL, 189
Santa Maria field, XXIII, 62
Santa Rosa Island, CAL, 6
transgressive, MSC, 89
type locality of, CAL, 189
unconformable on all older rocks and on Crocker Flat landslide, XXVI, 1620
upper, MSC, 157
Vera Cruz Mountain, CAL, 190
vulcanism associated with, CAL, 284

- Santa Margarita-Monterey sequence, MSC, 167
undifferentiated, MSC, 165
- Santa Margarita overlap in Devil's Den oil field, XI, 612
- Santa Margarita Pass, MSC, 167
- Santa Margarita sand, XXVI, 1141
- Santa Margarita sandstone, MSC, 7, 8, 38, 133, 160, Fig. 4 (in pocket)
in McKittrick field, California, STR I, 21; XI, 619
- Santa Margarita sequence, MSC, Fig. 6 (in pocket)
- Santa Margarita shale, PROB, 183
- Santa Margarita-Sisquoc diatrophism, XVI, 142
- Santa Maria, MSC, 119, 135; SC, 47; XX, 1593
- Santa Maria and Cat Canyon fields, west-east section through, GAS, 155
- Santa Maria and Paso Robles basins, *Notion* faunas of, MSC, 17
- Santa Maria Basin, California, MSC, 2, 136, 180, Fig. 14 (in pocket); PROB, 740, 741; XXVII, 1338
fracturing of fractured shale in, and origin of radiolarites, XXVII, 1622
- Santa Maria district, California, CAL, 166, 316; GAS, 154-158; MSC, 79; PROB, 340, 738, 756; SC, 49, 88; XIII, 435; XX, 1595, 1634
a district of Southern Coast Ranges, CAL 11
angular discordance on hills of, CAL, 206
columnar section, CAL, 231, 232
diatomite of, CAL, 188, 209, 245
Franciscan detritus in, CAL, 169
formations of, XXVII, 1340
generalized geologic map of, XXVII, 1336
- Harris formation in, CAL, 189
- lower Pliocene in, XVI, 135; XVII, 201
map showing location of oil fields in, and on Santa Barbara coast, XXIII, 46
- Miocene in, XXVII, 1338
- Monterey shale of, XXVII, 1345
- Pleistocene in, XXVII, 1342, 1360
- Pliocene in, CAL, 231, 232; XXVII, 1339, 1358
relation of oil accumulation to structure, STR II, 18
stratigraphy and paleontology of, XXVII, 1335
volcanics interbedded with Miocene in, CAL, 205
- Santa Maria-Lompoc field, V, 181, 458
- Santa Maria lowland, SC, 92; XX, 1638
- Santa Maria region, Pliocene formations of, CAL, 232
- Santa Maria-Taft road, MSC, 75
- Santa Maria Valley, California, geologic history of, XXIII, 79
- Santa Maria Valley oil field, California, STR II, 18, 20, 21; PROB, 207, 338, 741, 757, 758; GAS, 157; XXI, 981; XXIII, 45; XXVI, 1135; XXVII, 1339, 1345, 1349
an illustration of impossibility of compulsory acreage allocations and impossibility of determining ownership in place by engineering methods, XXII, 566
Cretaceous in, XXVII, 1338
development of, XXIII, 46
extension, XXII, 713
fossils of, XXIII, 56-61, 63-68
- (Santa)
Foxen formation in, XXIII, 54
Franciscan in, XXIII, 67
geological formations in, XXIII, 52
gravity of oil at, XXIII, 48
heavy oil from, XXVII, 1335
Jurassic in, XXVII, 1338
map showing location of wells, XXIII, 49
Miocene sections in, to show variable thicknesses and disconformities, XXIII, 73
Monterey formation in, XXIII, 62
Paso Robles formation in, XXIII, 53
oil zones in, XXIII, 68
production in, XXIII, 50
reserves, XXIII, 81
Santa Margarita formation in, XXIII, 62
sections across, XXIII, 71
sections to illustrate overlap and buttressing of Miocene in, XXIII, 76
Sisquoc formation in, XXIII, 61
stratigraphic section of, XXIII, 51
wells in, XXIII, 46, 48, 50, 69
western extension of, XXIII, 72
- Santa Maria Valley oil field and adjacent parts of Santa Maria Valley, California, subsurface stratigraphy of, XXIII, 45
- Santa Maria Valley syncline, Santa Maria Valley oil field located on north limb of, XXIII, 69
- Santa Monica, RMS, 228, 245, 249-255, 267-279; SC, 106; XX, 1652
- Santa Monica Basin, RMS, 257, 264
- Santa Monica Bay, California, CAL, 165, 316
distribution of sediments in, RMS, 250
distribution of types of bottom in, XXII, 205
outcrop section R, SBP, 167-194, 411
sediments of, XXII, 201
- Santa Monica Bay sediments, mineral grain studies of, XXII, 211
- Santa Monica Mountain region, structure of, SC, 110; XX, 1656
- Santa Monica Mountains, CAL, 57, 68, 69, 128, 131, 178, 199, 208, 217; MSC, 39, 102, 109, 120, 123, 124, 126, 127, 130, 155, 164, 166, 185, 200, 206, 210, 211, 237, 243, 247-249, 252, 253, 255, 262, 264, 267-270, 272-274, 276, 278-280, 282, 295-298, 307, 308, 319-321, 324, 327, 328, 331, 334, 342-344, 350, 354; PROB, 212; SC, 6, 11, 13, 17, 35, 105, 106, 108, 109, 114; XX, 1552, 1557, 1559, 1563, 1581, 1651, 1652, 1654, 1655, 1660
bituminous shale in, CAL, 199
correlation of Bitter Creek with, XXV, 250
Cretaceous in, CAL, 10, 98
Cretaceous faunas of, XXVI, 184
Cretaceous stratigraphy of, XXVI, 176
flora of, Pleistocene, CAL, 265
granite intrusion of Triassic (?) schist, CAL, 30, 69
Martinez formation in, CAL, 122, 128, 131
Miocene fossils in, CAL, 208, 217, 219
Modelo formation in, CAL, 217
phosphate rock in, CAL, 199
phyllite of, intruded by granitoid rock, CAL, 69
Sespe beds in, CAL, 147
- (Santa)
Temblor formation in, CAL, 166, 171
Topanga formation in, CAL, 177
Transverse Ranges, CAL, 9
Upper Cretaceous strata of, SC, 107; XX, 1653
volcanic rocks in, CAL, 175
- Santa Monica Mountains disturbance, MSC, 183
- Santa Monica phyllite, SC, 6; XX, 1552
- Santa Monica slate, SC, 115; XX, 1661
correlation of, SC, 107; XX, 1653
- Santa Monica submarine canyon, RMS, 254
- Santa Paula anticline, XII, 118
- Santa Paula Canyon, PROB, 193
- Santa Paula field, PROB, 756
- Santa Paula formation, CAL, 229-231, 236, 316
- Santa Paula Ridge, PROB, 193
- Santa Rosa, CAL, 13, 233, 245, 251, 316; SC, 106; XX, 1652
Temporal beds at, MEX, 109
- Santa Rosa Creek, MSC, 75
- Santa Rosa fault, SC, 110; XX, 1656
- Santa Rosa formation, XXIV, 64; XXVI, 383; XXVII, 488
- Santa Rosa Island, CAL, 3, 6, 7, 316
Eocene on, CAL, 5, 122
formations of, CAL, 6
fossils of, CAL, 6, 192, 288
Miocene on, CAL, 192
Oligocene on, CAL, 6, 148
Quaternos on, CAL, 6, 166, 169, 183
- Santa Rosa Mountains, CAL, 20, 316
- Santa Rosa sandstone, XXIV, 50; XXV, 600, XXVI, 63, 1635
- Santa Rosa-Sonoma district, MSC, 136
- Santa Susana fault, SC, 99, 104; XX, 1645, 1650
- Santa Susana field, V, 459
- Santa Susana Range, CAL, 9, 10, 316
- Santa Susana shale, CAL, 141
- Santa Susana thrust, CAL, 42
- Santa Ynez and San Cayetano faults, SC, 104; XX, 1650
- Santa Ynez fault, SC, 46, 67, 94-96, 99; XX, 1592, 1613, 1640-1642, 1645; XXVII, 15
- Santa Ynez Mountains, CAL, 9, 10, 13, 30-51, 57, 120, 134, 238, 316; MSC, 85, 103, 108, 109, 124, 134, 180, 184, 228, 237; PROB, 741; SC, 86, 88, 96; XX, 1632, 1634, 1642
bibliography on Eocene stratigraphy in, XXVII, 19
- Coldwater sandstone and *Turritella variata*, zone in, CAL, 141
- Cozy Dell shale and Matilija sandstone of, CAL, 141
detritus furnished to sea in Pliocene, CAL, 251
divided into chains separated by faulted synclines SC, 94; XX, 1640
fault blocks of, CAL, 50, 51, 56
foraminifera from, CAL, 130
Sespe beds in, CAL, 148
Sespe formation in, SC, 30; XX, 1576
Turritella variata beds of, CAL, 141, 148, 158
western, Santa Barbara County, California, Eocene stratigraphy in, XXVII, 1
- Santa Ynez Range, MSC, 33
- limestone in, CAL, 130
- Santa Ynez-San Rafael region, SC, 142; XX, 1688
- Santa Ynez-Santa Barbara area, SC, 86; XX, 1632

- (Santa)
columnar sections of, SC, 89; XX, 1635
map of, SC, 87; XX, 1633
present and Upper Miocene structure in, SC, 95, XX, 1641
structure sections across, SC, 93; XX, 1639
- Santa Ynez Valley, CAL, 57, 192
- Santana fossil locality, XXVI, 819
- Santiago de la Peña-Papantla-Misantla region, Tuxpan beds in, MEX, 18, 138
- Santiago River valley, XXI, 1350
- Santillan, Manuel, synopsis of the geology of Mexico, XX, 394
- Santo Domingo, physiographic map of, redrafted for lantern-slide copy, XXVI, 1665
- Santonian, MEX, 17, 53-56, 59, 61-63, 68, 69, 72, 73, 84
in Southern fields, MEX, 67
- Santonian and Coniacian in Mexico, XXVIII, 1100
- Santos shale, MSC, 106, 107, 322; XXVII, 1368
from Zemorra Creek, MSC, Fig. 14 (in pocket)
- Santos shale member, MSC, Fig. 6 (in pocket)
- São Bento series in Southern Brazil, XIX, 1750
- São Paulo, Brazil, petroleum geology of the state of, XXVI, 1163
state of, XIII, 1215
- Saponification of glycerides, PROB, 261
- Saponification number, SBP, 42
- Sapomite, RMS, 467, 470, 471
- Sapper, Karl, XXVII, 1507, XXVIII, 1079, 1116
- Mittelamerika*, review, XXIII, 1412
- Sappington, Chester, memorial of James Walker Cain, Jr., 516
- Sapropel, XXV, 839
- in Black Sea, RMS, 449
- Sapulpa group, V, 283
in Garber field, Oklahoma, STR I, 178
- Saratoga and Annona chalks, possible source of oil at Irma field, Arkansas, STR I, 13
- Saratoga chalk, XXIII, 296
- Bellevue field, Louisiana, STR II, 240, XXII, 1670
- Homer field, Louisiana, STR II, 209
- south Arkansas, XXII, 977
- Stephens field, Arkansas, STR II, 6
- Saratoga oil field, Hardin County, Texas, SD, 501, IX, 263, 276, 280
oil in lensing sands in, SD, 515
- oolites from, SD, 513
- Saratoga salt dome, PROB, 661; GAS, 706; SD, 509; I, 46; II, 34; IX, 271
Miocene super-cap-rock production at, GC, 5; XVIII, 504
- Sarawak, reserves in, XXIII, 964
- Sarcodina, MSC, 184
- Sardeson, F. W., XI, 1303; XIX, 1111; XXVI, 47
- Sardinata anticline, XXIX, 1127
- Sardinata structural depression, XXIX, 1125
- Sarepta field, oil pipe-line runs, XXII, 1499
- Sarepta-Spring Hill gas field, Webster and Bossier parishes, Louisiana, VII, 546
gas production from, VII, 555
- Sarga beds, XXIV, 261, 262
- Sarga limestone, XXIV, 253
- Sargasso algae, RMS, 367
- Sargasso Sea, RMS, 84, 235
fauna of, XXI, 1149
- Sargasso Sea conditions, XXI, 1145
- Sargasso seas, XXIII, 1188
- Sargent, E. C., and Plummer, F. B., PROB, 276, 315, 999; XIX, 321, 895; XXVIII, 1635, 1638, 1640, XXIX, 1256
- Sargent, J. H., XVIII, 1561
- Sargent field, PROB, 206, 228
- Sarnine River, RMS, 25
- Sarmas gas field, Transylvania, VIII, 208
- Sarmasel gas field, XVIII, 881
- Sarmatian, MSC, 180, Fig. 14 (in pocket)
Upper, MSC, 173
- Sarmatian-Pontian sequence of Europe and Delmontian-Lower Pliocene sequence of California, correlation between, MSC, 174
- Sarmatian sands in Hungary, XVIII, 931
- Sarmatian, Europe, VI, 526
- Sarmian division, XXIV, 263
- Sars, Michael, RMS, 50
- Sarten sandstone, XXII, 537
- Saskatchewan and Alberta, central, facies changes across, XXIX, 1624
- Sass, L. C., XXI, 1465
- Sata, A., PROB, 41
- Satanka shale in Laramie basin, XVIII, 1657
- Satanka shales and Tensleep sandstones, potential oil-bearing beds in Como Bluff anticline, XXVIII, 1214
- Satin-spar zone in Bessie silt, XXI, 1570
- Satsuma and Fairbanks fields, Harris County, Texas, XXIII, 686
the result of torsion-balance and reflection-seismic work, XXIII, 878
- Satsuma field, XXIII, 878; XXVII, 733
- Satterly, J., XVI, 1353
- Saturation, XXV, 1304
connate-water, relation between permeability of cores and, XXV, 1313
essential to oil and gas accumulation, PROB, 254
in reservoir zones, PROB, 281
of crude oils, increase with age, PROB, 239
of sand, relation to reserves, XXV, 1311
of sandstone in southern Oklahoma, GAS, 590
of water with carbonate, RMS, 291
- Saucesan, MSC, 158, 172, 196, 216, 222, 230, 232, 239, 264, 271, 276
Figs. 4, 5, 6, 14, and Table I (in pocket)
lower, MSC, 117, 178, 184-194, 198, 199, 201, 202, 204, 205, 208-211, 213-217, 225-227, 230-232, 237, 239-246, 248, 249, 251-254, 259, 262, 264-266, 275-277, 288-293, 296, 301, 302, 305, 306, 311, 312, 316, 321-323, 325, 326, 329, 331, 333, 334, 342-348, 352-354
lower, foraminifera, MSC, 113
of Reliz Canyon, foraminifera from, MSC, Pl. VII
redbed facies of, MSC, 114
schist-breccia facies of, MSC, 114
upper, MSC, opp. iii, 153, 178, 187, 194, 196, 198, 199, 201, 202, 204, 205, 208, 211, 213-216, 219, 223-225, 229-231, 247-249, 251, 252,
- (Saucesan)
254, 256-258, 260, 261, 265, 266, 268, 269, 272, 276, 279, 281, 285, 288-291, 298-300, 302, 305, 306, 312, 315, 316, 319, 325, 326, 329-331, 333-337, 341, 343-349, 352-355
upper, and lower and middle Relizian of Reliz Canyon, foraminifera from, MSC, Pl. VIII
Saucesan and Zemorrian, foraminifera from, MSC, Pl. VI
Saucesan age, MSC, 183
Saucesan assemblages, MSC, 165
Saucesan beds, MSC, 105
Saucesan foraminifera, MSC, 115, 153, 162, 163, 171
Saucesan foraminiferal faunas, MSC, 178
Saucesan foraminiferal sections, MSC, 154
Saucesan-Relizian-Luisian sequence, MSC, 164
Saucesan stage, MSC, 91, 108, 113, 114, 116, 117, 119, 120, 153, 160, 163, 179, 181
fauna of, MSC, 115
type area of, MSC, 112
Saucesan-Zemorrian discordance, MSC, 114
Saucesan zone of Klempell (Tim) (Miocene), SBP, 92, 95, 130-153, 167-194, 415
- Saucito, MSC, 37
- Saudi Arabia, Dammam field in, XXIII, 964
production from, XXIII, 964
- Saudi Arabia and Bahrain fields, production at, XXVIII, 919
- Sauer, Carl O., CAL, 22, 255
- Saugus, fault blocks near, SC, 104; XX, 1650
- Saugus deposits, SC, 48; XX, 1594
- Saugus district, SC, 102, XX, 1648
- Saugus formation, CAL, 249, 285, 316, SC, 102; X, 761; XX, 1648, XXI, 218, XXVI, 189, 190
- Saugus-Newhall district, SC, 74; XX, 1620
- Saunders, L. W., XXIX, 956
- Saunders Landing, MSC, 77
- Sauramo, Matti, RMS, 299
- Sauve Plantation crevasse, XXIII, 11
- Savage, J. L., XXVI, 1826
- Savage, Thomas Edmund, STRAT, 170; XIII, 441; XIV, 1536; XVII, 1527, 1532; XXII, 1534; XXIII, 600; XXIV, 769; XXV, 672, 689, 690, 691, 692; XXVIII, 1532; XXIX, 1256
- Devonian rocks of Kentucky, review, XV, 89
- Savage, Thomas Edmund, Tough, F. B., and Willison, S. H., VII, 351
- Savage, W. J., Company, RMS, 632
- Savage Brothers, SD, 274
- Savanna anticline, GAS, 519, 528; XXI, 1008
- Savanna sandstone, III, 268; V, 34, 290, 549, 562; VI, 13; XVIII, 1052; XX, 1350; XXII, 1569
(Csm) (Pennsylvanian), SBP, 259, 261-280, 414
near Charleston, composite section of, XXI, 1417
- Saverton shale, XXV, 2112
- Sawatch Mountains, XXVII, 430
- Sawatch Range, XXVI, 1377
- Sawatch quartzite, XXVI, 1377
- Sawatch sandstone, II, 85

- Sawkins, J. G., and Wall, G. P., IX, 1001; XX, 1439, 1441, 1442
- Sawtelle, George, SD, 524; IX, 1277; SBP, 339; XX, 390, XXIV, 860; XXVIII, 1289
- Batson oil field, Hardin County, Texas, SD, 524; IX, 1277
- salt-dome statistics, GC, 109; XX, 726
- Sawtooth and Rierdon formations, thinning of, over Kevin-Sunburst dome, XXIX, 1288
- thinning of, upon South arch, XXIX, 1289
- Sawtooth formation along Rocky Mountain Front, XXIX, 1272
- Cut Bank area, XXIX, 1273
- fossils and age, XXIX, 1276
- isopach map, XXIX, 1271
- Kevin-Sunburst dome, XXIX, 1274
- lithologic character of, XXIX, 1272
- oldest Jurassic formation of Sweetgrass arch, XXIX, 1270
- South arch, XXIX, 1275
- Sweetgrass Hills, XXIX, 1274
- Sawtooth Range, XXIX, 1024, 1266
- Sawtooth syncline, XIII, 219
- Sawyer, Roger W., V, 406, 416; VIII, 323, 333; XII, 707; XIII, 955, XIV, 37, 51; XX, 1469; XXI, 1527, 1534, 1535, 1538, 1542, 1543, 1544, 1551, 1561, 1562; XXIII, 562, 566, 574, 581, 1802, 1806
- areal geology of part of southwestern Oklahoma, VIII, 312
- memorial of, XXV, 1610
- studies of Anadarko basin, XXI, 1561
- Saxet, McFadden-O'Connor, Greta, Fox, Refugio, and White Point fields, Texas, XVIII, 519
- Saxet absorption gasoline plant, XXIV, 1834
- Saxet carbon-black plant, XXIV, 1835
- Saxet oil and gas field, Nueces County, Texas, XXIV, 1805; XVII, 949; XXI, 1045
- blow-outs of, XXIV, 1814
- contour maps, XXIV, 1819, 1820, 1822
- cross sections, XXIV, 1827, 1828
- development of, GC, 667; XXIV, 1832
- discovery of oil in, XIV, 1351
- discovery well data for different sands in, XXIV, 1809, 1812
- faulting at, XXIV, 1813, 1816, 1829, 1830
- geology and structure of, XXIV, 1817
- gravity of oil at, relation of production of distillate and of dry gas, XXIV, 1832
- history of, XXIV, 1807
- isopach maps of, XXIV, 1823, 1824, 1825
- porosity and permeability of sands in, XXIV, 1831
- production at, XXIV, 1812, 1832, 1833
- summary data, XXIV, 1835
- use of electrical logs in, XXIV, 1817
- wells in, XXIV, 1812
- Saxet Gas Company of Texas, XXIV, 1808
- Saxon type of oil occurrences, XVIII, 743
- Saxon Zechstein salt occurrences, XVIII, 722
- Saya da Malha, RMS, 400
- Sayers, R. R., GAS, 1004
- Sayre, A. N., GC, 553, XVII, 491, 497, 499, 512
- Sayre, A. W., STRAT, 725
- Sayre district, GAS, 385
- Sayre oil and gas field, Oklahoma, GAS, 413-415, 394; VIII, 347, XIV, 48; XVII, 904
- Scale of hardness and cohesion for sedimentary rocks, XI, 199
- Scales zone, PROB, 406
- in Elk Hills field, California, STR II, 49, 52
- Scandinavia, RMS, 437
- post-glacial uplift in, XXIX, 1644
- south, and north Germany, marine Paleocene and Eocene of, XXII, 315
- Scandinavian geologists, RMS, 299
- Scanlon or Midway dome, Lamar County, Mississippi, XXII, 816
- Scaphites ventricosus* zone, XVIII, 1411
- Scaphites warreni* zone, XVIII, 1410
- Scaphopods, XXV, 639, 644
- Scapolite group, RMS, 602
- Scarab field, PROB, 192
- Scarp-forming sandstone members, XXI, 1433
- Scary field, PROB, 495
- Scatter diagrams, RMS, 587, 589, 590
- Scattered radiations, RMS, 85
- Scenery of Florida, XXIV, 504
- Scenery Hill gas field, Pennsylvania, STR II, 443
- Schaaf, Downs, XX, 802; XXIV, 677, 678, 680, 681
- Schaaf, Downs, Stout, Wilber, and Lamborn, R. E., XXIV, 487
- Schaller, Waldemar T., and Henderson, Edward P., XXI, 1272, 1289; XXIII, 1690
- Schardt, XXIII, 1723
- Schattel pool, XXIII, 864
- Schaub, H. P., fusulinids in La Quinta formation, Venezuela, XXVIII, 1642
- Schaeffelberger, W. M., XXI, 584
- Scheer, Henry, XXI, 1560
- Scheib, Roberto, *Compilación de los Estudios Geológicos en Colombia—1917 a 1933, Tomo I*, review, XVIII, 1377
- Scheibe, E., XXVI, 808, 820
- Scheibe, Ernst A., and Stutzer, Otto, compilers, compilation of official geological studies in Colombia, 1917-1933, review, XIX, 1560
- Scheibe, Robert, X, 399; XXVI, 806, 817, 820; XXIX, 1078, 1087, 1103
- Schellhardt, M. A., STRAT, 749; XXIV, 985
- Schellhardt, M. A., and Rawlins, E. L., XXII, 404
- extent and availability of natural gas reserves in Michigan stray sandstone horizon of central Michigan, review, XXI, 123
- Scheme of Roman numerals with added letters for designation of coal seams in Indiana, XXIII, 1375
- Schenk, Edward, Schenck, Hubert G., and Klempell, R. M., MSC, 65
- Schenck, Hubert G., CAL, viii, 106, 110, 123, 124, 129, 141, 156, 180, 288; MSC, 1, 5, 9, 14, 24, 49, 53, 55, 65, 72, 73, 89, 102, 152, 160, 173-175, 177, 178, 180; SC, ix, 28, 30; XII, 237, 559; XIV, 606, 1325; XV, 257, 258; XVI, 611; XVII, 1162; XIX, 1200, 1588; XX, 220, 1535, 1574, 1576; XXIII, 252, 253; (Schenck)
- XXIV, 1723, 2038, 2042; XXV, 194, 1218, 1228, 1232, 1235, 1250, XXVI, 1651; XXVII, 2, 939, 1061, 1364; XXVIII, 451, 502, 507, 508, 516, 517, 903, 953, 955, 1359; XXIX, 956, 958, 970
- abstract, XXII, 1716
- applied paleontology, XXIV, 1752
- Pleistocene of southern California, discussion, XII, 559
- reviews, XXIV, 2049, 2051, XXV, 763, 767; XXVII, 92
- what is the Vaqueros formation of California, and is it Oligocene? XIX, 521
- Schenck, Hubert G., and Cushman, J. A., MSC, 78, 99, 102, 188, 220, 228, XX, 220, 221, XXIV, 1930
- Schenck, Hubert G., and Galliher, E. W., MSC, 37
- Schenck, Hubert G., and Hobson, H. D., MSC, 53
- Schenck, Hubert G., and Keen, A. Myra, XXVII, 13
- California fossils for the field geologist, review, XXIV, 2186
- Schenck, Hubert G., and Kern, Paul F., MSC, 114, 115; XIII, 203; XVI, 24; XXVII, 6
- Schenck, Hubert G., and Klempell, Robert M., MSC, 33, 79, 99-101, 103, 152, 160, 161, 174, Fig. 6 (in pocket); SC, 30, 91; XX, 493, 1637, XXIV, 1930; XXVII, 3, 6
- Refugian stage of Pacific Coast Tertiary, XX, 215
- Schenck, Hubert G., and Muller, Slemmon Wm., XXIV, 2041; XXIX, 133
- review, XXV, 1943
- standard of Cretaceous system, XXVII, 262
- Schenck, Hubert G., and Nelson, R. N., CAL, 129
- Schenck, Hubert G., and Nomland, J. O., XXVII, 192; XXVIII, 499, 507
- Schenck, Hubert G., and Reinhart, P. W., MSC, 53; XX, 492
- Schenck, Hubert G., and Taliaferro, N. L., MSC, 68, 199, 202, 204, 219, 227, 230, 242, 243, 248, 254, 256, 260, 266, 276, 277, 291, 305, 316, 321, 323, 329, 334, 344, 352, 353, Fig. 14 (in pocket); XIX, 529
- Schenck, Hubert G., and von Estorff, F. E., MSC, 106; XXVII, 1368, 1372
- Schenck, Hubert G., et al., stratigraphic nomenclature, discussion, XXV, 2195
- Schenck, Hubert G., Hobson, H. D., and Klempell, R. M., MSC, 53
- Schenck, Hubert G., Reinhart, P. W., and Hobson, H. D., MSC, 53
- Schenck, W. E., XXIV, 1771
- Schepman, M. M., XXIII, 1854
- Scherer, O. J., XXVI, 1518
- Scherrer, P., RMS, 617
- Scheuber, S. C., XXV, 1897
- Scheuchzer, J. J., XXV, 1209, 1211
- Scheuchzer, J. J., and Lang, K. N., XXV, 1210
- Schiebold, E., RMS, 619, 623, 624
- Schleferdecker, A. A. G., XV, 190
- Schildwacher, H., XXIV, 1890
- Schillhahn, E. O., our experience with underground storage of gas (The Manufacturers Light and Heat

- (Schillhahn)
Company, Pittsburgh, Pennsylvania), XXIV, 1478
- Schilling, Karl H., and Wagner, Carroll M., MSC, 101, 160; XIII, 235; XIX, 1203; XX, 220
- Schiltthuis, R. J., STRAT, 749; XXV, 1312
- Schiltthuis, R. J., and Hurst, William, XIX, 882
- Schimmel-Batts field, Texas, XVI, 760
- Schimper, XX, 443
- Schindewolf, O. H., XXIII, 345; XXIV, 289
- Schindewolf, O. H., and Paackelmann, W., XXIV, 289
- Schist, Los Angeles Basin, California, SBP, 95; X, 755
- usage of term in connection with Franciscan-Knoxville problem, XXVII, 169
- Schist-bearing clastics, Venice and Del Rey fields, California, age and correlation of, XX, 150
- Schist bodies, cross sections of northern part of Tiburon Peninsula showing relation of, to serpentine, XXVII, 164
- geologic map of northern part of Tiburon Peninsula showing relation of, to serpentine, XXVII, 163
- Schist-breccia facies of Relizian, MSC, 119
- of Saucanian, MSC, 114
- Schistosity, PROB, 640
- of pre-Cambrian rocks in Wind River Canyon, XXIII, 479
- Schists, MEX, 7, 8
- Schisodus stage, XXV, 383
- Schlagintweit, Otto, XI, 1269; XXIV, 1866
- Schlammsteine, RMS, 203
- Schleede, A., RMS, 621
- Schleicher County, Texas, XXVII, 764
- major gas field in, XXIII, 843
- Page field, XXV, 630
- Schleswig-Holstein, RMS, 204, 333
- gravity anomalies in, XXII, 497
- Lower Elbe, map showing results of seismic determinations, XXII, 498, 499
- subsurface of, in light of seismic refraction surveys, XXII, 494
- Schlick of North Sea, RMS, 327, 328
- Schlocker, Julius, and Owens, J. S., XXVII, 207
- Schlosser, P. A., XVI, 189
- Schlumberger, XVI, 1297; XXIV, 1412
- Schlumberger, Conrad, XII, 101; XVI, 1104; XIX, 37
- memorial of, XX, 997
- Schlumberger, Conrad and M., and Leonardon, E. G., PROB, 956
- Schlumberger, Conrad, and Schlumberger, M., XVI, 1264
- Schlumberger chart, XXIII, 1822
- Schlumberger electrical logs of McCloskey sand, XXII, 75
- Schlumberger method for locating water, PROB, 956
- of measuring resistivities, XVI, 1275
- Schlumberger section, Sugar Creek field, XXII, 1515
- Schlundt, Herman, XXIV, 1531
- Schlundt, Hermann, and Moore, R. B., PROB, 997
- Schlunz, F. K., RMS, 486, 625
- Schlüter, C., XVIII, 1412
- Schlüter, H., and Stille, H., European oil and gas occurrences and their
- (Schlüter)
relationship to structural conditions, XVIII, 736
- natural gas occurrences of Germany, XVIII, 719
- Schmelck, RMS, 377
- Schmid, K., XXIII, 1242
- Schmid, W., XXIV, 1890
- Schmidt, Adolf, X, 1190; XXIV, 1890
- design of field balance, X, 1190
- Schmidt, C., CAL, 223; XVIII, 731
- Schmidt, H., XIX, 1296
- Schmidt, J. J., Finn, F. H., and Corrin, J. B., Jr., problems of underground gas storage in Ohio, West Virginia, and Pennsylvania, XXVIII, 1561
- Schmidt, K. A., XXIX, 836
- Schmidt, Karl P., XXVI, 1728, 1746
- Schmidt, Karl P., Hesse, Richard, and Allee, W. C., XXIV, 1197
- Schmidt, M., XX, 856
- Schmidt, Wilhelm, RMS, 19, 24, 28, 78, 79
- Schmidt-Lloyd vertical variometer, XVIII, 71
- Schmidt vertical field balance, XV, 1379
- Schmidt's formula for stream motion, RMS, 20
- Schmittou, Maurice B., MEX, 13, 14, 22; XXVII, 1490
- memorial of, XIV, 255
- Schmotzer, J. W., Muralla field, Duval County, Texas, XXIII, 1237
- Schnabel, E., VI, 530
- Schneider, XV, 747
- Schneider, George W., PROB, 782; XIX, 691; XXII, 1474
- Urania oil field, LaSalle, Winn, and Grant parishes, Louisiana, STR I, 91
- Schneider, H. G., producing sands in Smackover field, Arkansas, IX, 1116
- Schneider, P. F., PROB 548
- Schneider, W. T., XXVIII, 831; XXIX, 1257
- geology of Wasson field, Yoakum and Gaines counties, Texas, XXVII, 479
- Schneiders, Gottfried, *Gewinnung von Erdöl*, review, XII, 773
- Schnurr, Cornelius, XVII, 251
- Schober, R., and Link, E., XVIII, 63
- Schöbull, on North Sea, RMS, 335
- Schodnica, Urycz, Opaka fields in Poland, XXI, 1189
- Schodnica anticline, XIV, 1171
- Schodnica field, Poland, XV, 14, 23
- Schoff, Stuart L., and Stovall, J. Willis, geology and ground water resources of Cimarron County, Oklahoma, review, XXVIII, 877
- Schoharie fossils, XXV, 684
- Schollen, XVIII, 743
- Schollenberg, C. J., XXVII, 1188
- Schollenberger, C. J., SBP, 46
- Schomburgk, R. H., XXIV, 1552
- Schöne, RMS, 546
- Schöne's tube, RMS, 546
- School of Engineering of Tulsa University, SBP, 7
- Schoolfield, R. F., XVI, 259
- Schooler Creek formation, VI, 116
- Schooner Gulch, MSC, 77
- Schopf, James M., XXV, 1246
- Schott, G., RMS, 88, 91, 397; XXI, 296
- Schott, W., RMS, 374, 377, 389, 390, 391, 397, 405, 407, 411, 441, 500, 501, 551
- (Schott)
deep-sea sediments of Indian Ocean, RMS, 396
- rate of sedimentation of recent deep-sea sediments, RMS, 409
- Schott-Aviator field, Texas, STR I, 406
- Schott field, XV, 764
- Schott sand in Laredo district, Texas, STR I, 393
- Schottenloher, Rudolph, *Gebirgsaufnahme des Nordamerikanischen Kontinents*, review, XX, 829
- Schrader, F. C., XIV, 1535
- Schramm, Eck. F., IV, 269; XVIII, 1599; XXVI, 1518
- notes on oil shales of southwestern Wyoming, IV, 195
- review, VII, 454
- Schramm, Eck. Frank, Condra, G. E., and Lugin, O. L., deep wells of Nebraska, review, XV, 976
- Schreiber, Karl, PROB, 40
- Schreiner, O., and Shorey, E. C., PROB, 42
- Schreter, Z., XVIII, 926
- Schrock, R. R., and Cummings, E. R., XIII, 655; XVI, 645
- Schroeder, H., PROB, 43
- Schroeder van der Kalk method, RMS, 604
- Schroth, H. A., XXIII, 462
- Schroyer, Charles Ross, memorial of, XVI, 712
- Schubert, R. J., XXV, 1219
- Schubert pool, XXV, 1110; XXVI, 1085; XXVII, 813
- Schuchert, Charles, GAS, 850; MEX 92, 94; PROB, 260, 281; SD, 42, 218, 220; V, 549; VI, 12, 208; VII, 334, 612, 628; VIII, 199; IX, 868, 872; X, 10; XI, 22, 25, 1313; XII, 113, 140, 932, 934, 1111, 1115; XIII, 646, 743, 903, 959, 1447; XIV, 1283; XV, 175, 495, 746, 1026, 1042, 1047, 1059; XVI, 4; XVII, 110, 1049, 1050; XVIII, 988, 992, 1013, 1018; XIX, 1268, 1738, 1807, 1814; XX, 700, 910, 929, 1067, 1201; XXI, 1145; XXIII, 194, 1181, 1184, 1188, 1191, 1192, 1712, 1854; XXIV, 253, 275, 282, 289, 298, 302, 321, 1549, 1615; XXV, 375, 397, 402, 406, 641; XXVI, 808, 1649, 1650; XXVII, 1497, 1523; XXVIII, 114; XXIX, 13, 426, 435, 929, 1075, 1076, 1078, 1080, 1081, 1085, 1093, 1103, 1332
- abstract of Wegener's hypothesis, CD, 105
- Ancestral Rocky Mountains and Siouxs, discussion, XIV, 1224
- discussion of theories of origin of salt domes, SD, 42; IX, 872
- displacement theory of, CD, 144
- experiments with globe, showing misfit of shifted American continents, CD, 109, 110, 112
- historical geology of the Antillean-Caribbean region or lands bordering the Gulf of Mexico and the Caribbean Sea, review, XX, 496
- hypothesis of continental displacement, CD, 104
- map of early Permian paleogeography, CD, 144
- map of western Pangaea, CD, 119
- memorial of, XXVII, 1027
- objections to Wegener's hypothesis, CD, 108
- objections to Wegener's hypothesis,

- (Schuchert)
 discussion by van der Gracht, CD, 215
 opinion that continental displacement is evidenced by the Alps and the cordilleras of United States, CD, 141
 relation of stratigraphy and paleogeography to petroleum geology, III, 286
 so-called "Lower Silurian" fossils of Venezuela, discussion, XII, 951
 stratigraphy of eastern and central United States, review, XXVII, 1016
 value of micro-fossils in petroleum exploration, VIII, 539
 Schuchert, Charles, and Dunbar, Carl O., GAS, 654
 textbook of geology, Part II, historical geology, review, XVII, 1148
 Schuchert, Charles, and LeVene, Clara M., earth and its rhythms, review, XII, 217
 O. C. Marsh, pioneer in paleontology, review, XXIV, 1684
 Schuh, Franz, IX, 440; X, 1196; XIX, 807
 Schuler area, map of, contoured on top of Meakin sand, XXVI, 1490
 Schuler facies, XXVIII, 34, 582
 Schuler field, Union County, Arkansas, XXII, 721; XXIV, 1095; XXV, 1036; XXVI, 1257, 1467; XXVIII, 582, 606, 608
 analysis of oil, XXVI, 1507, 1508
 bibliography on XXVI, 1515
 columnar section, XXVI, 1474
 Comanche in, XXVI, 1475
 correlation of drilling-time charts, XXVI, 1498
 cross sections, XXVI, 1484, 1488
 discovery wells in, XXII, 645
 drilling and completion practice at, XXVI, 1514
 Eocene in, XXVI, 1473
 gas-oil ratio at, XXVI, 1473, 1500, 1502, 1506
 geologic factors in unitized pressure maintenance, Jones sand reservoir, XXVIII, 217
 geologic history of, XXVI, 1495
 gravity of oil at, XXVI, 1471
 history of development of, XXVI, 1471
 isopach maps, XXVI, 1496, 1509
 isovel map of Jones sand reservoir, XXVI, 1510
 Jones sand and Smackover lime sections, XXVI, 1486
 Jurassic in, XXVI, 1475
 lenticular sands at, XXVI, 1471
 Mesozoic in, XXVI, 1473
 pressure-decline chart, Jones sand, XXVI, 1501
 pressure-decline chart, Reynolds oilite, XXVI, 1505
 producing practice at, XXVI, 1515
 production, XXVI, 1499, 1511, 1515
 reserves in, XXVI, 1508
 reservoir pressure maps, Jones sand, XXVI, 1504
 reservoir rocks in, XXVI, 1482
 stratigraphy in, XXVI, 1473
 structure in XXVI, 1487
 structure maps, XXVI, 1491, 1492, 1494
 Tertiary in, XXVI, 1473
 typical electric log, XXVI, 1476, 1478
 typical record through Morgan sands (Schuler)
 zone comparing all pertinent physical data, XXVI, 1480
 unconformity at base of Gulf series in, XXVI, 1475
 water analysis, XXVI, 1513
 well data, XXVI, 1497
 well spacing in, XXVI, 1514
 Schuler formation, XXVIII, 591; XXIX, 808
 distribution of, XXVIII, 594
 fossils of, XXVIII, 599
 isopach map, XXVIII, 596
 Monroe uplift on, XXVIII, 597
 paleontology, XXVIII, 599
 Portlandian and Tithonian in age, XXVIII, 612
 subdivisions, XXVIII, 597
 thickness of, XXVIII, 595
 thin section of vari-colored, sideritic shale of Dorcheat member of, Dorcheat field, Columbia County, Arkansas, XXVIII, 605
 type locality Schuler oil field, XXVIII, 594
 type section of nearshore facies, XXVIII, 598
 unconformable on Bossier formation, XXVIII, 599
 unconformable on Kimmeridgian Bossier formation, XXVIII, 612
 Schuler pool, map of southern Arkansas showing relation of, to other producing areas, XXVI, 1468
 Schuler redbeds member, XXVII, 1460
 Schuler unit core analysis, XXVIII, 220
 Schuler unit core graphs, XXVIII, 222, 224
 Schuler-Wesson area, structural maps, XXVI, 1469, 1470
 Schultz, A. R., PROB, 692; V, 199; VII, 618; X, 107, 117; XXI, 722; XXIII, 82, 89, 93; XXV, 1729, 1736, 1742; XXVII, 1317
 Schultz, C. B., and Elias, M. K., symposium on loess, review, XXIX, 846
 Schulz member, XXVI, 173
 Schultze, E. A., and Kann, C. Henry, XII, 1110
 Schultztown coal, XXIII, 1390
 Schumacher, A., RMS, 91, 104
 Schumann formation, CAL, 232
 Schungite, PROB, 79
 Schuppli, H., XXII, 3, 38
 Schurmann, H. M. E., XXII, 3
 Schurr pool, PROB, 776
 Schuster, XVIII, 86
 Schutte, K., XVIII, 88, 733
 Schwab, J. W., XXV, 752
 Schwabrow, John R., GAS, 1065; XXIV, 1215
 Schwabrow, John R., and Erdmann, Charles E., GAS, 248; XXVI, 1343
 Border-Red Coulee oil field, Toole County, Montana, and Alberta, Canada, STRAT, 267
Schwagerina beds, XXII, 1015
Schwagerina horizon, XXIV, 251
 lowest unit in Ufa Plateau, XXIV, 253
Schwagerina limestone, XXV, 1400
Schwagerina lusugina zone, XXV, 1400
Schwagerina zone, XIII, 904; XXV, 1399
 Schwartz, A., RMS, 518
 Schwartz, G. M., X, 192; XXIV, 749
 Schwartz, R., RMS, 485
 Schwarz, A., RMS, 202
 Schwarzenbek, and Swigert, VIII, 591
 Schwedhelm and Kunkler, XIII, 323
 Schweer, Buckstaff, and Moore, XXV, 84
 Schweer, Henry F., XII, 712; XIV, 37, 55; XXI, 1560, 1561, 1562, 1563, 1564, 1565; XXIII, 1754, 1789, 1802; XXIV, 8
 discussion of Brown's paper on unconformity at base of Whitehorse, XXI, 1554
 discussion on Weatherford area, Oklahoma, XII, 712
 review, XV, 479
 Schweer, Henry F., and Moore, Hastings, XXI, 1514
 Schweer, W., XV, 629
 Schwellen, XX, 864
 Schwennessen, A. T., I, 136; V, 49
 Schwennessen, A. T., Overbeck, R. M., and Dubendorf, H. H., Long Beach oil field and its problems, VIII, 403
 Schweydar, W., CD, 71; X, 1202, 1204
 application of precessional effect of lunar and solar attraction on equatorial bulge, CD, 147
 calculation of precessional impulse causing westward drift, CD, 36
 comments on Wegener's hypothesis of continental drift, CD, 147
 Schweydar-Bamberg types of Eötvös torsion balance, X, 1201
 Science of petroleum, XXII, 777
 Science and industry, temperature, its measurement and control in, a symposium, XXV, 1416
 Science and oil geology, VIII, 473
 Scientific and business geologists, V, 332
 Scientific and Specialized Personnel, national roster of, XXVI, 1440; XXVIII, 292
 Scientific and technical personnel, deferment of, XXVII, 1549
 Scientific background, early, for development of micropaleontology, XXV, 1209
 Scientific illustration, XXII, 500
 Scientific method, studies in, XXII, 502
 Scientific papers, presentation of, VII, 87
 Scientific principles of petroleum technology, review, XI, 766
 Scientific societies, meetings of, in December, 1941, XXV, 2217
 Scilla, Augustino, XXV, 1212, 1214
 Scio pool, Allegany County, New York, STR II, 269
 Scobey, E. H., and Dana, P. L., cross section of Chester of Illinois basin, XXV, 871
 Scobey, Fred C., RMS, 11
 Scofield, C. S., and Gale, Hoyt S., Taylor's theory of genesis of petroleum and coal as applied to Fruitvale field, California, discussion, XV, 709
 Scolecodont morphological features and their terminology, XXV, 1246
 Scolecodonts, XXV, 1244
 Scollithus sandstone in Black Hills, XX, 1332
 Scope of symposium on recent marine sediments, RMS, 1-3
 Scopes, J. T., XV, 231
 Scorching, odor of, probably produced by destructive distillation of hydrocarbons, XXIX, 1479
 Scoresby, William, RMS, 51
 Scotland, RMS, 212, 227, 322
 oil in, VI, 376, 386
 oil shales of, XXIV, 389

- (Scotland)
oil shales of, review, XI, 1337
Scotland formation, Barbados, XXIV, 1552
Scotland district of Barbados, XXIV, 1550
Scott, C. N., III, 312
Scott, D. C., VIII, 66
Scott, E. Cooper, XXIV, 2125
Scott, G. SBP, 297; XXVII, 1601
Scott, Gayle, GAS, 667; MEX, 51; STRAT, 618; XI, 5, 15; XVII, 774; XIX, 1299, 1536, 1537; XXI, PI. A, opp 1084; XXII, 525, 535; XXIV, 1191; XXVII, 262, 1061, 1230; XXVIII, 327, 1013, 1016; XXIX, 176, 1448, 1459, 1460, 1462, 1467
paleontological factors controlling distribution and mode of life of Cretaceous ammonoids in Texas area, XXIV, 1164
report of editor for 1944, XXIX, 594 review, XXI, 1211
Woodbine sand of Texas interpreted as a regressive phenomenon, X, 613
Scott, Gayle, and Armstrong, J. M., XIX, 1518
Scott, Gayle, and Plummer, F. B., PTNM, 565, 689; XVII, 774, 776; XXIII, 1700; XXIV, 41, 306, 307, 321; XXV, 99, 327; XXVI, 565, 598, 600, 643, 650, 681, 689, 696, 698; XXIX, 164, 1767
Scott, Gaylor, SD, 217
Scott, H. M., and Allen, Walter J., memorial of Harry Favill Wright, XXVIII, 1063
Scott, Harold W., XXIII, 462, 466, 469, 470, 474, 1246; XXVI, 311, 864, 1564; XXVII, 1288, 1293, 1296
Scott, Harold W., and Thompson, M. L., XXVII, 1293; XXIX, 1153
Scott, V. C., XXIII, 1353
Apache oil pool, Caddo County, Oklahoma, XXIX, 100
Scott, W. R., X, 157
Scott, Walter Winthrop, SBP, 78; VII, 251; VIII, 136; XIV, 604; XXV, 856
bibliography of works by, XXIV, 947
discussion of crooked-hole problem in Gulf Coast district, XIV, 604
Haynesville field, review, VI, 142
memorial of, XXIV, 944
Scott, Walter Winthrop, and Stroud, Ben K., VI, 188
Scott, William Berryman, XIV, 1284; XXIII, 1713
some memories of a paleontologist, review, XXIII, 1861
Scott dome, VI, 31
Scott sand, V, 404
Scottish coast, RMS, 325, 334
Scottish National Antarctic Expedition, foraminifera of, MSC, 13
Scour, RMS, 11, 164, 220
Scour and fill, XIII, 718
Scouting, VIII, 660; XXI, 711
Scrafford, Bruce, developments in South Texas in 1944, XXIX, 777
Screen analyses, STRAT, 293, 503, 585, 612
Scripps Institution of Oceanography, RMS, 48, 219, 245, 255, 256, 262, 265, 275, 280, 416; XXVI, 157
Scrivenor, J. B., XXII, 7, 8, 9, 27; XXVI, 781, 783
geology of Malaya, review, XV, 976
Scupin, H., XXIII, 1184
Scythian Anticline, XI, 495
Sea, gradual retreat of, during Permian, XXVI, 254
stagnation of bottom water in, RMS, 365, 367, 369
Sea bottom, RMS, 106
morphology of, RMS, 5
supply of silt and clay to, in California, RMS, 273
transportation of sediment on, RMS, 274, 276
Sea cliffs, RMS, 270, 272
Sea ice, RMS, 53
effect of, on circulation, RMS, 90
influence of, on composition of ocean, RMS, 52
Sea level, changes in, relation to source material, PROB, 513
fluctuations in, RMS, 115, 124
in Gulf Coast region, significance of frequent changes of, XXIX, 1319
Sea movements postulated by Wegener inconsistent with geological facts, CD, 116
Sea temperatures of Permian in Australia, XX, 1066, 1067
Sea-urchin, RMS, 197
Sea-urchin skeletons, glauconite in, RMS, 506, 509
Sea water, base exchange in relation to composition of clay with special reference to effect of, XVIII, 358
cause of color of, RMS, 84
composition of, RMS, 143
deposition of free oil by sediments settling in, XXV, 2170
methods of determining composition of, RMS, 61
physical properties of, RMS, 70
relation of base exchange to, RMS, 463, 464
Sea-water salinity, normal, abundance of echinoids, ammonites, and foraminifera of Duck Creek, indication of, XXVII, 1075
Sea water salts, origin of, RMS, 144
Sea waters, theoretical mixture of uncontaminated water with, XXVI, 843
Seaboard Oil Company, XXIII, 935
Seaboard Oil Corporation, XXI, 1022, 1066; XXII, 721
Seabreeze field, XXIX, 789
Seabrook, A. H., GAS, 997
Seacliff field, PROB, 742
Seager, O. A., XXVI, 123, 307; XXVII, 1288, 1297, 1301, 1568
test on Cedar Creek anticline, southeastern Montana, XXVI, 861
Seager, O. A., et al., stratigraphy of North Dakota, XXVI, 1673
stratigraphy of North Dakota, discussion, XXVI, 1414
Seahorne cyclothem, XXVI, 1587
Seahorne limestone, XXVI, 1588
Seal Beach, CAL, 228, 248, 316; MSC, 32, Fig. 14 (in pocket); SC, 116; XX, 1662
Dominguez, and Long Beach oil fields, structure, GAS, 182
Miocene-Pliocene transition beds of, MSC, Fig. 14 (in pocket)
Seal Beach and Alamitos areas, California, geology and status of development of, XI, 870
Seal Beach area, XII, 641
Seal Beach field, California, PROB, 218, 750, 973, 974; GAS, 186-188
structure section across, SC, 128; XX, 1674
(wells 87-92), SBP, 87-153, 404
(Seal)
and vicinity, map, SC, 126; XX, 1672
Sealey, F. C., XIII, 946
Sealey, F. C., and Baker, R. F., XXVI, 1441
Sealy field, XXVII, 733
Sealy pool, Yates sand productive in, XXV, 1048
Search for oil, geoelectric methods in, XVI, 1337
in New Guinea, XI, 157
in Parma district, western Italy, XVI, 1152
Searcy field, XXV, 1033
Searight field, Oklahoma, STR II, 316-318, 324
Searight pool, Oklahoma, STR II, 342; PROB, 411, 766
Searle, V. C., and Moose, J. E., XIX, 942
Searles Lake district, SC, 72; XX, 1618
Sears, Julian D., GAS, 324, 342, 346, 367, 624; SBP, 196; IX, 248, 249; XIII, 977; XIV, 1015, 1018; XXII, 1026; XXIII, 247, 250
review, VII, 300
Sears, Julian D., and Bradley, W. H., GAS, 353; XIV, 1015, 1026, 1027; XXII, 1030
Seas, inland, composition of water of, RMS, 143
modern land-locked, occupying intercontinental troughs, XXVIII, 1508
Seashoie, Paul T., X, 703
Seashore, Paul T., and DeWolf, F. W., GAS, 676
diamond drilling near Kerens, Navarro County, Texas, X, 703
Seasonal variations in radiation, RMS, 87
in upwelling, RMS, 127
Seay, S., XXIII, 1446
Sebastopol, MSC, 173, 174
Second Cow Run-Macksburg formation productive in West Virginia, XXV, 797
Second Cow Run sand, III, 21
Second Cow Run sandstone in Ohio, GAS, 901
Second Frontier sand in Salt Creek field, Wyoming, STR II, 595
Second gas sand in Scenery Hill gas field, Pennsylvania, STR II, 446
Second-hand book dealers, XXVII, 996
Second Leo sandstone, XXV, 1843
Second Muddy sand in Rock River field, Wyoming, STR II, 616, 617
Second oil pay, Texon, in Big Lake field, Texas, STR II, 509
Second Salt sand productive in West Virginia, XXV, 798
Second sand, Bradford field, Pennsylvania and New York, STR II, 422
gas wells at Monroe field, GAS, 764, 765
Monroe field, GAS, 743, 754, 762
Second Sand pools, Venango district STRAT, 517
Second Venango sand, XXVIII, 730
Second Venezuelan Geological Congress, San Cristobal, April, 1938; abstracts, XXII, 1101
Second Wall Creek sand, PROB, 838, 936; Gas, 271
Elk Basin field, Wyoming and Montana, STR II, 579, 580, 584
Elk Basin field, Wyoming and Montana, analysis of water from, STR II, 587
Salt Creek field, Wyoming, STR II, 592, 596

- Second Wall Creek sandstone, XXV, 1854
- Second Wilcox sand, XXIX, 715
from Oklahoma City field, Oklahoma, XXI, 252
productive at Alma pool, XXIII, 831
- Second World Petroleum Congress, Paris, June 14-19, 1937, XXI, 131
- Secondary calcite significance in a limestone reservoir, XX, 1409
- Secondary folding at local anticlines, XXII, 840
- Secondary recovery, XXVI, 1124
Gay-Spencer-Richardson trend, STRAT, 812
Noodle Creek pool, STRAT, 715
Recent, of oil in Ohio, XXIV, 494
Red Fork shoestring sand, STRAT, 490
- Secondary-recovery methods, XXV, 1319
- Secondary tilt, problem of, XXII, 1255
problem of, —Harker's solution corrected, XXII, 1255
- Secor, Dana M., XXIV, 29; XXV, 318; XXVI, 218
memorial of Marion Harbin Funk, XXIX, 1216
- Secor, Dana M., Fritz, W. C., and West, W. W., XXVI, 1026
developments in West Texas and southeastern New Mexico during 1939, XXIV, 1033
- Section exposed in Dry Creek and Golden structures, XXII, 106
in Reliz Canyon, Monterey County, California, MSC, Fig. 4 (in pocket)
Monterey shales, Reliz Canyon, MSC, Fig. 4 (in pocket)
of Hydrology of American Geophysical Union, XXVI, 856
Temblor and upper Tejon Formations as exposed at type locality of Zemorrian Stage, MSC, 105
- Section E, American Association for the Advancement of Science, meeting of, Dallas, December, 1941, XXV, 1966, 2099
- Section 28 piercement dome, XXV, 1013
- Section 28 salt dome, St. Martin Parish, Louisiana, SD, 352; IX, 1290
- Section 28 salt-dome field, XXIX, 798
- Sections, California, SBP, 521
Colorado, SBP, 529
columnar, in Michigan, XXII, 400, 403, 409, 412
geologic, in Urals, XXI, 1442, 1445-1447, 1454
of High Island dome, GC, 926, 928, 929, 933-939, 941, 943-951; XX, 578-580, 584-590, 592, 593, 595-602
Wyoming, SBP, 527
- Secular changes in ocean, RMS, 58
- Securities and Exchange Commission, the petroleum geologist and, XXV, 1297
- Securities Act, new responsibility of geologist in sale of oil and gas securities under, XIX, 1038
- Security for loans, interests in a proved and producing oil and gas property as, XXVI, 1286
- Security law, Illinois, IV, 169
- Sedalia limestone, XXI, 1159; XXIV, 794
- Sedan field, helium in, GAS, 1056
- Sederholm, J. J., XIII, 560
- Sedges, RMS, 169
- Sedgwick, A., XXIV, 287
- Sedgwick, A., and Murchison, R. I., XXIV, 289; XXIX, 130
- Sedgwick County, Kansas, subsurface study of Greenwich pool, XXIII, 643
(wells 257, 258), SBP, 255-285, 407
- Sediment of Santa Monica Bay, sorting of, XXII, 209
sources of, in Santa Monica Bay, XXII, 213
- Sediment cup, United States Coast and Geodetic Survey snapper type of, XXIII, 12
- Sediment flume, XXIX, 1241
- Sediment maps of Baratania Bay, XXIX, 1248
- Sediment patterns and energy patterns, relation between, XXIX, 1249
- Sediment traps, RMS, 3, 274, 632
- Sedimentary and igneous rocks, relative radioactivities of, XXIX, 1482
- Sedimentary aggregates, porosity of, XXVI, 1722
properties of, XXVI, 1717
- Sedimentary basins in China, XXVIII, 1427
principal, in East Indies, XXVIII, 1440
relation of, to commercial deposits of petroleum, PROB, 260, 304
- Sedimentary blanket, CAL, 27, 31, 58, 274, 275, 281; SC, 102; XX, 1648
- Sedimentary component, internal structure of, XXVI, 1704
- Sedimentary components, attributes of, XXVI, 1703
composition of, XXVI, 1704
- Sedimentary conditions, summary of, on continental shelf off east coast of United States, RMS, 230
- Sedimentary control in formation of lake basins, factors of, XXV, 827
- Sedimentary criteria of unconformities, XXVI, 39
- Sedimentary cycles in Coal Measures in Eastern Interior basin, XXIII, 1376
- Sedimentary data, graphic presentation and statistical analysis of, RMS, 558
references on, RMS, 591
- Sedimentary deposition of oil, XXII, 1045
- Sedimentary discharge of Mississippi River, RMS, 159
- Sedimentary divisions of central Oklahoma, XX, 1458
- Sedimentary dynamics, XXVI, 1736, 1756
- Sedimentary ecology, XXVI, 1736
- Sedimentary environment of Great Salt Lake, XXII, 1307
- Sedimentary environments of Chester series, XXIV, 846
- Sedimentary iron, RMS, 423
- Sedimentary kaolin, RMS, 483
- Sedimentary laboratory, portable, XVIII, 1705
- Sedimentary lens, GAS, 1078
- Sedimentary-load hypothesis as cause of geosynclinal depression of Gulf Coastal Plain, XXIII, 199
- Sedimentary-load theory of cause of geosynclinal depression, difficulties with, XXIII, 203
- Sedimentary materials, by-passing and discontinuous deposition of, XIII, 713
methods of preparation for study, XXI, 260
- Sedimentary natural gases from oil (Sedimentary)
and coal fields of Japan, with special reference to their geologic occurrence, XI, 187
- Sedimentary particles, effects of transportation on, RMS, 32
- Sedimentary petrogenesis, XXVI, 1736
- Sedimentary petrography, XXV, 169
introduction to, review, VII, 194
manual of, XXIII, 256
review, XIII, 1490
study methods, XXVI, 1699
supplement to introduction, review, XI, 427
- Sedimentary Petrology, Journal of, XXVII, 940
- Sedimentary prism, GAS, 1078
- Sedimentary problems, quantitative approach to, XXIX, 1234
- Sedimentary rock components, genetic classification of, XXVI, 1701
- Sedimentary rock units, XXIII, 1075
- Sedimentary rocks, RMS, 269, 272; XXIII, 1073
density, porosity, and compaction of, XIV, 1
deposition of, review, XIV, 1233
effect of gravitational compaction on structure of, X, 1035; discussion, XI, 889, 1333
factors affecting color of, XII, 901
in Tejon Quadrangle, XXI, 214
in western Canada, character of, FOP, 18; XXV, 1450
migration of petroleum through, II, 168
radioactivity of, and associated petroleum, XXIV, 1529
scale of hardness and cohesion for, XI, 199
- Sedimentary structures, XXVI, 1723
- Sedimentary variation, value for understanding of dynamics of, XXIX, 1246
- Sedimentary wedges important in concentrating updip fluid movements, XXIV, 114
- Sedimentation, STRAT, 277; XIII, 715; XXIV, 374, 2045
an important discovery tool, XXVII, 926
anaerobic, RMS, 358
conditions determining, XXI, 1106
conditions of, and sources of Oriskany sandstone as indicated by petrology, discussion, XXII, 1108
history of, in Bend Arch district, GAS, 621
- Sedimentation in barred basins, and source rocks of oil, XXI, 1101; XXVI, 789
discussion, XXI, 1350
- Sedimentation in Gulf Coast region of Texas and Louisiana, résumé of facts and opinions on, XXIX, 1304
- Mississippi River delta, RMS, 153
of Chester series, cycles of, XXIV, 847
of early Paleozoic sands in Mississippi Valley, flow diagram showing probable progress of, XXVI, 1754
of Pico formation in Ventura quadrangle, California, XII, 235
oil sands and their relationship to zones of, XXIX, 1324
Pennsylvanian, around Healdton Island, IV, 47
phases of, in Gulf Coastal Prairies of Louisiana, XIV, 903
principles of, XXIV, 505
radioactivity, and organic content,

(Sedimentation)

- relation of, XXIX, 1470
rate of, in Great Salt Lake, XXII, 1330
rate of, in tidal areas, RMS, 200
rate of, of recent deep-sea sediments, RMS, 409
rate of, references on, RMS, 414
recent, and the search for petroleum, XXIX, 1233
recent, and search for petroleum, references, XXIX, 1259
references, XXIV, 376
relation of oceanography to, RMS, 48
relationship to organic agencies Florida area, RMS, 291
report of committee on, 1929-1930, division of geology and geography, review, XVI, 217
report of committee on, 1930-1932, review, XVII, 270
report of committee on, 1936-1937, XXII, 223
report of committee on, 1938-1939, XXIV, 386
report of committee on, 1940-1941, XXVI, 1294
researches in 1925-1926, review, XI, 517
treatise on, review, XVII, 98
Sedimentation and diastrophism, Upper Cretaceous, in Montana, IX, 886
Sedimentation and stratigraphy of lower Mississippian in western Michigan, study of, XXV, 713
Sedimentation and subsidence, interpretation of, XXIX, 1334
Sedimentation curve, graphical interpretation of, RMS, 555
Sedimentation curve methods, RMS, 550-554
Sedimentation study groups, XXVI, 155
Sedimentation time diagram of Gulf Coast formations, XXIX, 1318
Sedimentation tubes showing effect of prolonged dispersion on oil settling capacity of a sediment, XXV, opp. 2174
Sedimentationsverhältnisse des Schwarzenmeeres, Untersuchungen über die, review, XVIII, 550
Sedimentology, applied, XXV, 899
Sedimentpetrographisches Institut, RMS, 373
Sediments, agents affecting rate of transformation of organic material in, XXVIII, 932
along north coast of Europe, map of, RMS, 226
along north Pacific Coast of United States, map of, RMS, 224
along northeast coast of South America, map of, RMS, 225
amount transported by Mississippi River, RMS, 6
amount transported in rivers, RMS, 23, 24
amount transported to Baltic Sea, RMS, 299
amount transported to sea in California, RMS, 272, 273
areal variations of, RMS, 178
as indexes of their environments of deposition, RMS, 582-590
associated with transgressions and regressions of sea in Starr and Zapata counties, Texas, XXVI, 272
base exchange in relation to, RMS, 454

(Sediments)

- beyond 200-meter line in East Indies, RMS, 350, 351
bottom, of Lake Pontchartrain, Louisiana, XXIII, 1
calcareous, mechanical analyses of, RMS, 286
calcium carbonate in, RMS, 258
changes during burial, PROB, 32
character of, on continental shelf, as indicated by marine charts, RMS, 220
content of faecal pellets in, RMS, 518
continental shelf, RMS, 219, 227, 240, 249, 254, 293
deep-sea, of Indian Ocean, RMS, 396
delta, RMS, 154, 166, 170
distribution in Southern California, RMS, 248
distribution maps, RMS, 221, 248, 262, 328
fragmental and crystalline-textured, size classification of, XXVI, 1706
genetic analysis of, XXVI, 1703
hydrogen sulphide in, in East Indies, RMS, 354
in badly ventilated areas, RMS, 357-369
in basins of South Atlantic, distribution of, XXIII, 1669, 1670
in canyons, RMS, 254
in deep sea, clay content of, RMS, 488
in glaciated areas, RMS, 225
in lake basins, effect of climatic conditions on, XXV, 832
individual, average curves for, XXV, 2174
inferences about origin of oil as indicated by composition of organic constituents of, XXIV, 506
methods of study, RMS, 545; XXV, 1420, 2170
mineral analysis of, RMS, 592
mineral analysis of, references on, RMS, 613
nature of, in basins of South Atlantic, XXIII, 1667
near-shore,—hemipelagic deposits, RMS, 219
nitrogen in, off Southern California, RMS, 262
of Baltic Sea, RMS, 298
of Baltic Sea, references on, RMS, 321
of Barataria Bay, distribution of, XXIII, 587
of Black Sea, RMS, 448-450
of East Indian Archipelago, RMS, 348
of East Indian archipelago, references on, RMS, 354
of fresh-water lakes, XXV, 826
of fresh-water lakes, references on, XXV, 848
Sediments of Great Salt Lake, Utah, XXII, 1305, 1311, 1333; XXIII, 1089
Sediments of Gulf of Maine, RMS, 222
of Gulf of Mexico, XXIII, 1123
of Lake Pontchartrain, relation to crevasses, XXIII, 11
of Lake Pontchartrain, relation to streams, XXIII, 10
of lakes, inorganic, XXV, 838
of lakes, organic, XXV, 838
of Montana age in Milk River Ridge region, Alberta, ALTA, 87; XV, 1215
of north Baltic and adjoining seas, study of, review, XIX, 128

(Sediments)

- of North Sea, RMS, 322
of North Sea, references on, RMS, 339
of Santa Monica Bay, California, XXII, 201
of South Atlantic Ocean, XXIII, 1666
of southern North Sea, petrological relations of, RMS, 343
off California coast, RMS, 245
off California coast, references on, RMS, 281
on insular shelves, RMS, 258
on submarine slopes, RMS, 254
organic content of, PROB, 29-31; RMS, 440
organic matter in, in East Indies, RMS, 350
peat, RMS, 641
Permian, of West Texas region, PTNM, 729; XXVI, 729
petroleum in, at time of deposition, XIV, 1451
probability of producing oil from, FOP, 3; XXV, 1435; XXVIII, 900
properties considered in study of, XXI, 1382
relation to environmental conditions of deposition, RMS, 4, 335
relation to ridges, banks, and saddles, RMS, 257, 279, 387
San Joaquin basin, PROB, 787
settling in sea water, deposition of free oil by, XXV, 2170
shifting of, southeastward, during deposition of Lissie and Beaumont in Gulf Coastal Plain, XXIV, 700
size-distribution of, on Mississippi delta, RMS, 166
special features of, RMS, 409
stream derivation of, RMS, 271
study and correlation of, by petrographic methods, review, VIII, 97
subsurface, analyses of, RMS, 256
symposium on, XXII, 1692
tidal lagoon, on Mississippi delta, RMS, 178
transportation of, RMS, 136, 201, 244, 274, 283
types of, areal distribution of, RMS, 187; XXIII, 587
types of, in which cephalopods are most likely to occur, and their paleontological significance, XXIV, 1190
types of, off California Coast, RMS, 247
types of, on continental platform, RMS, 233
ultimate fate of, RMS, 278
variation of, within short distances, RMS, 306, 308
variations in size distribution of, with depth in a delta deposit, RMS, 167
wind transportation of, RMS, 270
Sediments and fossils, stratigraphic significance, XXVII, 940
Seeding, in CaCO₃ precipitation, RMS, 292
Seeley pool, Greenwood County, Kansas, STR II, 157; XI, 1166; XXII, 828
Seepage at Cerro Azul, MEX, opp. 166
at Chicondillo, MEX, opp. 145
at Comales, MEX, opp. 143
influence on water-conservation projects, XXVI, 1800
of oil through joints, MEX, 171
oil, V, 190

- Seepages, PROB, 182, 183, 198, 206, 208, 214, 412, 755, 756, 785; MEX, 11, 143-145, 151, 156, 166, 212, 213, 215
 associated with faulting and fracturing, MEX, 152, 153, 155, 195
 associated with igneous intrusions, classification of, MEX, 153
 at Amatlán, MEX, 213
 at Ebano, MEX, 153, 193
 at Laguna Tampamachoco, MEX, 154
 at Los Naranjos, MEX, 213
 classification of, XI, 687
 in Northern fields district mostly connected with basalt intrusions, MEX, 155
 in Southern fields, connected with basaltic intrusions, MEX, 155
 life of, in relation to effect on oil pools, MEX, 184, 196
 near Garrucho, MEX, 154
 of oil at Mata de Chapapote pool, MEX, 184
 SeEVERS, H. N., XIX, 553
 Segall, Julius, memorial of, XIII, 295
 Segno area, XXIII, 877
 Segno field, XXIX, 790
 Polk County, and Cleveland field, Liberty County, Texas, Wilcox
 Eocene production at, XXII, 1274
 Segregation by gravity, PROB, 282
 of fluids in accordance with their specific gravities, XXIX, 1739
 of oil and gas, from subterranean water, XVI, 924
 of oil and gas, lack of, PROB, 467
 of oil and water, factors determining, PROB, 846
 Seguin, A., *recherches sur le pétrole dans l'antiquité*, review, XXI, 275
 Seguin, M. A., XXI, 275
 Seguin formation, XXIV, 1893
 correlation of, XXVII, 609
 cumulative curves of mechanical analyses and grain-size constants for Caldwell Knob member and Solomon Creek member of, XXVII, 619
 lithologic comparison of sections of, XXVII, 616
 mechanical analyses of, XXVII, 618
 of central Texas, bibliography on, XXVII, 621
 of central Texas, stratigraphy and age of, XXVII, 608
 paleontology of, XXVII, 616, 618
 Segundo Canyon, MSC, 36, 37, 127, 131, 132, 234, 235, 278, 297, 313
 Segura, M. A., XXI, 1506
 Seibert, F. M., SD, 774; IX, 35, 314
 Seibert, F. M., and Burrell, G. A. GAS, 1076
 Seiches, RMS, 128
 Seidel, G., Carle, W., and Lotze, F., *germanotypen Tektonik*, review, XXIII, 1419
 Seidel, Erich, SD, 45, 47, 118, 152, 154, 164, 189, 200, 207, 489, 744; IX, 326, 328, 429, 440, 1260; XVII, 1032, 1458; XIX, 806; XX, 51; XXI, 1273
Bruch und Fließ-Formen der technischen Mechanik und ihre Anwendung auf Geologie und Bergbau, review, XV, 291
 Seidl theory of origin of salt domes, IX, 1260
 Seidlitz, XVIII, 781
 Seismic and surface exploration party, (Seismic)
 combined, XXIX, 1781
 Seismic center of Mexico, XX, 1295
 Seismic determinations of Ewing, XXIX, 83
 Schleswig-Holstein, Lower Elbe, map showing results of, XXII, 498, 499
 Seismic difference between ocean floors of Pacific and of Atlantic, CD, 201
 Seismic interpretation, wave-front diagrams in, XIV, 185
 Seismic maps derived from measurement of time intervals between initiation and reception of seismic events, XXVIII, 914
 of prospecting for oil, XIV, 203; XVIII, 9; XIX, 501; XXIV, 1409; XXV, 1257
 Seismic prospecting, modern instruments for, review, XIII, 1492
 Seismic-reflection examination, XXIV, 1391
 Seismic refraction surveys, subsurface of Schleswig-Holstein in light of, XXII, 494
 Seismic shooting, XXVII, 1589
 Seismic survey of Gulf Coast to greater depth, value of, XXV, 1258
 in northeast Texas, GAS, 664, 674
 Seismic susceptibility of California and Great Basin district, XVI, 45
 Seismic tests at Woodbine, New Jersey, XXIX, 896
 Seismic velocities, longitudinal, influence of geological factors on, XIX, 1
 Seismic velocity variations in San Joaquin Valley, California, XXV, 1343
 Seismic waves, CD, 16; RMS, 128
 Seismic weathered or aerated surface layer, XVI, 1230
 Seismic work of future concerned with location of stratigraphic traps, XXV, 1258
 Seismograms, earth movements shown by study of, XXIX, 1631
 Seismograph, application of reflection, XVI, 1204
 early use for gas-field discoveries in California, XXIV, 1714
 prospecting with, XXVIII, 746
 Tracy gas field discovered by use of, XXIV, 1941
 use of, in Oklahoma, XXVII, 794; XXVIII, 787
 Seismograph and gravity meter used in exploration in Gulf Coast region, XXVII, 732
 Seismograph-contour map of Tepetate field, XXII, 288
 Seismograph data in Alamo and Paso Real, MEX, 222
 Seismograph exploration in California in 1941, XXVI, 1137
 in East Texas, XII, 529
 in Erie, Crawford, and Mercer counties, Pennsylvania, during 1940, XXV, 1143
 in north and west-central Texas, XXVIII, 840
 in north Texas, XXVI, 1043
 in Raisin City field, XXVI, 1143
 in Salem oil field, XXIII, 1353
 in southwestern Pennsylvania during 1940, XXV, 1141
 in Union County, Arkansas, XXVI, 1471
 of Seminole uplift, XXVI, 1067
 Seismograph flank profile of High (Seismograph)
 Island dome, GC, 922, 923, 925; XX, 573-575
 Seismograph map of Esperson dome, GC, 867; XVIII, 1642
 Seismograph records, RMS, 163
 Seismograph sections, study of, XXVI, 155
 Seismograph Service Corporation licensed in South America, and Trinidad, to make radioactivity logs, XXV, 1769
 Seismograph survey at Jennings dome, GC, 967, 969; XIX, 1314, 1316
 in East Pauls Valley area, XXIX, 716
 Seismograph surveys, GAS, 588; XXVIII, 827
 in Illinois basin, XXI, 784
 on west flank of Bend arch through Knox, Baylor, Haskell, and Throckmorton counties, XXIV, 1048
 Seismograph work important at Wilmington oil field, XXII, 1052
 in Forest City basin, FOP, 85; XXV, 1517
 in Fox field, Carter County, Oklahoma, XXI, 1026
 in Illinois, XXII, 74; XXIX, 690
 in Kansas, XXI, 1000
 in Nebraska, XXI, 1003
 utilization of existing wells in, XV, 1409
 Seismographs, XXVIII, 827
 use of, in locating salt domes, STR II, 683
 Seismography, application of, to geological problems, XV, 1311
 Seismological discovery and partial detail of Vermilion Bay salt dome, Louisiana, XVI, 1221
 Seismology, evidence of, concerning interior of earth, CD, 12
 introduction to theoretical, Part I, geodynamics, XXI, 1206
 practical, and seismic prospecting, XXII, 1607
 Seismos Geophysical Company, recent geophysical abstracts of, review, XX, 109
 Seitz, O., XXII, 1267
 Seitz, O., and Gother, W., *Paldontologische Praktikum*, review, XIII, 1494
 Seiwel, H. R., RMS, 94, 438, 439
 Sejita structure, Duval County, Texas, XXIV, 482, 483
 Selby, California, outcrop section E, SBP, 167-194, 411
 Selby Oil and Gas Company (well 327), SBP, 292-335, 408
 Selby smelter, MSC, 65, 234
 Selected bibliography of articles describing stratigraphic type oil fields, STRAT, 858
 Selective breakage, of minerals during transport, RMS, 610
 Selective Service System bulletin, XXVI, 1555
 Selective transportation of minerals, RMS, 36, 41, 213, 610
 of minerals, in provenance studies, RMS, 610
 Selective wear, RMS, 610
 Selectivity, variable frequency, XXVI, 1137
 Selenite, V, 220, 225
 Self-flushing beaker brush, XXIII, 1244
 Self-locomotion, life realms of, XXVI, 1760

- Self-potential diagram of electrical log, XXIII, 1288
- Self-potential measurement, XXIII, 1296
- Seliber, XXVII, 1182
- Seliber, G., PROB, 41
- Selig, A. L., SD, 211, 247, 249, 257, 258, 265, 266, 273; STR II, 171; X, 3, 31, 39, 41, 50, 57, 58, 221
- Selivanovski, B. V., XXII, 774
- Sell, George, XXII, 777
- Sellans Pool, PROB, 769
- Sellards, Elias Howard, GAS, 609, MEX, 25, 27-29, 31, 32, 44, 56, 70, 83, 84, 162; PTNM, 668, PROB, 340, 782; SBP, 297; II, 71; III, 360; X, 148, 151; XII, 1158; XIII, 594, 963; XIV, 801; XV, 802, 807, 811, 812, 814, 818, 825, 1030, 1044, XVI, 123, 190; XVII, 479, 488; XVIII, 973, 1061, 1067, 1071, 1203, 1253, 1541; XIX, 222, 230, 825, 1225, 1545; XXIV, 65, 67, 99, 306, 307, 315, 316; XXV, 1627, 1632; XXVI, 207, 210, 211, 384, 668; XXVII, 1239; XXVIII, 302, 1674, 1675, 1730; XXIX, 1338, 1709, 1733
- abstract, XXII, 1703
- discussion of fluid mechanics of salt domes, GC, 107; XVIII, 1203
- geographic distribution of geologists in the United States, XI, 305
- Luling oil field in Caldwell County, Texas, VIII, 775
- memorial of Charles Schuchert, XXVII, 1027
- memorial of Johan August Udden, XVI, 328
- oil fields in igneous rocks in Coastal Plain of Texas, XVI, 741
- rocks underlying Cretaceous in Balcones fault zone of central Texas, XV, 819
- settlement of Red River dispute, VII, 192
- structural conditions in oil fields of Bexar County, Texas, III, 299
- subsurface geology of Big Lake oil field, X, 365
- underground position of Ellenberger formation in north-central Texas, IV, 283
- Sellards, Elias Howard, and Gregory, Joseph T., XXIX, 1710
- Sellards, Elias Howard, and Miser, Hugh D., XVIII, 1253, XXIV, 2148
- pre-Cretaceous rocks found in wells in Gulf Coastal Plain south of Ouachita Mountains, XV, 861
- Sellards, Elias Howard, and Patton, Leroy T., GAS, 439; PROB, 352; STR II, 524
- Sellards, Elias Howard, and Putnam, L. G., MEX, 90
- Sellards, Elias Howard, and White, David, XXIV, 315
- Sellards, Elias Howard, Adkins, W. S., and Plummer, F. B., GAS, 653; GC, 743; XIX, 387
- geology of Texas, Volume I, stratigraphy, review, XVIII, 554
- Sellards, Elias Howard, Adkins, W. S., Baker, C. L., and Bose, Emil, PROB, 378
- Sellards, Elias Howard, Bybee, H. P., and Hemphill, H. A., GAS, 439, 440, 442, 443; PROB, 352
- Sellards, Elias Howard, King, P. B., (Sellards) and Baker, C. L., XVIII, 1005
- Sellars pool, VI, 429
- Sellerier, Carlos, GAS, 1004
- Sellersburg formation, XXV, 687
- Sellersburg limestone, XXV, 684
- Selligie, XIX, 486
- Selma chalk, I, 153, 154; V, 491, 496, 654; XXII, 1632, 1644, 1645; XXIX, 817
- in Alabama, Oktubeha tongue of, XXI, 807
- in Alabama and Mississippi, XXI, 806
- in Jackson field, GAS, 883, 884
- Selma formation, XXII, 820
- in Covington County, Mississippi, GC, 379, XIX, 1158
- Selma group, XXVIII, 43
- Selma-Butaw contact, XXVIII, 43
- Selover zone, PROB, 219
- Selsyn motor, XXV, 1774
- Selsyn receiver, XXV, 1772
- Selsyn transmitter, XXV, 1772
- Selvig, W. A., SBP, 21
- Selvig, W. V., XXVII, 1210
- Selwyn, Alfred R. C., XXV, 1218
- Semichatova, S. V., XXIV, 243, 244
- Semichatova, S. V., (Mrs.), XXIV, 249
- Semi-diurnal cycles, RMS, 58
- Semi-diurnal tides, RMS, 128
- Semi-interquartile range, SBP, 10
- Semi-logarithmic paper, RMS, 589
- Seminole fault, GAS, 309
- Seminole, Oklahoma, bitumen content of Arbuckle limestone in, SBP, 69
- vertical variations of properties of sediments in, SBP, 283-285
- (wells 293-299), SBP, 255-285, 408
- Seminole and Pottawatomie counties Oklahoma, geology and development of Keokuk pool, XXIII, 220
- Seminole area, Oklahoma, XXIII, 842; XXVI, 1067
- development active during 1936, XXI, 1009
- vertical variation of properties of sediments in, SBP, 284
- Seminole-Cedar Lake pay zone, XXV, 1052
- Seminole City field, Oklahoma, STR II, 316-318
- Seminole conglomerate, I, 135; III, 261; V, 176, 283, 286, 546, 566; VI, 12
- Seminole County, Oklahoma, Dora oil pool, STRAT, 408; XXIII, 692
- most new discoveries during 1940, XXV, 1093
- Seminole crude oils, analyses of, STR II, 348
- Seminole district, Oklahoma, STR II, 315; PROB, 356, 587, 588, 764
- developments in 1939, XXIV, 1029
- Hunton productive in, XXV, 1646
- paleogeology of, XVII, 1123
- Seminole field, Oklahoma, STR II, 324; PROB, 314, 411, 766; XXV, 1052
- production of, XI, 1106
- Seminole formation, XXIV, 721; XXVII, 633
- Dora pool, STRAT, 412
- Olympic pool, STRAT, 458
- Seminole-Holdenville zone, XXIII, 225
- Seminole oil pools, Oklahoma, statistical details, STR II, 318
- Seminole plateau, XXIII, 830
- Seminole pool, Oklahoma, map of surface and subsurface structure, STR II, 343
- Seminole sand in Seminole district, Oklahoma, STR II, 334
- Seminole sandstone, East Tuskegee pool, STRAT, 441
- Seminole subsurface uplift, contradictory to surface structure, STR II, 681
- Seminole uplift, Oklahoma, PROB, 293, STR II, 702, XI, 1097, 1236, XXII, 1579; XXVIII, 783
- oil fields of, XI, 1099
- Semi-permanent motion in ocean, RMS, 109
- Semitropic area, wells in, XXV, 1359
- Semitropic gas field, California, XX, 940
- Semitropic ridge, California, groundwater contours, XVI, 345
- Semi-wildcat footage, XXVII, 717
- Semmelhack, W., RMS, 497
- Semmes, Douglas R., MEX, ix, 137; XI, 292; XII, 810, XVI, 1195, XXVII, 1077; XXVII, 1050; XXVIII, 1676
- memorial of George Irving Adams, XVII, 103
- oil and gas in Alabama, review, XIII, 1487
- petroliferous formations of Tampico Embayment, Mexico, abstract, V, 101
- Senckenberg Institute, RMS, 195, 198, 203
- Sendai, Japan, RMS, 503
- Seneca oil, XXII, 1094
- uses, PROB, 1, 2
- Senftleben, Gerhard G., reviews, XII, 774, 1029
- Senn, Alfred, XXIII, 1244, 1722
- Paleogene of Barbados and its bearing on history and structure of Antillean-Caribbean region, XXIV, 1548
- Senonian, V, 7
- Europe, VI, 526
- Lower, sea, MEX, 93
- Senonian (?) limestone, XXIII, 964
- Senonian sediments, XXIX, 1084
- Senonian stage, CAL, 111
- Senora formation, V, 34, 283, 287, XXII, 1579
- Dora pool, STRAT, 413, 422; XXIII, 693
- Olympic pool, STRAT, 459
- Senora sand, XXIII, 824
- production from, XXI, 1009
- Sensori agglomerate, III, 364
- Senstius, M. W., XXII, 133, 1307, 1335, 1348
- Sentinel Butte, XXVI, 357; XXVII, 1575
- Sentinel Butte to central Burleigh County, cross-section of Tertiary strata in Dakota basin of North Dakota from, XXVII, 1572
- Sentinel Butte member, XXVII, 1569
- Separation apparatus, for mineral studies, RMS, 597
- Separator gas, GAS, 1076
- Sepik-Ramu-Markham trough, XXVIII, 1453
- Sepiolite, RMS, 468
- Separian clay of North Sea, RMS, 332
- Separian concretions, XXVIII, 1205
- Sequatchie Valley anticline, correlation of Pine Mountain fault with, XVIII, 1595
- Sequence, restricted, of geological events, chart showing, XXII, 836
- Serdyuchenko, D. P., RMS, 469

- Sergipe, O Cretaceo de*, review, XXI, 1211
- Seria field, XXVIII, 1449
- Sericate, MEX, 148, RMS, 467, 485, 509, XXVIII, 79
- Sericitization and dolomitization compared with fixed carbon ratio of coal as indices of metamorphism in oil-bearing formations, VII, 291
- Series, definition, XXIII, 1074
- Series, divisions of Permian, standard, proposed by Adams and others, recommended for general use, XXIV, 340
- Serpe Teintje limestone, XXIV, 1569
- Serpentine, PROB, 578; MEX, 11, 147
- Cuba II, 138
- in fossiliferous Knoxville shales, intrusive contacts of, XXVII, 205
- Texas, III, 85; V, 658
- Serpentine blue band, SC, 67; XX, 1613
- Serpentine detritus, SC, 59; XX, 1605
- Serpentine fields, PROB, 60, 240
- Serpentine masses in Franciscan area, XXV, 1333
- Serpentine oil fields of Texas, X, 961; XXI, 1490
- Serpentine plug, a cause of high anomaly in vertical intensity in Yoast field, XIV, 1191
- at Hilbig field, Texas, XIX, 1023
- Serpentine production, pre-Eocene, in south Texas pools, XXIV, 1078
- Serpentine zone at Kettleman Hills, XVIII, 1568
- Serpenitized peridotite in Franciscan, XXVII, 153
- Serra do Mda, in Territory of Acre, Brazil, petroleum occurrence possible in anticlinal structures of, XXI, 99, 110
- Serra Geral, traps of, XIX, 1755
- Servia, review, VI, 388
- Service, Jerry H., essentials of engineering astronomy, review, XXI, 1352
- Sespe, MSC, Fig. 6 (in pocket)
- Ventura Basin, SC, 29; XX, 1575
- Sespe brownstone, type locality of, SC, opp. 54; XX, opp. 1600
- Sespe Canyon, PROB, 193
- Sespe-Coldwater contact, MSC, 101
- Sespe Creek, MSC, 101, 152, 165
- Sespe formation at, XIII, 490
- Sespe drainage system, XXIII, 554
- Sespe faunule, middle, of Gaviota Pass, MSC, Fig. 14 (in pocket)
- Sespe field, PROB, 193, 756
- Sespe formation, California, CAL, 147, 148, 160, 316; MSC, 32, 33, 68, 85, 111, 152, 153, 184, 188-190, 192, 195, 213, 217, 222, 225, 228, 237, 256, 286, 307, 311, 318, 324, 342, 353, 354; SC, 80; VI, 305, XIII, 489; XX, 1626
- a desert period suggested, CAL, 293
- age of, SC, 30; XX, 1576
- an alluvial fan, XII, 746
- angular discordance with Santa Barbara formation, CAL, 244
- correlation, CAL, 148, 161, 214, 303
- Eocene land mammals from, CAL, 136, 156
- exceptional weathering conditions indicated by, CAL, 151
- few invertebrate fossils in, CAL, 289
- fossil vertebrates of, CAL, 158, 181
- Franciscan chert pebbles in, CAL, 160
- in Tejon Quadrangle, XXI, 214
- middle, MSC, 186
- (Sespe)
- minerals of, and their bearing on its origin, XII, 747
- near Point Conception, XIII, 499
- probably formed during warm, humid climate, XIII, 505
- Sespe Creek, XIII, 490
- Sespe deposits of South Mountain, CAL, 155, 176; XIII, 493
- Simi Valley, CAL, 150, 304; XIII, 494
- South Mountain, California, origin of, XII, 743
- (Ts) (Oligocene and upper Eocene), SBP, 95, 168-194, 416
- type locality, CAL, 147
- Vaqueros-Sespe contact, CAL, 176; MSC, 100
- Sespe-Piru Creek district, California, overturned plunge on overturned folds in, XVI, 209
- Sespe redbeds, MSC, 112, XXVIII, 745
- Sespe, sands, PROB, 189-191
- Sespe strata, Corral Canyon, XIII, 498
- east and west of Los Angeles Basin, SC, 30; XX, 1576
- in and around Ojai Valley and Red Mountain, CAL, 150; XIII, 495
- San Marcos Pass, XIII, 497
- Upper Santa Ynez River valley, XIII, 500
- Sespe zone in Elwood field, GAS, 169
- Sessums, Harry, XXV, 1897
- Settling velocity, RMS, 19, 21, 80, 274, 374, 541
- factors influencing, RMS, 21
- relation to size of particle, table showing, RMS, 544
- Seven Rivers beds, sedimentary features of, XXVI, 97
- Seven Rivers dolomitic limestone, XXVI, 94
- Seven Rivers formation, PTNM, 707; XXIV, 40; XXV, 605; XXVI, 85, 707, 1020, 1036, 1735; XXVII, 490, 754, 767, 768
- in Midland basin, XXIV, 60
- New Mexico, effects of formation of gypsum from anhydrite in, XXVI, 90
- problem of, XXVI, 85
- references on, XXVI, 98
- section showing lateral gradation in, XXVI, 86
- Seven Rivers formation, Rocky Arroyo, Eddy County, New Mexico, lateral gradations in, XXVI, 80
- Seven Rivers gypsiferous member of Chalk Bluff formation, XXV, 862; XXIV, 48
- of Chupadera formation, XXIV, 48
- Seven Rivers gypsum, XIII, 940; XXI, 860; XXVI, 85, 97
- Seven Rivers Hills, XXVI, 82
- Carlsbad limestone in, XXI, 861
- Seven Rivers reef section, XXV, 1048
- Seven Rivers section, breccia in, XXVI, 95
- Seven Sisters field, XXI, 1423
- Seventeenth International Geological Congress, Moscow, July, 1937, XXI, 362
- Seventeenth Street area of Huntington field, GAS, 188
- Severance tax, GAS, 1015
- Severn River geologic section, FOP, 108; XXV, 1540
- Severy, C. L., XIII, 154, 157
- Severy shale, V, 568
- Sevier, Clara Driscoll, XVII, 823
- Sevier, E. G., Survey, Texas (well 335) SBP, 292-335, 409
- Sevier Desert, XXII, 1307
- Seville limestone, XXIII, 1389
- Seward, A. C., XIV, 1285, XXII, 1385
- Seward, Grant, Haskell, Morton, and Stevens counties, Kansas, and Texas County, Oklahoma, Hugoton gas field, STRAT, 78
- Sewell, R. B. S., RMS, 397, 399, 400, 401; XXI, 1579
- Sewell and No. 3 Pochontas coals, regional variations in fixed-carbon content of, XXVII, 1211
- Sewell coal, chemical analyses of, XXVII, 1207
- percentage of fixed carbon in, XXVII, 1212, 1213
- petrographic analyses of, XXVII, 1205
- uniform character of, XXVII, 1206
- Sewell-Eddleman area, Young County, Texas, anticlinal fold in, XXVI, 216
- development of, XXVI, 206, 216
- fossiliferous reef limestone in, XXVI, 212
- maps, XXVI, bet. 208 and 209
- marketing facilities for, XXVI, 216
- pay zones of, XXVI, 213
- Pennsylvanian in, XXVI, 207
- production in, XXVI, 205, 206
- sections, XXVI, bet. 208 and 209
- subsurface geology of, XXVI, 204, 213
- well data, XXVI, 214
- Sewell field, XXVI, 205
- Sewell pay, XXVI, 205
- Sewickley-Meigs Creek coal, XXII, 103
- Seychelles Islands, RMS, 400
- Seyer, W. F., XVIII, 143, XX, 293; XXVII, 1188
- conversion of fatty and waxy substances into petroleum hydrocarbons, XVII, 1251
- Seyler, Felix Hoppe, PROB, 38
- Seymour, A. J., XII, 825
- Seymour, D. Bruce, CAL, 3, 6; SC, ix, 105, 106; XVIII, 435; XX, 1535, 1651, 1652
- memorial of, XVIII, 1222
- memorial of Charles Edwin White-side, XII, 785
- Seymour, D. Bruce, and Moody, Graham, SC, 105
- Seymour field, Baylor County, Texas, XXIV, 1053
- limestone reefs productive in, XXIV, 1048
- Seymour pool, Baylor County, Texas, STRAT, 760; XXV, 1076
- accumulation of oil, STRAT, 762, 763
- analysis of oil, STRAT, 774
- Shackelford County, Texas, XXI, 1022; XXIII, 856
- development, XXVII, 779
- Shadow effect in aerial photographs, XXIX, 1761
- Shadowgraphic contour maps, basic rules controlling construction of, XXV, 2167
- bibliography on, XXV, 2169
- experiments with lights, shadows, and contours, and the resulting, XXV, 2161
- work on, by Engineering Corps of the United States Army, XXV, 2163
- work on, by United States Geological Survey, XXV, 2163

- Shadowgraphic structural map, XXV, 2164
- Shadowgraphic treatment of map of Conroe field, Montgomery County, Texas, XXV, bet. 2166 and 2167
- of map of Elk Basin field, Park and Carbon counties, Montana, XXV, bet. 2166 and 2167
- of map of Salt Creek oil field, Natrona County, Wyoming, XXV, bet. 2166 and 2167
- of map of Sulphur salt dome, Calcasieu Parish, Louisiana, XXV, bet. 2166 and 2167
- of map of Yates oil field, Pecos County, Texas, XXV, bet. 2166 and 2167
- Shafer, John L., XI, 375
- Shafer anticline, Utah, XI, 377
- Shaffer Oil Company, XXIII, 692
- Shafter area, West Texas, PTNM, 686, 700; XXVI, 686, 700, 1151
- areal map of, XXIV, 184
- Paleozoic sediments in, XXIV, 181
- Shaking, effect of, on dispersion, RMS, 541
- Shale, RMS, 369; SBP, 413
- carbonaceous, VI, 333
- chemical composition of, RMS, 509
- faecal pellets of, RMS, 520, 522
- glauconite in, RMS, 507, 508
- illite in, RMS, 484
- in Bend group, gray, GAS, 625
- lithologic character of, as an index of metamorphism, X, 625
- of Strawn formation probably source of oil in Smith-Ellis field, Texas, STR II, 567
- Shale cover, PROB, 732
- Shale deposition in Pierre time, XXI, 1264
- Shale faunas and floras of Pennsylvanian, XIII, 475
- Shale gas fields of New York, GAS, 975
- Shale-gas industry of eastern Kansas, XIII, 367
- Shale Hills, MSC, 328
- Shale Hills anticline, PROB, 188
- Shale-limestone series in Pongo de Manseriche sandstone, XXI, 1348
- Shale-muds, RMS, 530
- Shale oil in Colorado fields, XXI, 1245
- Shale-oil industry, development of, in western Europe and eastern America, XIX, 485
- Shale oil pools, PROB, 727
- Shale production, eastern Kansas, STR II, 708
- Florence field, Colorado, STR II, 709
- Ohio, STR II, 708
- Pennsylvania, STR II, 708
- Wyoming, STR II, 709
- Shale well, Teapot dome, STR II, 708
- Shale wells, examples of, STR II, 708
- Salt Creek field, STR II, 708
- Shaler, M. K., V, 670
- Shaler, M. K., and Ball, S. H., V, 665, 668
- Shaler, N. S., XVIII, 1336, 1340
- Shales as source beds of petroleum and natural gas, PROB, 51, 54, 58, 63
- determination of carbon and hydrogen in substances of bituminous or pyro-bituminous nature occurring in, XIX, 293
- Franciscan, XXVII, 140
- in United States, replacement bases of, XVII, 70
- lenticular, in Allegan and Bay counties, Michigan, section showing, (Shales)
- XXV, 726, 728, 730
- sandstone dikes as conduits for oil migration through, XIV, 411
- Shales, sandstones, and limestones, compaction of, PROB, 814
- Shales, variegated, in Lunlunta-Barancas area, XXVIII, 1462
- Shales and sands, magnetic susceptibility and magnetite content of, XIV, 1187
- Shallow domes of Gulf Coast, GAS, 699; GC, 43; XVII, 1048
- Shallow Emba domes larger than Gulf Coast shallow salt masses, XXIII, 506
- Shallow gas sand in Hewitt field, Oklahoma, STR II, 293
- Shallow oil in Laredo district of southwest Texas, GC, 631; XIX, 1131
- Shallow oil and gas in redbeds on structures within Anadarko-Ardmore geosyncline caused by lateral compression, XXV, 20
- Shallow oil prospect map of Texas Panhandle, XXIII, 1042
- Shallow oil zone in Big Lake field, Texas, STR II, 504, 507, 508, 522, 530
- Shallow pools, Corsicana-Powell district, Texas, STR I, 360
- outline map of part of Navarro County, Texas, showing positions of, STR I, 359
- Shallow producing wells in deeper anticlinal areas, MEX, 195
- Shallow-sand developments in Pennsylvania, XXVII, 838; XXVIII, 726; XXIX, 672
- Shallow-sand gas fields, GAS, 30
- Shallow sea bottoms, deep holes in, favorable for origin of black shales, XXIII, 1191
- Shallow test wells in New York state in 1944, results of, XXIX, 671
- Shallow water adjacent to shores, extent of, XXV, 829
- Shallow-water anomaly, Barbers Hill, Texas, PROB, 894
- DeWalt, Texas, PROB, 898
- Stratton Ridge, Texas, PROB, 896
- Shallow-water conditions associated with salt domes, PROB, 895, 896
- turbulent, in Chickasha facies of Flower-pot, XXI, 1559
- Shallow-water deposits, RMS, 154, 285, 288
- in East Indies, RMS, 349
- Shallow-water facies of limestone, MEX, 22
- Shallow-water salinity anomaly, XXIV, 1405
- Shallow-well completions in gas fields of northern and central Pennsylvania in 1942, XXVII, 842
- in 1943, XXVIII, 729
- in 1944, XXIX, 674
- Shallow-well completions in southwestern Pennsylvania in 1942, XXVII, 839
- in 1943, XXVIII, 728
- in 1944, XXIX, 672
- Shallow zone in Tupungato field, XXVIII, 1478
- Shallow-pool test, definition, XXVIII, 707
- Shaly sand, PROB, 688
- Shambaugh pool, Kansas, STR II, 158
- Shamrock dome, Cushing field, Oklahoma, STR II, 399; PROB, 585
- (Shamrock)
- section, STR II, 405
- Shamrock oil field, PROB, 473, V, 133; VI, 38, 81
- Shand, S. J., XVII, 231
- Shandro shale, Mulga tongue possible correlative of, XXIX, 1623
- Shannahan, N., XXIX, 886, 900
- Shannon, C. W., I, 6, 32; VII, 621; VIII, 312; XIII, 157; XXVIII, 1037
- Shannon, C. W., and Rockwell, Fred Gore, new oil and gas development in Oklahoma, IV, 277
- Shannon, E. V., XI, 1293
- Shannon, E. V., and Ross, C. S., XI, 1295; XXIII, 363
- Shannon, Upper Cretaceous, sand zone, XXII, 684
- Shannon dome, a faulted segment on axis of anticline at Salt Creek field, Wyoming, STR II, 591
- Shannon field, XXIX, 746
- Shannon sand, III, 358; IV, 38; V, 205; VI, 90; XXIII, 908; XXV, 1151
- Salt Creek field, Wyoming, STR II, 591, 596
- Shannon sandstone, PROB, 171, 172; XXV, 1856
- in Rocky Mountain area, XXI, 907
- Shannon sandstone waters, XXIV, 1226
- in Wyoming fields, analysis of, XXIV, 1228, 1229
- Shansi, China, oil prospects in, X, 1083
- Shantung Peninsula, XXVIII, 1419
- Shantz, H. L., and Marbut, C. F., XII, 768
- Shape, RMS, 35, 37, 40, 178, 582, 587, 601, 607
- as influenced by sorting, RMS, 35
- definition of, RMS, 35
- effect of, on sorting, RMS, 33
- in beach sands, RMS, 210, 213
- of particles, RMS, 178, 528
- of sand grains in Bethel sandstone, XXVIII, 93
- Shape analysis of crinoidal sediment, XXVI, 1710
- Shape-classification diagram, XXVI, 1709
- Shapes, varied, of domes in Emba salt-dome region, XXIII, 505
- Shapiro, S. L., and Tauson, V. O., XXVII, 1176, 1186
- Shark River formation, XXIX, 891
- Shark teeth from Hockley dome, SD, 577
- Sharkey platform, XXVIII, 29, 41, 47, 53
- Sharktooth field, XXVIII, 743
- Sharktooth Hill, MSC, 26, 27, 155, Fig. 14 (in pocket)
- diatoms of, CAL, 179
- Sharon field, XXV, 1144
- Sharon pool, Potter County, Pennsylvania, XXIV, 972; XXVII, 846; XXVIII, 732
- Sharon Ridge field, XXV, 1053
- Sharon Ridge pool, XXV, 1054; XXVI, 1027
- Sharp, J. R., MEX, 202
- Sharp, R. P., XXVI, 45, 774, 777
- Sharpsburg field, XXVI, 995
- Sharwood, W. J., and Louderback, G. D., XXVII, 160
- Shasta and Butte counties, California, Cretaceous: east side Sacramento Valley, XXVII, 306
- Shasta and Chico series, hiatus separating, XXVII, 289

- Shasta and Knoxville fossil zones, CAL, 112
- Shasta-Chico series, CAL, 108
- Shasta County, CAL, 99, 111, 316
- Shasta Dam, California, XXVI, 1816
- diorte and dacite dikes at site of, XXVI, 1818
- faults at site of, XXVI, 1820
- foundation problems of, XXVI, 1820
- geology at site of, XXVI, 1816
- map of abutment, showing structural details of finished excavation, XXVI, 1822
- meta-andesite at site of, XXVI, 1818
- plan and section showing geological formations and structures of foundation for, XXVI, 1821
- with principal formations, maps, XXVI, 1817, 1819
- Shasta flora, CAL, 48, 109
- Shasta group, CAL, 112
- Shasta series, XXVII, 254
- in Sacramento Valley, XVIII, 1350
- Shasta Valley, CAL, 99, 125
- Shaw, Eugene Wesley, GAS, 1016, 1017; PROB, 410, 813; SD, 21; II, 172; I, 156, 357; IV, 10; V, 490; VII, 168, 606; VIII, 697, 717; IX, 851, 853, 1033, 1041, 1047; XI, 598; XII, 1095, XIII, 145; XIV, 7, 30, 859, 888, 897; XXII, 808; XXVII, 1198, 1199
- memorial of, XX, 239
- principal factors of natural gas land valuation, III, 378
- principles of natural gas-land valuation, III, 378
- review, V, 634
- Shaw, Eugene Wesley, and Mather, K. F., XVI, 236, XXIV, 1642; XXV, 689
- Shaw, Eugene Wesley, and Munn, M. J., VII, 214
- Shaw, Eugene Wesley, and Udden, J. A., XXIII, 1519, 1523
- Shawnee area, Shannon sandstone water in, XXIV, 1231
- Shawnee district, XXII, 683
- Shawnee formation in Eldorado field, Kansas, STR II, 166
- Shawnee group, GAS, 467, 477; XXI, 506
- (Csh) (Pennsylvanian), SBP, 258, 261-280, 414
- helium in, GAS, 1056
- Shawneetown fault, XXI, 781
- Shawneetown-Rough Creek zone of faulting, XXII, 651; XXIV, 770, 965; XXVIII, 71
- Shayes, Fred P., XVIII, 524; XXII, 1185
- Shayes, Fred P., and Stroud, Ben K., Monroe gas field, Louisiana, VII, 565
- Shea, E. F., XXIX, 1257
- Shea, E. F., developments in Oklahoma in 1938, XXIII, 823
- in 1939, XXIV, 1011
- in 1940, XXV, 1090
- Shea, E. F., memorial of Carl W. Clarke, XIII, 93
- water conditions in Urschel pool, Marion County, Kansas, VI, 426
- Shear, as related to velocity of water, RMS, 73
- horizontal, XXVII, 1255
- Shear faults or folds, XII, 720
- Sheared basement, puckers and tears developed in sedimentary rocks (Sheared) resting upon a, SC, 131; XX, 1677
- Shearer, H. K., GC, 392, 395, 397, 399, 403, XV, 537; XVII, 616, 622, 623, 625, 627, 629, 633, 642; XVII, 622, 627, 629, 633; XXII, 1484; XXV, 1376; XXVIII, 579
- developments in south Arkansas and north Louisiana in 1937, XXII, 719
- geology of Catahoula Parish, Louisiana, XIV, 433
- Shearer, H. K., and Hutson, F. B., GC, 385, XVII, 616
- Dixie oil pool, Caddo Parish, Louisiana, XIV, 743
- Shearing in Pacific geosyncline province, XIII, 434
- of rocks, PROB, 449
- Shearing or folding, which? XI, 31
- Shearing, repetitive reverse diagonal, passing into a bedding plane shear, XXVII, 1256
- Shearing pressure tests on Colorado oil shale, XIII, 343
- Shearing pressures, PROB, 449
- generation of oil in rocks by, XIII, 303, 329; XIV, 451
- generation of oil in rocks by—effects of heat on oil shales, XVII, 1229
- Shearing pressures and heat, relative importance in generation of oil, XIII, 363
- Shearing tests on Australian kerosene shale, XIII, 351
- on Chattanooga oil shale, Kentucky, XIII, 352
- Shears, lateral, XXVII, 1260
- normal diagonal, XXVII, 1246
- reverse diagonal, XXVII, 1252
- vertical, XXVII, 1263
- Sheba, the land of, XXII, 1606
- Shebit anticline and fault, XXIII, 133, 135
- Shedda, Solon, XVIII, 847, 848
- Sheep Creek structure, Embarras and Tensleep waters in, XXIV, 1290
- Sheep Mountain, New Mexico, Lake Valley formation, Sly Gap Canyon, XXIV, 1680
- Sheep Mountain, Wyoming, XXV, 2028
- Sheet-iron dredge, RMS, 637
- Sheets, M. M., XXV, 2022, 2042
- Sheetz pool, Oklahoma, STR II, 365
- Sheffield channel, XXV, 77, 102
- San Andres group in, XXV, 83, 88
- Sheffield channel wells in Yates area, XXIV, 136
- Sheffield horizon, PROB, 478
- Shegren, XVIII, 624
- Shelbourne, SD, 350
- Shelby, T. H., XXIX, 1417
- Shelby, T. H., Jr., Pickton field, Hopkins County, Texas, XXIX, 1777
- Shelbyville and Carthage, gas-distillate discoveries in northeast Texas, XXI, 1066
- Sheldon, H. P., GAS, 221
- Sheldon, I. R., Driscoll pool, Duval County, Texas, GC, 620; XVII, 816
- Shelf, continental, sediments of, RMS, 219-298
- Shelf area northwest of Delaware basin, PTNM, 674, 687; XXVI, 674, 687
- Shelf seas, their outlines and locations, inconsistent with a single great continental mass, CD, 84
- Shell, calcareous, RMS, 397
- (Shell) calcareous, solution of, RMS, 377
- Shell-banks in Baltic, RMS, 316
- Shell breccia, RMS, 293
- Shell Creek dome, XIV, 1036
- Shell Creek fault, XIV, 1032
- Shell detritus, RMS, 234, 235
- Shell foraminifera, RMS, 376, 388
- Shell formation in central Ohio, GAS, 899
- Shell fragments, RMS, 182, 183, 212, 259
- from Englishtown sand, XXIX, 891
- in Baltic, RMS, 319
- origin of, RMS, 235
- Shell-Humphreys well, Pecos County, Texas, basement rocks in, XIV, 314
- Shell Norman well, XXIX, 657
- Shell Oil Company, XXI, 983; XXII, 702, 708, 712; XXIV, 1088; XXVI, 1042, 1143, 1144, XXIX, 749
- Chundburg 1 (well 248), SBP, 255-285, 407
- Egermeier 1 (well 289), SBP, 255-285, 408
- G. H. and N. 22, 25 (wells 108, 109), SBP, 87-167, 404
- Jones 8 (well 86), SBP, 87-153, 404
- Koehn 1 (well 252), SBP, 255-285, 407
- Landers 9 (well 311), SBP, 292-335, 408
- Manuel 7 (well 78), SBP, 87-165, 404
- Martin 1 (well 287), SBP, 255-285, 408
- Nesa 11, 12 (wells 82, 83), SBP, 87-153, 404
- of California, GAS, 162, 184, 210
- Petty 4 (well 291), SBP, 255-285, 408
- Reyes 70, 71 (wells 76, 77), SBP, 87-165, 404
- Ritz 4 (well 253), SBP, 255-285, 407
- Slusher 12, 15, 17, 26, B2 (wells 106, 155-158), SBP, 87-167, 404
- Stakemiller 6, 7 (wells 84, 85), SBP, 87-153, 404
- Stephens 1 (well 371), SBP, 292-335, 409
- Taylor 59, 73 (wells 28, 29), SBP, 130-153, 403
- Thompson 2, 6 (wells 110, 111), SBP, 87-167, 404
- Wells 3, 4 (wells 80, 81), SBP, 87-153, 404
- Shell Oil Corporation, XXIV, 1087; XXIX, 749
- Shell Petroleum Company, XIX, 20
- Shell Petroleum Corporation, GAS, 481, 668, 732; GC, x; XXI, 1013; XXII, 731; XXIII, 644, 804; XXVIII, 844
- studies of surface and subsurface geology in Illinois basin, XXI, 784
- Shell Williams well, CAL, 242, 316
- Shell "zone," RMS, 366
- Shellhorn, Ramann, Remeli, and Krause, XIII, 1469
- Shells, RMS, 171, 248, 258, 287, 380, 393
- in beaches, RMS, 215
- in East Indies, RMS, 354
- of North Sea, RMS, 337
- of organisms, RMS, 234
- of the earth, CD, 14
- Shensi, China, oil prospects in, X, 1089
- North, non-marine origin of petroleum in, and Cretaceous of Szechuan, China, XXV, 2058
- North, stratigraphy, XXV, 2059

- Shensi basin, XXVIII, 1419, 1428
 Shensi field, China, VIII, 169; X, 1105, 1109
 Shensi sandstone, III, 101
 Shensi series, XXV, 2059
 geologic conditions during deposition of, XXV, 2061
 Shepard, I, 33
 Shepard, Edwin Martin, XIV, 1215
 memorial of, XIX, 142
 Shepard, Francis P., RMS, 1, 101, 136, 243, 245, 246, 249, 250, 252, 254, 258, 260, 270, 278, 281; SBP, 70; XVIII, 1006; XIX, 1597; XXIII, 205; XXVI, 271
 abstract, XXII, 1716
 continental shelf sediments, RMS, 219
 Shepard, Francis P., and Chamberlin, R. T., XII, 847
 Shepard, Francis P., and Cohee, G. V., XXIX, 1255
 Shepard, Francis P., and Emery, K. O., submarine topography off the California Coast: canyons and tectonic interpretation, review, XXV, 1940
 Shepard, Francis P., and MacDonald, G. A., sediments of Santa Monica Bay, California, XXII, 201
 Shepard, Francis P., and Revelle, Roger, STRAT, 483, XXVIII, 325
 sediments off California coast, RMS, 245
 Shepard earth-resistivity meter, XVI, 1273
 Sheperd, E. S., XXIV, 498, 499, 500, 503
 Shepherd, G. Frederick, developments in Louisiana Gulf Coast in 1944, XXIX, 792
 Sheppard, C. W., XXIX, 18, 1490
 radioactivity and petroleum genesis, XXVIII, 924
 Sheppard, George, XVII, 212; XXIX, 537
 age of Guayaquil limestone, XIII, 383
 beekite in Tertiary oil-bearing formations of southern Ecuador, XVII, 1388
 Sheppard, George, geology of southwest Ecuador, XIV, 263
 review, XXI, 959
 Sheppard, George, notes on Miocene of Ecuador, XII, 671
 observations on geology of Santa Elena Peninsula, Ecuador, South America, review, XI, 1238
 Sheppards Mott dome, GC, 178, 183, 184; XIX, 364
 Sherar, E. S., XXIX, 836
 Sherar, Stuart, review, 107
 Sherard, Bell Springs, and O'Brien Springs areas, Frontier water in, XXIV, 1245
 Sherard dome, Carbon County, Wyoming, STR II, 661; XXVII, 478, 856
 structure of, STR II, 662
 Sherborne, J. E., and Pyle, H. C., XXV, 854, 1311
 Sheridan Basin, STR II, 591
 Sheridan test, Ellsworth County, Kansas, X, 199
 Sheridan, Texas, Wilcox oil discovery, XXV, 1008
 Sherman pool in Isabella County, Michigan, XXII, 659
 Sherrin camera, XXI, 1335
 Sherrill, R. E., XIII, 628; XVIII, 243, 247; XXII, 250; XXVII, 1198, (Sherrill)
 1215; XXVIII, 734
 origin of *en échelon* faults, discussion, XIII, 1398
 origin of *en échelon* faults in north-central Oklahoma, XIII, 31
 some problems of Appalachian structure, XXV, 416
 Sherrill, R. E., and Matteson, L. S., STRAT, 538
 Sherrill, R. E., and Nevin C. M., PROB, 812, 820, XIII, 528, 633, 1074; XVIII, 31
 nature of uplifts in north-central Oklahoma and their local expression, XIII, 23
 Sherrill, R. E., and Nevin, C. M., studies in differential compaction, XIII, 1, 179
 a reply, discussion, XIII, 1396
 Sherrill, R. E., Dickey, P. A., and Matteson, L. S., types of stratigraphic oil pools in Venango sands of northwestern Pennsylvania, STRAT, 507
 Sherwin, Melvin, and Lloyd, A. M., XXVII, 1411
 Sherwin, R. S., XVIII, 1298
 Sherwood, Andrew, PROB, 71
 Sherwood, Theodore C., Jr., memorial of, XII, 593
 Sherzer, XI, 1287
 Sherzer, W. H., PROB, 547
 Sherzer, W. H., and Grabau, A. W., PROB, 546, 549
 Shetland Islands, RMS, 322, 334
 Shetlandville limestone, XXIII, 1500
 Shetlandville member of Renault formation, XXIV, 825
 in southeastern Illinois and western Kentucky, abundant fossils in, XXIV, 829
 Shiarella, N. W., XVI, 232, 250
 Shideler, W. H., STRAT, 149, 150
 Shiells Canyon field, PROB, 191, 742, 755; V, 459
 Shift from salt industry to petroleum industry, XXII, 1091
 Shifting of axis of structure, PROB, 496
 of equator relative to ecliptic, effect on climate, CD, 180
 of sediments southeastward during deposition of Lissie and Beaumont in Gulf Coastal Plain, XXIV, 700
 of shore line, RMS, 243
 of the poles, CD, 181
 Shihchienfen series, XXV, 2059
 Shikhan Shak-Tau, XXIV, 257
 Shikhan Tra-Tau, a reef in Sakmanian beds, XXIV, 254, 255
 explanation of great height of, XXIV, 257
 section through, showing relations of flanking Artinskian and Kungurian strata, XXIV, 256
 Shikhans in Urals, XXIV, 255
 Shimer, Hervey W., XI, 239; XIX, 1119; XXIV, 1623; XXV, 1620; XXVI, 5, 1193; XXVII, 47
 introduction to study of fossils, review, XVII, 1539
 Shimer, Hervey W., and Grabau, A. W., XXVII, 573
 Shimer, Hervey W., and Shrock, Robert R., index fossils of North America, review, XXVIII, 1220
 Shimer gypsum, II, 74, 114
 anhydrite in, XVIII, 1302
 Shimer gypsum, Medicine Lodge gyp-
- (Shime)
 sum, Nescatunga gypsum, and Dog Creek shale in Comanche County, Kansas, view showing, XXIII, 1801
 Shimer gypsum bed, Comanche County, Kansas, XXIII, 1797
 Shinarump conglomerate, VI, 47, 205, 211, 244; XXIII, 124, 138
 Shinarump horizon in Colorado, XI, 131
 Shinglehouse field, PROB, 478
 Shingo, K., XVI, 1030
 Shinnston oil pool, Harrison County, West Virginia, STRAT, 830
 accumulation of oil, STRAT, 841, 843
 Shipley, E. D., and Higgy, R. C., XX, 1123, 1124
 Shipley deep pool, XXV, 1055; XXVI, 1033
 Shipley field, Ward County, Texas, Silurian production, XXV, 425
 Silurian and Devonian fauna in, XXV, 426
 Shipley pool, gravity of oil in, XXV, 1055
 Shiprock district, PROB, 409
 of Navajo Indian reservation, New Mexico, development and relation of oil accumulation to structure in, XIII, 117
 Shiprock structures, data on, XIII, 143
 Shira Streak pool, Venango district, STRAT, 527
 Shirley anticline, XXV, 889
 Shirley basin, XXVII, 431
 Shoal Creek-Carlville limestones in Illinois coal basin controversy, XXIII, 1518
 Shoal Creek limestone, XXIII, 1512
 Shoal deposits, RMS, 259, 293
 Shoal River formation, MSC, 176; XXV, 264
 Shoenfelt, Cecil Earl, STRAT, 19
 discovery of oil at Big Medicine Bow anticline, Carbon County, Wyoming, XIX, 1238
 memorial of, XXVIII, 1413
 Shoenfelt, Cecil Earl, and Johnson, C. D., GAS, 1056
 Shoestring and lensing sands, origin of, XXVII, 918
 Shoestring gas fields, accumulation of gas, STRAT, 244
 of Michigan, STRAT, 237
 Shoestring oil pools of eastern Kansas, further observations on, X, 568
 Shoestring oil sands, Bartlesville and Burbank, in parts of Oklahoma and Kansas, origin and distribution of, XXI, 30
 Shoestring pool, Madison, Kansas, STR II, 150
 Shoestring pools, PROB, 323, 400, 501, XX, 528
 Greenwood County, Kansas, Bartlesville sand in, STR II, 159
 Mirando City, Texas, XXI, 1438
 Shoestring sand of Permian age—Verden sandstone of Oklahoma, XXIII, 559
 Shoestring sand areas of Kansas and Oklahoma, XXV, 899
 Shoestring sand bodies, Bush City field, STRAT, 45-53
 Chanute pool, STRAT, 60, 63, 65, 71
 Red Fork, STRAT, 473-491
 Shoestring sand lenses, examples in Kansas, STR II, 700
 Madison pool, Kansas, STR II, 151
 origin in shore-line deposits or valley

(Shoestring)

- fillings, STR II, 700
 Shoestring-sand oil fields, new, suggestions for locating, XXI, 65
 Shoestring sand reservoirs of Mid-Continent region, XXIX, 1560
 Shoestring sands, PROB, 561, 575; RMS, 174; STRAT, 71, 238, 419, 461, 478, 481, 486, 488; XXI, 31
 Bartlesville, Greenwood and Butler counties, Kansas, origin of, discussion, XVIII, 1710
 in eastern Osage County, Oklahoma, stratigraphic position of, XXI, 39
 in Greenwood and Butler counties, Kansas, distribution of, XXI, 40
 in Greenwood and Butler counties, Kansas, origin of, XXII, 1458
 of eastern Kansas, VII, 103
 Shoestring sandstones, GAS, 490
 eastern Kansas, GAS, 492
 Sholom Alechem and Fox pools, folding at, GAS, 586
 Sholom Alechem field, GAS, 589
 Shongaloo and Carterville-Sarepta fields, Bossier and Webster parishes, Louisiana, XXII, 1473
 pipe lines, XXII, 1502
 stratigraphic section of formations encountered at, XXII, 1476
 Shongaloo deep test, XXII, 1502
 Shongaloo field, XXIII, 899
 cross section of, XXII, 1482-1483
 oil pipe-line runs, XXII, 1487
 pertinent data, XXII, 1488
 Shongaloo field structure an elongate dome, XXII, 1485
 Shongaloo gas field, structure map of, contoured on base of Annona chalk, XXII, 1479
 Shongaloo member, XXVIII, 597, 600, 611
 type section, XXVIII, 601
 Shongaloo oil field, XXVIII, 611
 Shoo Fly formation, CAL, 62
 Shooting at North Cowden field, XXV, 627
 of Simpson sand wells at Greenwich pool, XXIII, 662
 with nitro-glycerine at Turner Valley field, XXIV, 1638
 Shooting and acid treatment of wells, MEX, 233, 234
 Shooting motion of water, RMS, 8, 17
 Shore, RMS, 207
 Shore erosion, RMS, 164
 on deltas, RMS, 165
 Shoreline, equilibrium profile of, RMS, 272
 shifting of, RMS, 243
 Shore-line conditions, oscillating, in Amarillo district, GAS, 390, 393
 Shore-line deposits, genetic relationship of oil reservoirs to, XII, 597
 on deltas, RMS, 164
 Shoreline processes, recent, Brazoria County, Texas, XXIV, 731
 study of, XXVI, 155
 Shore-line sand wedges, O'Hern field, STRAT, 728-730
 Shore-line sands, O'Hern field, STRAT, 730
 Shore-line theory of origin of sands of Golden Lanes, Kansas, not tenable, XI, 1152
 Shore lines, Bend Arch district, GAS, 622
 in relation to oil and gas accumulation, PROB, 484, 505
 shifting, in New York during Paleo-

(Shore)

- zoic, GAS, 957
 Shore processes, STRAT, 819, 820
 Shoreface, RMS, 207
 Short, M. N., XXI, 1292
 Short, R. T., XV, 811
 Short, R. T., and Bybee, H. P., XVI, 755, 756
 Short Creek oolite, XXIV, 818
 Short Tract oil field due to a fault, XXI, 1585
 Shoshone anticline, Park County, Wyoming, XXIII, 911; XXV, 2027; XXVII, 449
 structure map. Structure contours on Torchlight sand, XXIII, 912
 Shoshone dome, XXVII, 436
 Shoshone field, XXVII, 857
 Shoshone pool in Kevin-Sunburst field, Montana, STR II, 263
 Shoshone River, Wyoming, character of water, XXIV, 1223
 outcrop section b, SBP, 243-255, 411
 Shoshone structure, XXIII, 913
 Shottenloher, Rudolf, *das Osarkland*, review, XXI, 1498
 Shoultes, M. A., VIII, 717
 Shows of oil, definition of, SBP, 86
 Shreveport field, Caddo Parish, Louisiana, II, 67; IV, 131; XXII, 1277; XXIII, 896; XXIV, 1099; XXV, 1036
 Shreveport Geological Society, guide-book of the eleventh annual field trip of, in southeast Mississippi, review, XIX, 571
 oil-field models of, XXV, 1587
 Shreveport oil field, XXVI, 1275
 Shrimp, brine, at Great Salt Lake, XXII, 1330, 1401
 Shrinkage in clays, RMS, 479
 Shrinkage or formation-volume factors, XXV, 1314
 Shriver chert, XXIV, 1987
 Shrock, Robert R., GAS, 847; XX, 310; XXV, 2127
 Shrock, Robert R., and Cumings, E. R., XXV, 2126; XXVI, 1734
 geology of Silurian rocks of northern Indiana, review, XIII, 181
 Shrock, Robert R., and Malott, Clyde A., structural features of West Franklin formation of southwestern Indiana, XIII, 1301
 Shrock, Robert R., and Shimer, Hervey W., index fossils of North America, review, XXVIII, 1220
 Shrock, Robert R., and Twenhofel, William H., invertebrate paleontology (1935), review, XX, 228
 Shrock, Robert S., XIV, 470
 Shubani field, Russia, XXIII, 950
 Shubarkuduk dome, XXIII, 496
 Shugart area in southeastern New Mexico, XXIII, 838
 Shukson formation, XXIX, 1391
 Shuler, Ellis W., SD, 258; X, 50; XXVIII, 548
 undergraduate preparation for the geologist, XIII, 1317
 William Embry Wrather—an appreciation, XXVIII, 444
 Shulits, Samuel, RMS, 9
 Shultz, A. R., GAS, 324, 342; XIV, 1015, 1025, 1031
 Shumard, B. F., I, 23, 27, 29; XIX, 331, 1509, 1510; XXI, 834, 836, 840; XXIII, 595
 Shumard, G. C., I, 29
 Shumard, George G., PTNM, 582;

(Shumard)

- XIX, 1509; XXI, 834, 836, 840; XXVI, 582; XXVIII, 1614
 discovery of Permian rocks in America in western Texas and New Mexico, XXI, 834
 Shumway dome, VI, 322
 Shutt, Roscoe E., XXV, 899
 memorial of Charles Ross Schroyer, XVI, 712
 memorial of Thomas Kennerly Harnsberger, XVIII, 1554
 Shvetzov, M. S., XXIV, 249
 Sial, XIX, 1807
 correlated with granite, CD, 77
 definition of, CD, 10
 density of, CD, 16
 in floor of Atlantic, CD, 201
 thickness of, CD, 12, 13
 total mass of, not congregated in northern hemisphere, CD, 182
 Sial and sima, radium in, CD, 43
 relation of, according to Wegener, CD, 150
 Sial crust, outer, CD, 15
 thickness, CD, 12, 13
 Sial sheets, XIX, 1810
 Siam, geology of, with reference to petroleum, XI, 407
 Siberia, CAL, 301
 ozocerite and naphtha on Lake Balkash, IX, 811
 West, soda lakes of, PROB, 915
 Siberia and Russian Central Asia, XI, 506
 Sibley, John, SD, 323
 Sibley Lake, XXIX, 35
 "Siboga" Expedition, RMS, 352
 Siboga Expedition, foraminifera of, MSC, 12
 Sicilian sulphur deposits, similar to Gulf Coast sulphur, SD, 707
 Sicily, MSC, 338
 dust falls in, RMS, 498
 Recent foraminifera from Bay of Palermo, MSC, 13
 Sickler, J. M., VII, 174, 176
 Siculus, Diodoras, XX, 904
 Sidebottom, H., MSC, 13
 Siderite, RMS, 385, 602
 in cap rock at Carlos dome, Grimes County, Texas, GC, 133; XVIII, 543
 Sideritic rhombs, effect on distillation of oil shale, XIII, 1384
 Sidewall coring, XXVI, 1136
 Sidwell, C. V., and Millikan, C. V., PROB, 314
 Siebenthal, C. E., PROB, 909; SD, 20; IX, 850; X, 1271; XVIII, 1134, 1138, 1142, 1154, 1156; XXV, 687, 688
 theory of origin of salt domes, IX, 850
 Siebenthal, C. E., and Darton, N. H., XVIII, 1657, 1687, 1689, 1690; XXVIII, 1196, 1201
 Sieberg, A., SC, 130; XX, 1676
 Sieberg, A., Gutenberg, B., and Berlage, H. P., *Handbuch der Geophysik, Band 4, Erdbeben*, review, XIV, 955
 Siegfried, E., XV, 36
 Siegfus, Stanley S., XVIII, 1561
 stratigraphic features of Reef Ridge shale in southern California, XXIII, 24
 Siegfus, Stanley S., and Cushman, Joseph A., MSC, 79; XXIV, 1933; XXVII, 1380
 Siemens-type ozonizers, XXVIII, 940

- Sierr. PROB, 36, 39, 40
 Sierra Alta, XXIV, 180
 Sierra Blanca limestone, CAL, 129, 131, 145, 316; SC, 19, 26, 90, opp. 98; XX, 1565, 1572, 1636, opp. 1644 at type locality, MSC, 51
 Sierra Blanca ridge, SC, opp. 90; XX, opp. 1636
 San Rafael Mountains, unconformity between Middle Miocene and Middle Eocene, near, SC, opp. 98, XX, opp. 1644
 Sierra Blanca sandstone, MSC, 162
 Sierra Boca del Abra, Mexico, PROB, 393
 Sierra Burro, MEX, 54, 161
 Sierra Caballos, XXIV, 159
 Sierra Colmena, overfolded, MEX, 159, 160
 Sierra Cucharas, MEX, 46, 62
 Sierra de Buenavista (Tamaulipas), structural relationship to Sierra Tamaulipas, MEX, 162
 Sierra de Cruillas, MEX, 15, 21, 22, 94; XXVIII, 1148
 Sierra de Jimulco, XXVIII, 320, 1162
 Sierra de Juarez, XX, 1279
 Sierra de la Paila, eastern Coahuila, Cretaceous section in, XXVIII, 1174
 Sierra de la Peña, southern Coahuila, XXVIII, 1165
 Sierra de Los Angeles, CAL, 1, 9
 Sierra de Parras, Coahuila, Cretaceous section in, XXVIII, 1158
 western part of, and Parras basin, Coahuila, XXVIII, 1160
 Sierra de Perijá, XXIV, 1567
 foothill region of, XXIX, 1127
 Sierra de Perijá mass, XI, 181
 Sierra de Perijá Range, XXIX, 1090
 Sierra de Salinas, CAL, 44, 316
 Sierra de San Carlos of northern Tamaulipas, XXVIII, 1147
 Sierra de San Pedro Martir, XX, 1279
 Sierra de Santa Ana, XXVIII, 1163
 Sierra de Tamaulipas, Agua Nueva formation in, XXVIII, 1146
 Tamaulipas limestone in, XXVIII, 1145
 Sierra de Tamaulipas-Sierra de San Carlos anticline, XII, 396
 Sierra de Tlahualilo, Durango, XXVIII, 321
 mature topography, XXVIII, 321
 Sierra de Uspallata, XXVIII, 1476
 Sierra del Abra (San Luis Potosí and Tamaulipas), MEX, 20, 23, 35, 36, 43, 62, 95, 159, 160, 226, 250
 Sierra del Abra front range, MEX, 205
 Sierra del Burro and Río Grande, Cretaceous section in area between, XXVIII, 1181
 Sierra del Carmen area of northwestern Coahuila, XXVIII, 1182
 Sierra del Rosario, eastern Durango, Cretaceous section in, XXVIII, 1167
 Sierra del Rosario Durango, youthful topography and intense folding characteristic of geosynclinal belt, XXVIII, 322
 Sierra Diablo, PTNM, 538; XXV, 77; XXVI, 538
 Culberson County, Texas, occurrence of strata of Bend age in, XVI, 484
 Sierra Diablo and vicinity map, PTNM, 554; XXVI, 554
 Sierra Diablo Mountains, XIII, 961
 Sierra Grande-Eads arch, PROB, 682, 683
 Sierra Grande-Las Animas arch, FOP, 88; XXV, 1520
 Sierra Grande uplift, XXIII, 928
 Sierra limestone, XXV, 2109
 Sierra Madera uplift, XXV, 78
 Sierra Madre, CAL, 9; MEX, 6, 24, 36, 58, 89, 95, 97, 99, 139, 144; SC, 88; XX, 1634
 Eastern, XX, 1287
 of Chiapas, XX, 1296
 Southern, XX, 1295
 Western, XX, 1285
 Sierra Madre fault, trend of, GC, 263; XVII, 1206
 Sierra Madre Oriental, MEX, 5, 6, 11, 23, 43, 53, 95, 97, 103, 140, 143, 149, 159-161, 205; XXI, 1042; XXVIII, 317, 1150
 eastern front of, and Tamasopo ridge, comparison of, XIV, 87
 Eocene sea bounding, MEX, 139
 igneous activity on eastern front of, XIV, 85
 Jurassic-Cretaceous boundary in, XXVII, 1494
 similarity of surface geology in front range of, to subsurface in Mexican South fields, XIV, 73
 Sierra Madre Oriental fault, XV, 883
 Sierra Madre trend, MEX, 163
 Sierra Mojada, Upper Cenomanian fossils in, MEX, 48
 Sierra Mojada-Mohóvano-Piedra de Lumbre area, Cretaceous section in, XXVIII, 1170
 Sierra Nevada, CAL, 1, 15, 21, 24-26, 30, 35, 41, 43, 50, 62, 63, 65, 68, 94, 95, 111, 117, 119, 193, 194, 274; SC, 1, 52, 71; XX, 1547, 1598, 1617
 a distinct mountain chain in Pliocene, CAL, 250
 affected by Permian volcanic period, CAL, 281
 age of faults of, CAL, 17
 an asymmetrical basement fold (Argand), CAL, 46
 articles on, CAL, 18, 26, 35, 41-43, 60-66, 85, 95, 97, 132, 133, 193, 203, 250, 251, 258, 267
 bedrock complex, western slope of, CAL, 85
 Callovian formation in Gold Belt of, CAL, 76
 continental sediments in, CAL, 200
 Cordilleran revolution, effect on, CAL, 75, 87
 Cretaceous erosion, CAL, 117
 Cretaceous rocks in, CAL, 17, 109, 117, 119, 286
 Eocene in, CAL, 124, 125, 132, 146
 fossiliferous Cretaceous sandstones in, CAL, 286
 fossils of, CAL, 67, 112, 131, 134, 208, 211, 245, 286
 glacial deposits of, CAL, 17
 Granitic Basement, CAL, 19, 27, 86
 igneous and metamorphic rocks of, CAL, 16, 93, 95-97, 101, 127, 282
 Jurassic batholithic invasion, Cretaceous and Eocene erosion, and Miocene rhyolitic and andesitic series, CAL, 40; SC, 74; XX, 1620
 Jurassic rocks of, CAL, 72, 74, 281
 land area designated Mohavia, CAL, 119
 land area in Cambrian, CAL, 65
 lava flows of, CAL, 261
 Lias volcanic rocks in, CAL, 76
 (Sierra)
 metamorphism of, CAL, 66, 282
 mineral deposits of, CAL, 282
 moraines, CAL, 267
 Mother Lode fissure system of, CAL, 43
 periods of compression in, CAL, 97
 plutonic rocks of, post-Kimmeridgian, CAL, 77
 rivers of, CAL, 16
 Sailor Canyon formation of Colfax region in, CAL, 76
 sequoias in, during Pliocene, CAL, 251
 source of Tumey sandstone, XXVIII, 968
 structural relationship to San Joaquin Valley, SC, 71; XX, 1617
 structure, CAL, 274
 Tejon, fossil flora best known in, CAL, 134
 Temblor rocks of, CAL, 175
 temperature phenomena of granitic rocks of, XXI, 1201
 uplift of, CAL, 66, 286
 vulcanism in, CAL, 281, 283, 284
 Sierra Nevada block, CAL, 16, 29, 48; XIII, 230
 Sierra Nevada de Santa Marta, XXIX, 1082
 Sierra Nevada fault, CAL, 41, 42
 Sierra Nevada foothills, folds of, CAL, 109
 Sierra Nevada granite, XXIX, 1131
 Sierra Nevada massif, XVI, 6
 Sierra Nevada peneplain, SC, 71; XX, 1617
 Sierra Nevada range, XIII, 103
 Sierra Nicolás Pérez, MEX, 35, 159
 Sierra Otontepec, MEX, 5, 143, 145
 Sierra Papagayos, MEX, 68, 97, 139, 161
 Sierra Picachos, anticlinal mountain range, MEX, 161
 Sierra Pintada, XXVIII, 1476
 Sierra San Carlos, MEX, 5, 11, 22, 23, 25, 55, 56, 90, 95, 97, 144, 161
 Sierra Sombrerito, Cretaceous section in, XXVIII, 1154
 Sierra Tamaulipas, MEX, 5, 23, 25-29, 32, 34, 35, 37, 44, 45, 53, 55, 57, 76, 90, 91, 95, 97, 139-141, 148, 152, 160-163, 169
 igneous rocks in, MEX, 143, 144
 Sierra Tamaulipas anticline, MEX, 161, 163, 171, 172
 Sierra Tamaulipas trend, MEX, 161, 163, 172, 192
 Sierra Tantima, igneous complex, MEX, 5, 143, 145, 151
 Sierra Zuloaga, XXVIII, 1155
 Sierran epoch, CAL, 267
 Sierran interval of Pleistocene, XII, 130
 Sierras of Buenos Aires, geological history, CD, 122
 Sierras Ramfres and del Chivo of south-eastern Durango and northern Zacatecas, XXVIII, 1157
 Sierrita del Chivo, Cretaceous section, XXVIII, 1157
 Siesta formation, MSC, 133, 174
 Sievers, W., XVII, 212, 214, 220; XIX, 770, 776, 780, 783; XXIII, 1854
 Sieving, RMS, 530, 533, 545, 595
 Sigmatu, R., RMS, 115
 Siggins pool, V, 311
 Sigler pool, Texas, STR I, 299
 Signal Butte field, waters in, XXVI, 1371
 Signal Hill, PROB, 218; GAS, 184;

- (Signal)
 CAL, 47, 228, 256; SC, 50, XX, 1596
 Signal Hill area, XXIII, 941
 Signal Hill field, California, V, 458, VIII, 14; XI, 420
 Signal Mountain formation, XXV, 1630
 Significance of initial daily production of wells in Burbank and South Burbank oil fields, Oklahoma, XXV, 1175
 of nickel in petroleum, review, VIII, 832
 of statistical constants, RMS, 572, 573
 of Upper Cretaceous fossils from wells in Mississippi, XXIX, 1008
 Significant features of western coal deposits, I, 148
 Significant uncertainties in Pennsylvanian correlation in Illinois coal basin, XXIII, 1507
 Sigsbee, RMS, 648
 Sigsbee's sounding tube, RMS, 648
 Sikes-Ford sand, XXIII, 851
 Silica, RMS, 146, 149, 472, 511, 529
 added to limestone by intrusion, MEX, 31, 149
 amorphous, RMS, 485
 annual replenishment of, in Gulf of California, XXVI, 157
 cycle of, in sea, RMS, 147
 epigenetic, XXIX, 1160
 in glauconite, RMS, 504
 in Great Salt Lake, XXII, 1341, 1347
 in sea, RMS, 50, 143
 in shale, RMS, 509
 in tidal deposits, RMS, 200
 organic, RMS, 499
 quantity of, in muds, RMS, 510
 replacement of, in clays, RMS, 476, 477
 replacement of wood by, XXI, 1492
 Silica-alumina ratio, RMS, 467, 472, 477
 Silica-carbonate rock, Franciscan, XXVII, 182
 Silica cement in Bethel sandstone, origin, XXVIII, 100
 Silica content of Atlantic water, RMS, 379
 of soils, RMS, 486
 Silica pool, Kansas, XXII, 667, 675
 Silica South pool, Kansas, XXII, 675
 Silicate mantle, inner, CD, 15
 Silicate minerals, platy, identification of, by X-ray, RMS, 624
 Silicate tetrahedron, RMS, 624
 Silicates, RMS, 147
 hydrous aluminum, RMS, 484
 identification of, by X-rays, RMS, 624
 in clay minerals, RMS, 471
 melting point of, CD, 22
 relation of, to plant growth, RMS, 146, 149
 Siliceous caliche, GC, 567; XVII, 505
 Siliceous deposits, formation of, RMS, 4
 Siliceous Dockum conglomerates, origin of, XXVII, 622
 Siliceous fragments of diatoms, RMS, 397
 Siliceous frustules, RMS, 402
 Siliceous lime, GAS, 480; PROB, 410, 762, 765, 769, 856, 917; XI, 974; XXI, 508
 Blackwell field, Oklahoma, STR I, 167
 Eldorado field, Kansas, STR II, 162
- (Siliceous)
 of Arbuckle group, XXV, 1640
 Osage County field, Oklahoma, STR II, 381
 Rainbow field, Kansas, STR I, 58
 Siliceous microfossils, RMS, 530
 Siliceous organic remains, RMS, 351
 Siliceous organisms, RMS, 291, 379
 in Atlantic, RMS, 374, 391, 392
 relation of, to glacial and interglacial conditions, RMS, 391
 separation of, in sediment studies, RMS, 600
 Siliceous replacement of calcareous vein minerals, GC, 567; XVII, 505
 Siliceous residues, definition of terms used in descriptions of, XXIX, 415
 in north-central Texas, regional relationship of, XXIX, 424
 preparation of, XXIX, 415
 Siliceous sand, RMS, 593
 Siliceous shale deposition, ecologic interpretations with respect to, MSC, 18
 Siliceous shales as criteria for subdivision of Bendian, XXII, 912
 Siliceous skeletons, RMS, 144
 Silicification, secondary, XXIX, 1162
 Silicified erosion surfaces, XXVI, 42
 Silicified shell fragments as an indication of unconformity, XV, 1103
 Silicified wood, XXVIII, 1171
 Silicoflagellates, CAL, 110, 209; RMS, 379
 Silicon, RMS, 429, 461
 Silicon ions, RMS, 459, 461, 463
 Sill of asphaltite, MEX, 155
 Sill depth, RMS, 60, 102, 266, 277, 280, 357-369
 effect of, on tides, RMS, 134
 in East Indies, RMS, 351, 352
 influence of, on circulation in basins, RMS, 95, 98, 100, 357-369
 Silliman, VIII, 63
 Silliman, B., XXV, 2109
 Silliman, Benjamin, Jr., XIX, 488
 Silliman, Benjamin, Sr., XIX, 484
 Silliman, E. R., and Reed, L. C., XXVII, 1488, 1492; XXVIII, 1143
 Sillimanite, RMS, 602, 609; XXVIII, 86
 Sills, igneous, MEX, 143, 148, 149
 of granophyres in Wichita Mountains, XXV, 289
 of porphyries in Glén series, XXV, 1793
 Sills sand, XXVI, 1271
 Silsbee field, Hardin County, Texas, XXI, 1051, 1055
 Silt, RMS, 155, 156, 165-173, 197, 199, 239-242, 252-257, 265-288, 313, 347, 433, 455, 487
 dimensions of, in terms of textural units, SBP, 71
 distribution of, with respect to erosion and deposition, RMS, 23, 24
 effect of, on properties of sediments, SBP, 160-165
 effect of, on erosion, RMS, 11
 size-distribution of, RMS, 185
 supply of, to sea floor, in California, RMS, 273
 velocity of transportation of, RMS, 15
 Silt grains, RMS, 533
 Silting of harbors, RMS, 200
 Silts of Salado, XXVI, 74
 Siltstones, MEX, 75, 86
 Silty sand, XXV, 2171
- Silurian, CAL, 61-63, 65
 Appalachian area, XXVIII, 740
 Appalachian region, PROB, 105
 Appalachian region, folding contemporaneous with deposition in, GAS, 957
 Baltic area, RMS, 317, 321
 Big Lake, XIV, 618
 Big Sinking field, STRAT, 179
 Bradford field, Pennsylvania and New York, STR II, 417
 Canada, FOP, 19; XXV, 1451
 carbon content of, SBP, 27-31; V, 476
 carbon-nitrogen ratio of, SBP, 34, 35
 Central basin of Appalachian geosyncline, XXV, 813
 China, XXVIII, 1421
 Clinton formation (Sc), SBP, 349-379
 Clinton sand (Sm), SBP, 349-379
 Corniferous lime (Sl), SBP, 349-379
 Davenport field, STRAT, 389
 east-central United States, XXII, 1531, 1547
 Eastern Interior coal basin province, XIII, 420
 eastern Tennessee, XXVII, 1051
 Franklin Mountains, Texas, XXIV, 162
 gas from, in Appalachian region, XXII, 418
 Hunton group (Sh), SBP, 255-285
 Illinois, IV, 45; XXIII, 812
 in geosyncline in Rocky Mountains, XXIII, 1138
 Indiana, IX, 321
 Iowa, XXIV, 1497; XXV, 1645
 Irvine field, STRAT, 187
 Kansas, II, 105, 109; XXV, 1645
 Kentucky, GAS, 835, 857; STRAT, 179; II, 40; IV, 305; VI, 25; VIII, 625; XXV, 1147; XXVII, 820; XXVIII, 531
 Kentucky eastern coal field, STR I, 74, 75, 88; XI, 479
 limestone (Sl), SBP, 351, 355-379, 415
 Lower, eastern Ohio, STR I, 146
 Medina group (Sm), SBP, 349-379
 Michigan, XXV, 1125; XXVIII, 195
 Middle, strata, paleontologic criteria for correlations of, XXVI, 15
 Missouri, XXIII, 595; XXV, 1645
 Nebraska, XVIII, 1627
 New Mexico, IV, 104
 New York, GAS, 985; STR II, 275
 New York and Pennsylvania, GAS, 964
 Niagara group (Sl), SBP, 349-379
 North Dakota, XXVI, 343, 1421
 North Sea, RMS, 332
 Ohio, GAS, 908; STRAT, 384; XI, 1026; XX, 798; XXIV, 676
 Ohio, helium in, GAS, 1056
 Ohio and Kentucky, PROB, 505, 509
 Oklahoma, STRAT, 389; III, 263; V, 33, 121, 152, 406; VI, 6, 161; XXIII, 326
 Ontario, FOP, 115; GAS, 59, 61; XXV, 1547
 Silurian, Ordovician, Devonian, and early Carboniferous sedimentary rocks of Interior Highlands in Arkansas, GAS, 540
 Silurian, Pennsylvania, XXV, 1142
 Rocky Mountain region, XXVII, 422
 Russia, VI, 335
 Sand Hills area, Texas, XXIV, 126
 Seminole district, Oklahoma, STR II, 324
 subjacent, and Devonian formations

- (Silurian)
 in western Kentucky, composite correlation diagram showing relation of, XXV, 695
 Szechuan province, China, XXVIII, 1433
 Tennessee, FOP, 154, STR I, 251, V, 169, 653, VIII, 625, XXV, 1586
 Texas, XXI, 1019
 Texas and New Mexico, XXVII, 911
 Urals, XXI, 1442
 Utah, VI, 207
 Van field, Texas, XXI, 811
 West Texas, XXVIII, 817
 West Virginia, XXV, 1146
 western Kentucky, XVI, 238
 zones of, in Kentucky, XXV, 696
- Silurian and Devonian, Arbuckle Mountains, Oklahoma, XXV, 1641
 Mid-Continent, XXV, 1641
 Mid-Continent, references on, XXV, 1701
 Ouachita Mountains, Oklahoma and Arkansas, XXV, 1641
 Ozark area, Arkansas and Oklahoma, XXV, 1644
 productive horizons in Tennessee, XI, 913
 subdivisions, nomenclature, and correlations of, XXV, 1643
- Silurian and Devonian rocks in Mid-Continent, distribution of, XXV, 1642
- Silurian and Devonian strata, possible, in Van Horn region, Texas, XVI, 95
- Silurian and Devonian stratigraphy, central Kentucky, XXVIII, 533
- Silurian and Ordovician in eastern Kentucky, GAS, 941
- Silurian and Ordovician formations in Michigan, XXII, 399
- Silurian and Ordovician possibilities in Michigan, XXII, 665
- Silurian brine, exceptional, near Bay City, Michigan, XXIX, 567
- Silurian correlations in east-central United States, XXII, 1523
 locations in Tennessee, Missouri, Illinois and Arkansas studied in making, XXVI, 2
- Niagara and Alexandrian series in western Tennessee basis of, XXVI, 4
 some, in lower Mississippi drainage basin, XXVI, 1
- Silurian-Devonian in Oklahoma, XXIII, 825
 in Texas, XXIV, 21
- Silurian dolomite in Kansas, XIII, 453
- Silurian graptolite zone in Crane County, Texas, XXVI, 857
- Silurian limestones, Ohio oil fields, STR I, 141
- Silurian Oil Company, XXII, 655
- Silurian production, XXVI, 1033
 Shipley field, Ward County, Texas, XXV, 425
 West Texas, XXV, 1055
- Silurian sandstones, gas-producing in New York, GAS, 966
- Silurian section, unexposed, and producing zone of Irvine oil field, Estill County, Kentucky, XXII, 1447
- Silurian series, Upper, XXVIII, 732
- Silurian strata in western Tennessee, southeast Missouri, southern Illinois, and northeast Arkansas, stratigraphic summary of, XXVI, 3
- Silurian worm, XXVI, 860
- Siluro-Devonian, Arbuckle Mountains, XXIX, 193
 Jesse pool, Oklahoma, XXII, 1566
 Kansas, STRAT, 109
 Nikkel pool, STRAT, 109
 Oklahoma, XXIII, 230; XXIV, 1997
- Siluro-Devonian waters in Mid-Continent, PROB, 859
- Silver in organic matter, RMS, 435
 in sea water, RMS, 143, 148
- Silver City area, Kansas, igneous intrusives in, XVII, 1268
- Silver Creek limestone member, XXV, 687
- Silver Peak group, CAL, 62
- Silver Pit in North Sea, RMS, 325
- Silver sulfate, SBP, 23
- Silverberg, A., MEX, 200
- Sirm River, section along bluffs of, XXIV, 246
- Sirm Works, XXVI, 407
- Sirm Works district, conglomerates of, XXV, 1400
- Sima, XIX, 1807
 condition in deep interior, CD, 29
 correlated with basalt, CD, 77
 density of, CD, 16
 nature of, CD, 10, 19, 29, 191
 tidal effects on circulation in, CD, 48
 variations in temperature, CD, 68
- Sima and sial, radium in, CD, 43
- Sima crust under oceans, CD, 46, 212
- Sima rock, dry, melting point of, CD, 32
- Simi anticline, PROB, 192
- Simi field, PROB, 192, 756
- Simi Hills, CAL, 10, 98, 316; SC, 11, 15, 104, XX, 1557, 1561, 1650
 Cretaceous faunas of, XXVI, 185
 Cretaceous localities in, XXVI, 186
 Cretaceous stratigraphy of, XXVI, 176
- Simi oil field, XXIV, 1940
- Simi Valley, MSC, 78, 152, 187-189, 192, 195, 199, 204, 213, 224, 226, 227, 232, 233, 243, 249, 257, 261, 283, 311, 344; SC, 20, 21, XX, 1566, 1567
- fossils of, CAL, 138, 181; SC, 17; XX, 1563
- Las Lajas formation and Santa Susana shale of, CAL, 141
 Martinez in, CAL, 122
 Pliocene in, CAL, 228
 Sespe in, CAL, 136, 304, XIII, 494
 Transverse Ranges, CAL, 9
- Vaqueros-Sespe contact in, CAL, 176
- volcanic rocks in Sespe of, CAL, 150
- Simi Valley field, PROB, 754
- Simonescu, I., SD, 122
- Simmons, Arthur C., XXII, 253
- Simmons, Benjamin T., STRAT, 236
- Simmons, Benjamin T., and Halbouty, Michel T., Hitchcock field, Galveston County, Texas, showing stratigraphic accumulation and structure, STRAT, 641
- Simmons, H. J., Jr., memorial of Charles Brewer, Jr., XXVIII, 1553
- Simmons, Jesse Elmore, memorial of, XXV, 1610
- Simmons, S. P., XX, 1361
- Simms, E. F., SD, 352, 354, 616, 721, 732; IX, 1290
- Simms Oil Company, SD, 549
- Simon, Louis J., XXIX, 956
- Simonds, XXIV, 427
- Simonovich and Sorokin, A. I., XVIII, 624
- Simons, A. L., XXV, 405
- Simonson, Russell R., XXVIII, 954
- Simonson, Russell R., and Krueger, Max L., Crocker Flat landslide area, Temblor Range, California XXVI, 1608
- Simplification of the John L. Rich dip construction, XIX, 903, XXI, 351
- Simpson, XXII, 1133
- Simpson, Edward C., SC, 74; XIV, 1353, XX, 1620
- Simpson, George Gaylord, SC, 43, XIX, 1065; XX, 1589; XXVIII, 489
- Simpson, George Gaylord, and Roe, A., XXVI, 1728
- Simpson, Howard E., XXVI, 336
- Simpson, J. H., Survey, Texas (well 375), SBP, 292-335, 409
- Simpson, Paul F., GAS, 813
- Simpson, Roscoe, Page field, Schleicher County, Texas, XXV, 630
- Simpson, central Oklahoma, XIV, 1507
 of Oklahoma, three more graptolites from, XXVII, 1388
- Simpson versus Detrital at Oklahoma City, XIV, 228
- Simpson and Ellenburger production, XXVII, 763
- Simpson anticline, Bradford field, Pennsylvania and New York, STR II, 431
- Simpson beds, section from Oklahoma City field to Cushing field, XIV, 1512
- Simpson beds and Viola limestone, section of Billings area after deposition of. Contact with Arbuckle limestone unconformable, XXIV, 2012
- Simpson dolomite, PROB, 357
 in St. Louis-Maud area, XXIII, 824
 productive in extension to St. Louis pool, XXIII, 831
- Simpson formation, GAS, 480; PROB, 412, 431; V, 34, 150, 344, 471; VI, 6, 13, 422; XXI, 508, 1011; XXII, 696; XXIII, 231, 649; XXV, 1057
- Arbuckle Mountains, XI, 970
- Criker Hills, XIV, 1502
- East Tuskegee pool, STRAT, 448, 450
- Fitts pool, production from, XXI, 1009
- Fox field, Carter County, Oklahoma, XXI, 1026
- Hull-Silk pool, STRAT, 671
- Nikkel pool, STRAT, 110
- Oklahoma, VII, 558; XX, 1112
- Oklahoma, notes on, VII, 558
- Pearson and St. Louis area, Oklahoma, STR II, 347
- productive at Greenwich pool, XXIII, 644, 657
- productive in Sand Hills area, XXIV, 130
- productive in Texas, XXIV, 20
- Seminole district, Oklahoma, STR II, 316, 333, 334
- Wherry pool, STRAT, 126
- Zenth pool, STRAT, 150
- Simpson group, PROB, 764; XXIV, 1998, 2011; XXV, 1635, 1638, 1707; XXIX, 188
- Arbuckle and Wichita mountains, Oklahoma, XIV, 1493; XXV, 650
- Arbuckle Mountains, Oklahoma, graphic section of formations of, XXV, 656
- complex structure of, XXV, 651
- correlation of formations of, with Black River, Chazy, and Beek-

- (Simpson)
mantown, XXV, 652
correlation table of formations of, XXV, 657
fossils of, XXV, 653-656
Jesse pool, XXII, 1563
made up of alternating limestones, sandstones, and shales, XXV, 667
on West Spring Creek, revised section of, XXV, 657
(Os), SBP, 260, 261-292, 415
sections at, XXV, 659, 662, 663, 664, 666
stratigraphy of, XXV, 651
Voshell field, XVII, 182
Walnut Bend pool, STRAT, 790
West Texas, McKee and Waddell sands, XXVI, 279
Simpson limestone, PROB, 412
Bowlegs field, Oklahoma, STR II, 457
Simpson limestone production, XXI, 1012
Simpson oolite zone in Fox area, XXIII, 824
Simpson producing sandstone of Waddell (Ordovician) area in Sand Hills, XXIV, 130
Simpson production, XXVI, 1029, 1030
in West Texas, XXV, 1056
Simpson Ridge anticline, XIII, 1283
Simpson sand, PROB, 294, XXVI, 1066; XXVII, 798, 800, 809, XXVIII, 770; XXIX, 706
second, XXVIII, 782
Simpson sand pay, XXIX, 704
Simpson sands in Oklahoma City field, XIV, 1521
Simpson shale, PROB, 293
Simpson structure, XXVI, 1069
Sims, W. I., SD, 244; X, 36
Sims pool, XXIII, 854
Simsboro gas field, XXVI, 1276
Sinai and Palestine, oil and gas possibilities of, discussion, XI, 515
Sinaloa and Nayarit, coastal strip of, XX, 1283
Sincelajo anticline and Bolivar fault, section, XXIX, 1130
Sinclair *et al.*, XXII, 696
Sinclair, Ewart Gladstone, memorial of, XI, 1348
oil possibilities of Black Hills region, X, 800
Sinclair, Joseph H., XXI, 959
Sinclair, Joseph H., and Wasson, Theron, XIV, 295; XVII, 221; XXI, 1350; XXIX, 521
geological explorations east of Andes in Ecuador, XI, 1253
Sinclair, W. J., CAL, 266
Sinclair, W. J., and Granger, Walter, XXV, 141
Sinclair Development Company, GAS, 708
Sinclair Oil and Gas Company, SD, 617, 618, 623, 625, 627, 628, 719, 721, 727, 730-732, 757
Sinclair Oil Company, SD, 611, 612; XXI, 560
Cole 1 (well 329), Davenport 1 (well 306), Holland 4 (well 344), Kinney 1 (well 343), Martin 1 (well 355), McRae 1 (well 353), Shaw 1 (well 354), Wiley 1 (well 357), SBP, 292-335, 408, 409
Kennedy 1 (well 286), SBP, 255-285, 408
McRae 1 (well 353), vertical variation of properties in, SBP, 332
- (Sinclair)
Voshell 1 (well 251), SBP, 255-285, 407
Sinclair Oil Company wells, vertical variation of properties in, SBP, 332
Sinclair Pipe Line Company, SD, 639
Sinclair-Prairie Oil and Gas Company, XXI, 1024
Sinclair-Prairie Oil Company, XXI, 1008, 1010; XXIII, 853
Sinclair-Wyoming Oil Company, XXI, 991; XXIII, 915, 919
Sinemurian, MEX, 10
Sineiz, J. G., *los Metodos Geofisicos de Prospeccion*, review, XIII, 1489
Singer dome, Madison Parish, Louisiana, XXIV, 483
Singewald, XXI, 99, 103, 107, 1348
Singewald, Joseph T., XXIX, 540
Singewald, Joseph T., Jr., MEX, 77; XI, 1276, 1277; XXIX, 518
discussion of Wegener's theory, CD, 189
geological exploration between upper Juruá River, Brazil, and middle Ucayali River, Peru, discussion, XXI, 1347
memorial of George Martin Hall, XXV, 1828
memorial of Otto Stutzer, XXI, 139
memorial of Tracy Gillette, XXVII, 238
Singewald, Joseph T., Jr., objections to Wegener's theory, CD, 189
discussion by van der Gracht, CD, 203
Singewald, Joseph T., Jr., review, XII, 564
Singewald, Joseph T., Jr., and Miller, B. L., XVII, 512
Singewald, Joseph T., Jr., and Milton, Charles, XVIII, 60
Singewald, Quentin D., XVII, 353, 365; XXVI, 1377; XXVIII, 1165
review, XXI, 529
Singewald, Quentin D., and Van Tuyl, F. M., discoloration of sediments by bacteria, XIV, 626
Singleton, F. A., Tertiary geology of Australia, review, XXV, 1813
Singley, J. A., XXVII, 1082
Singu field, Burma, XI, 568
Sinian limestone, China, III, 100
Sinian system, XXVIII, 1420
Sink-hole, typical, Jacob's Well, western Clark County, Kansas, near Big Basin, XXIII, 1814
Sink holes, XXVII, 576
formed by solution of salt at Côte Blanche dome, GC, 1027; XX, 181
fossil, in Cretaceous beds of Prowers County, Colorado, XVIII, 1493
in El Abra limestone, MEX, 40
Sinking of water in ocean, RMS, 99, 91
periods of, dominant factors in Cenozoic history of Gulf Coast, XXIII, 197
Sinking basin (syncline), delta deposits in (Chicontepec), MEX, 140
Sind Valley, Colombia, XXIX, 1093
Sinusoidal projection, XXIX, 435
Sinusoidal projection outline map of North America, XXIX, 436
Siosi pool, GAS, 825
Siouix, and Ancestral Rocky Mountains, discussion, XIV, 1224
Sioux Falls district, South Dakota, pre-Cambrian in, XXV, 1625
Sioux Falls high, XXVI, 1535
Sioux Falls uplift, XXV, 1626
- Sioux quartzite, VI, 552
Sioux uplift, XXVI, 1557
Siouxia, V, 559; VI, 470
Siparia basin, XXIV, 2110
Siparia syncline, Trinidad, XXIV, 2114, 2123
Sipe Springs formation, XXIV, 85
Siphogenerina Caribbean affinities, MSC, 183
Siphogenerina, *Baggins*, upper and lower zonules, MSC, 17, 86
Siphogenerina branneri zone, MSC, 155, 162, 164, 390, Figs 6, 14, and Table I (in pocket)
Siphogenerina collumi zone, MSC, 78, 125, 167, Figs. 6, 14, and Table I (in pocket)
Siphogenerina hugheesi zone, MSC, 121, 162, 325, Figs. 6, 14, and Table I (in pocket)
Siphogenerina nuciformis zone, MSC, 67, 125, Figs. 6, 14, and Table I (in pocket)
Siphogenerina - *Planulina* zonule, MSC, 17, Figs. 4, 14, and Table I (in pocket)
Siphogenerina - *Plectofrondicularia* zonule, MSC, 17, 86, Figs. 4, 14, and Table I (in pocket)
Siphogenerina reedi zone, MSC, 125, 326, Figs. 6, 14, and Table I (in pocket)
Siphogenerina silt, MSC, 27, 38, 153, 292, 305
Siphogenerina silt faunule, MSC, Fig. 14 (in pocket)
Siphogenerina transversa zone, MSC, 85, 116, 241, Figs 6, 14 (in pocket)
Siphogenerina zone, MSC, Fig. 14 (in pocket)
Siphogenerinids, MSC, 169
Siphoninae, MSC, 322
Siphons of organisms, RMS, 444
Siskiyou embayment, CAL, 131
Sisler, James Donaldson, GAS, 960; PROB, 453; SBP, 356, 357
memorial of, XIX, 1717
Sisler, James Donaldson, and Tucker, R. C., natural gas in West Virginia, GAS, 989
Sisler, James Donaldson, Ashley, G. H., Moyer, F. T., and Hickok, W. O., STRAT, 538
Sisquoc formation, XXVII, 1339, 1347
California, XVI, 139
Casmalia Hills, XXVII, 1349
fossils of, XXVII, 1350
purisima Hills type region of basin facies of, XXVII, 1348
Santa Maria oil field, XXIII, 61
Sisquoc formation and Careaga sandstone in Foxen Canyon area, stratigraphic relations of, XXVII, 1348
Sisquoc oil zones in fields of Santa Maria district, XXVII, 1349
Sites of accumulation, PROB, 459
Sites formation, XXVII, 284; XXIX, 993
Sites section of Upper Cretaceous, Colusa County, XXVII, 294
Sittner south pool, Kansas, XXIII, 805
Six, Ray L., XXI, 1538, 1541, 1547; XXIII, 1096, 1097
Six-hundred-foot gas sand in Hewitt field, Oklahoma, STR II, 293
Six Lakes gas field, Michigan, STRAT, 258, 260; XXII, 158; XXIV, 1952
accumulation of gas, STRAT, 258
cross sections of, XXII, 163
reserves, STRAT, 258

- (Six)
structural map of, XXII, 162
Sixteenth International Geological Congress, XVII, 1139
Sixth sand in Bradford field, Pennsylvania and New York, STR II, 422
Size, RMS, 559, 582, 587
of openings in reservoir beds, PROB, 273
of original copy, width of projection, and size of actual lantern slide, diagram to show relationship between, XXVI, 1671
ratio of different scales of, RMS, 567, 570, 571
Size characteristics, RMS, 178
Size classification of fragmental and crystalline-textured sediments, XXVI, 1706
Size data, scatter diagram of, RMS, 590
Size distribution, SBP, 9, 26
carbon content, SBP, 26
carbon-nitrogen ratio, SBP, 32
effect of dispersing agent upon, RMS, 537
interpretation of, RMS, 558-591
nitrogen content, SBP, 40, 41
nitrogen-reduction ratio, SBP, 61
nitrogen-reduction ratio of distance classes with respect to oil zones, SBP, 388, 389
of Atlantic sediments, RMS, 386-388
of Baltic sediments, RMS, 310, 312
of beach sands, RMS, 208
of glauconite sands, RMS, 510
of late-glacial samples of colloidal clay in Baltic, RMS, 315
of Mississippi delta sediments, RMS, 166, 169
of nitrogen-reduction ratio of distance classes with respect to oil zones, SBP, 388
of organic content of Baltic sediments, RMS, 303
of post-glacial samples of colloidal clay in Baltic, RMS, 315
of sand in some dunes, beaches, and sandstones, XXIX, 215
of sedimentary particles, XXIX, 1237
of sediments, chart of, RMS, 185
of subsurface sediments in Atlantic, RMS, 393
of wind-borne detritus, RMS, 498
oxidation factor, SBP, 44
reduction number, SBP, 55
secondary maxima, RMS, 387
two maxima in, RMS, 310, 312
Size-distribution curves for sands, systems of plotting, XIV, 1340, 1341
Size histogram of transported fragmental components, crinoidal phase of Grand Tower limestone, XXVI, 1708
Size relations of texture units, SBP, 71
Size scale, logarithmic, RMS, 584
Sjostedt, L. Gunnar, RMS, 299, 300, 652
Sjostedt bottom sampler, RMS, 652
Skagerak, RMS, 317, 322, 325, 331-333
Skaggs-Deep pool, XXIX, 754
Skeats, Ernest W., XI, 56
Skeels field, XXVII, 831
Skeeters, W. W., Parker, Ben H., and Van Tuyl, F. M., migration and accumulation of petroleum and natural gas, review, XXIX, 460
Skeletons of bottom-living organisms, RMS, 258
Skelly Oil Company, GAS, 470, 480; XXI, 502, 517, 1014; XXIV, 1030, 1787; XXVII, 813
Cherry 1, 2 (wells 295, 296), Sinclair 1 (well 247), SBP, 255-285, 407, 408
Skellyville pool, PROB, 766
Skelton, A. G., SBP, 2
Skelton, M. B., SBP, 2
Skelton dome, XXIV, 1271
Frontier water in, XXIV, 1240
Greybull water in, XXIV, 1257
Sketching case, use of, in geologic work, VIII, 672
Skewness, RMS, 3, 193, 560, 564, 581, 590
coefficient of, in beach sands, RMS, 209
in Baltic sediments, RMS, 315
in direction of transport, RMS, 586
Phi quartile, RMS, 569
quartile, RMS, 564, 572
Skatook group in Oklahoma, XXIV, 721
Skiff pool, law gravity of oil, PROB, 167
Skimming producing wells, MEX, 230
Skinker, C. F., XVII, 83
Skinner and Lyle, Barrow 1 (well 378), SBP, 292-335, 409
Skinner *et al.*, Becker 1 (well 380), SBP, 292-335, 409
Skinner, John W., PTNM, 539; XIV, 1251, 1252; XXIV, 5, 171, 306, 315, 317, 328; XXV, 75, 99; XXVI, 218, 539, 572, 603, 648, 673, 674, 682, 694, 696, 701
abstract, XXII, 1705
Upper Paleozoic Chinati series, Presidio County, Texas, XXII, 924
upper Paleozoic section of Chinati Mountains, Presidio County, Texas, XXIV, 180
Skinner, John W., and Dunbar, Carl O. PTNM, 560, 564, 565, 573, 598, 603, 643, 649, 651; XXIII, 1700, 1710; XXIV, 294, 308, 315; XXV, 97; XXVI, 560, 564, 565, 573, 598, 603, 643, 649, 651; XXIX, 1767
Skinner, John W., and Henbest, L. G., PTNM, 675; XXVI, 675
Skinner, W. W., and Sale, J. W., PROB, 266
Skinner sand zone, XXV, 1100
Skipping of pebbles in transport, RMS, 14
Skirvin, Orren W., PROB, 285; X, 1028; XIV, 27
experimental study of invasion of oil into water-wet sand, review, VII, 85
Skull Creek shale, XXVI, 1534
Skunk Ranch conglomerate, XXII, 534
Sky radiation to sea, RMS, 85
Slab of Yucatan, XX, 1299
Sladen, W. Percy, XXVI, 1195
Slagter, A. J., STR II, 538
Slate's Springs district, CAL, 86, 89, 316
Slaughter Creek member, XXIX, 61
Slaughter-Duggan pay zone, XXV, 1053
Slaughter field, XXVI, 1017, 1025; XXVIII, 821; XXIX, 747
Slaughter pav zone, XXVII, 758, 769
Slaughter pool, XXIV, 1037; XXV, 1053
Slavin, Morris, and Head, R. E., XXI, 260
Slawson, C. B., XXII, 1307, 1367
Sledge pool, VI, 24
Slichter, I, 33; XIX, 895
Slichter, C. S., VIII, 712; IX, 203, 207, 208; XV, 918
Slichter, L. B., XIX, 38
Slick, T. B., XVI, 1024
Slick, T. B., Properties, Inc., Martin 1 (well 287), SBP, 255-285, 408
Slick, Tom, XXVII, 933
Slick and Lyons-Quinn-Deaner fields, maps of, review, VI, 260
Slick field, Oklahoma, VI, 260, 398
Slick pool, PROB, 411, 767
Slick-Wilcox field, XXVIII, 861
Slickensiding, horizontal, from well drilled through Los Bajos fault, XXIV, 2112
Slickford sand, IV, 306
Slides, preparation of, RMS, 601
Sliding, RMS, 12, 13, 40, 271
of continents, gravitational, CD, 38
of sediments, RMS, 312
Sliding continents and tidal and rotational forces, CD, 158
Sliding crust-sheets, problem of, CD, 172
Sligo field, northwestern Louisiana, type locality of Sligo formation, XXIX, 1434
Sligo formation, XXVIII, 269
correlation of, with Travis Peak and Cuchillo formations, XXVII, 1230
distribution and thickness, XXIX, 1434
equivalents in northern Coahuila, Mexico, XXIX, 1439
lower Aptian in age, XXIX, 1419
Sligo field, northwestern Louisiana, type locality of, XXIX, 1434
South Texas, XXIX, 1419
South Texas, correlation, XXIX, 1440
South Texas, sections of, XXIX, 1437-1440
South Texas, similar to Cuchillo formation of eastern Chihuahua, XXIX, 1441
stratigraphic and lithologic features, XXIX, 1437
Sligo gas field, Louisiana, XXI, 1069
"Slim"-hole drilling, XXIV, 1073, 1375; XXVII, 933
Slim-hole prospecting, value of, XXIV, 1416
Slipper, V. M., and Adel, Arthur, XIX, 900, 902
Slipper, S. E., GAS, 1070; STRAT, 273, 275-276; IV, 254; VII, 148; XI, 252, 256; XV, 1159, 1171, 1176; XVIII, 1390; XXII, 1141, 1142
natural gas in Alberta, GAS, 1
Slipper, S. E., and Allan, J. A. XXIX, 1607
Slipper, S. E., and Hunter, H. M., stratigraphy of Foremost, Pakowki, and Milk River formations of southern plains of Alberta, ALTA, 53; XV, 1181
Silverville sand, Music Mountain pool, STRAT, 497-504
Sloboda conglomerate, Europe, VI, 526
Sloboda Rungurska field, Poland, XV, 14, 26
Slocum, A. W., IX, 667
Slope currents, RMS, 108, 122, 123
Slope scale, XXI, 145
Slope scale formula, XXI, 345
Slope water, RMS, 235, 236
Slopes in Baltic, RMS, 307
isobaric, cause of, RMS, 117
of beaches, RMS, 208

- (Slopes)
 of deltaic deposits, RMS, 173
 of isobaric surfaces, RMS, 111
 of isobaric surfaces, table showing effect of, on velocity, RMS, 113
 of sea surface, RMS, 121
 sediments of, RMS, 245
 sediments of, wind-blown sand on, RMS, 240
 submarine, RMS, 260
- Sloss, Laurence L., and Hamblin, Ralph H., stratigraphy and insoluble residues of Madison group of Mississippian of Montana, XXVI, 305
- Sloss, Laurence L., and Perry, Eugene S., XXIX, 1151
- Big Snowy group: lithology and correlation in Northern Great Plains, XXVII, 1287
- Slotnick, M. M., curvature of equipotential surfaces, XVI, 1250
- Sloughs, tidal, RMS, 202
- Sludge, thickness of, in lakes, XXV, 840
- Slump faulting from solution of salt, XXVIII, 1623
- Slumping, RMS, 4, 260
- erosional, XXIX, 202
- evidences of, previous to consolidation of Pennsylvanian of Oklahoma, VIII, 505
- of sediments in deep sea, in East Indies, RMS, 353
- relation of, to rain-wash, RMS, 270
- Sluss-Smock pool, PROB, 775
- Smackover, Arkansas, PROB, 666
- Smackover basin, XVIII, 1260
- Smackover field, Arkansas, VI, 556; IX, 1116
- salt in, XVI, 601
- subsurface conditions in heavy oil-producing area of, VII, 672
- Smackover formation, XXVI, 1494; XXVII, 1413, 1440; XXVIII, 592
- Alabama, section, XXVII, 1445
- comparison of fossils from, XXVII, 1449
- Louisiana, section, XXVII, 1444
- Texas, section, XXVII, 1443
- Smackover limestone, XXII, 724; XXIII, 896, 897, 902; XXVI, 994, 1259, 1265, 1473; XXVII, 1230; XXVIII, 267
- Alabama, Arkansas, Louisiana, and East Texas, distribution of Jurassic fossils from, XXVII, 1446
- Arkansas, Texas, and Louisiana, XXI, 1068
- northern limitation of, due to truncation, XXII, 982
- productive in Arkansas and Louisiana, XXIV, 1092
- Schuler oil field, XXII, 721
- Smackover field, XXI, 1072
- Smackover limestone development in East Texas, XXIX, 776
- Smackover limestone formation in south Arkansas, XXII, 964
- Smackover limestone gas-distillate production, Macedonia field, XXVIII, 263
- Smackover limestone production, XXIV, 1027; XXIX, 769
- Dorcheat field, XXVIII, 260
- results of tests for, in northern Louisiana, XXV, 1029
- southern Arkansas, XXV, 1024
- Small, Walter M., MEX, 32; XII, 398
- memorial of Ion Popescu-Voitești, XXIX, 1221
- (Small)
 review, XVIII, 1375
- Small foraminifera from late Tertiary of the Netherlands East Indies, XXV, 761
- Small Guinea Basin, XXIII, 1667
- Smart sand, XXVI, 1255
- Smeckal, A., GC, 84
- Smedley, Harold O., XXIV, 1010
- Smethport anticline, PROB, 477; XXII, 259; XXV, 1144
- Smiley, F. J., MSC, 5
- Smiley, H. F., GAS, 609
- Smiley's Bluff section of Seguin formation, XXVII, 610
- disconformity in, XXVII, 613
- Smiser, Jerome S., XXV, 1920
- Smiser, Jerome S., and Wintermann, David, XIX, 1028
- character and possible origin of producing rock in Hilbig oil field, Bastrop County, Texas, XIX, 206
- Smith, III, 72; XI, 965; XV, 374, 532
- Smith, Brankstone, H. R., and Gealy, W. B., XVI, 863
- Smith, A. H., SD, 720; IX, 538
- Smith, Allison W., MEX, 180
- Smith, Alexander, SD, 469
- Smith, B., and George, T. N., XXIV, 288
- Smith, C., and Essex, H., XXVIII, 937
- Smith, C. E., SD, 443
- Smith, C. S., Cochran 1 (well 349), SBP, 292-335, 409
- Smith, Carl D., I, 23; III, 272; V, 130; XI, 1055
- Smith, Cecil W., XXIII, 462
- Smith, E., XIII, 1146
- Smith, Eugene A., XVII, 192; XXII, 310
- geology of Alabama, abstract, XI, 1239
- Smith, Eugene A., and Johnson, L. C., XXVII, 596
- Smith, Eugene A., Johnson, L. C., and Langdon, D. W., Jr., XXII, 1655
- Smith, Frank Morse, memorial of, XII, 687
- Smith, Fred E., STRAT, 565
- Smith, G. J., XV, 406
- review of developments in 1942, Gulf Coast of upper Texas and Louisiana, XXVII, 730
- Smith, George E., *et al.*, GC, 648
- Smith, George Otis, IV, 317; XVIII, 848, 853, 1459, 1469
- bibliography of, XXVIII, 685
- memorial of, XXVIII, 683
- public-service opportunity of the oil geologist, IV, 5
- Smith, H., GC, 861; XVIII, 1637; XX, 1230
- Smith, H. T. U., aerial photographs and their applications, review, XXVII, 1160
- improved method of handling microfilm copy, XXV, 2068
- Smith, Hampton, CAL, 228; XVIII, 788; XX, 132; XXVII, 1364; XXIX, 957
- Smith, Harold M., STRAT, 436; XXIV, 1353, 1453; XXVI, 284; XXVII, 1305, 1306, 1595
- Smith, Harold M., Neumann, L. M., Bass, N. W., Ginter, R. L., Mauney, S. F., and Ryniker, Charles, relationship of crude oils and stratigraphy, in parts of Oklahoma and Kansas, XXV, 1801
- Smith, J. E., XXVII, 1183
- (Smith)
 Venezuelan oil-field waters, XV, 895
- Smith, James Perrin, CAL, vi, vii, 63, 64, 69, 70, 72, 75, 84, 98, 99, 109, 111, 114, 131, 134, 135, 145, 155, 158, 179, 180, 208, 210, 247, 248, 260, 267, 276, 300, 301; MSC, 17, 81, 169; PTNM, 643, 698; VII, 612; X, 130, 132, 133; XIII, 903, 920, 924; XIV, 1354; XVI, 4; XVIII, 1351; XX, 862, 868; XXI, 463; XXIV, 307; XXV, 224, 1227, 1235; XXVI, 163, 643, 698; XXVII, 118, 159, 160, 173, 179, 255; XXIX, 1767
- Smith, James Perrin, and Alexander, C. I., southward extension of Bonham clay, Texas, XVI, 205
- Smith, James Perrin, and Burks, Dana, Jr., XIII, 315, 325
- Smith, L. L., XVII, 507
- Smith, N. A. C., XXVII, 1306
- Smith, N. A. C., and Lane, E. C., PROB, 109, 129, 143
- Smith, N. A. C., Cooke, M. B., Bayer, A. D., PROB, 109
- Smith, Neil, XXVII, 193
- Smith, Philip S., XIII, 823, 825, 844
- memorial of George C. Martin, XXVII, 1280
- possible future oil provinces in Alaska, FOP, 8; XXV, 1440
- Smith, Philip S., and Heald, K. C., STR II, 305
- Smith, R. A., GAS, 787, 794; XI, 1288; XXI, 1601; XXII, 133
- oil prospecting in Michigan, review, VI, 381
- Smith, R. Hendee, XXVIII, 1676
- micropaleontology and stratigraphy of a deep well at Niceville, Okaloosa County, Florida, XXV, 263
- Smith, R. Hendee, Ackers, A. L., and DeChicchis, R., GAS, 451, 452, 454; PROB, 372, 373, 413
- Hendricks field, Winkler County, Texas, XIV, 923
- Smith, R. O., XXIV, 1465
- Smith, Rufus M., and Bartle, Glenn G., relative porosity and permeability of producing formations of Hugoton field as indicated by gas withdrawals and pressure decline, XXIV, 1798
- Smith, T., Survey, Texas (wells 339, 340), SBP, 292-335, 409
- Smith, Velair C., XIX, 871; XXV, 812
- Smith, W. Campbell, XVII, 1388
- Smith, W. D., XXVII, 193; XXIX, 1383
- Smith, W. O., Brankstone, H. R., and Gealy, W. B., improved technique for determination of densities and porosities, XVI, 915
- Smith, W. R., XXVIII, 1152
- Smith, W. S. T., CAL, 3; XXVII, 122, 124
- Smith, W. W., and ZoBell, C. E., XXII, 1331, 1401
- Smith, Wayne M., MSC, 28, 324, 331, 335
- Smith, William, MSC, 79; XXIII, 1100; XXIV, 1754, 1755, 1759, 1762, 1763, 1771; XXVI, 1797; XXVII, 939
- Smith, William C., XXIX, 221
- Smith, Rusk, Cherokee, Gregg, and Upshur counties, Texas, East Texas oil field, STRAT, 600
- Smith, Corkill, Texas, possible salt

- (Smith)
dome, SD, 770; IX, 588
Smith County, Texas, XXVIII, 851
Chapel Hill pool, XXII, 1107
Mount Sylvan dome, GC, 1041
Sand Flat field, XXVIII, 1647
South Tyler field, XXVIII, 1646
tests in, during 1939, XXIV, 1068
(wells 357-360), SBP, 292-335, 409
Smith Creek, West Virginia (well 426),
SBP, 349-379, 410
Smith-Dunn process, V, 686
Smith-Ellis and Hutton-Curry pools,
Texas, section, STR II, 562
Smith-Ellis field, Texas, STR II, 556;
PROB, 340, 402, 600, 602
Smith Mills area, XXVII, 820
Smith Mills pool, XXVIII, 740
Smith Petroleum Company, XXV, 1131
Smith Union Township, Pennsylvania
(well 421), SBP, 349-379, 410
Smithies, John, XIX, 206
Smithland area, structure of top of
Chattanooga Black shale, GAS,
862
Smithland field, GAS, 858-863
Smithson, F., RMS, 595; XXIX, 1256
Smithsonian Scientific Series, review,
XVI, 268
Smithville shale in Stephens County,
Texas, STR II, 471
Smithwick, PROB, 59
Smithwick, Big Saline, and Marble Falls
groups, formations of, in north-
central Texas, XXIV, 84
Smithwick (Caddo) limestone productive
in State Asylum grounds in
Wichita County, Texas, XXIII,
849
Smithwick (Gay) limestone, Brecken-
ridge field, Stephens County,
Texas, relation of initial production
to ultimate production of wells
completed in, XXV, 1589
Smithwick (upper Bend) gray lime-
stone, XXIII, 853
Smithwick beds, XXIV, 85
Smithwick formation, XXVI, 210, 211
Smithwick group, XXV, 1066, 1663;
XXVI, 211
Smithwick limestone, XXIII, 851, 854
Smithwick shale, PROB, 59; III, 35, 39,
71-81, 130, 139, 163, 166, 169, 173,
188, 217, 224, 231, 237, 419; V, 377;
VI, 13; X, 481
Bend Arch district, GAS, 615, 627
Bryson field, STRAT, 541, 542
helium in, GAS, 1055
Hull-Silk pool, STRAT, 671
Seymour pool, STRAT, 763
Smithwick-Strawn unconformity, GAS,
626
Smoky Hill chalk, gas in, XXIV, 999
in western Kansas, stratigraphy and
structure of, XIII, 595
Smoky Hill marl, brecciated in sub-
sidence areas, XVIII, 1496
Smyres pool, XXVII, 809
Smyth, H. L., XXV, 2183
Smythe, W. R., and Hemmendinger, A.,
XXI, 1199
Snail Shells, XXIII, 88
Snails and mussels, river, from Miocene
clay beds near Burkeville, Texas,
XXVIII, 996
Snake Creek, CAL, 303
Snake Ridge formation, XXVIII, 1189
Snake River downwarp, GAS, 231
Snakes, poisonous, in Central America,
XXIV, 383
Snapper samplers, RMS, 658-662
Snavey 1A (Selby Oil and Gas Co.)
(well 327), SBP, 292-335, 408
Snedden, XVIII, 377
Snedden, Loring B., MSC, 55, 85, 187,
188, 192, 202, 204, 206, 227, 230,
240, 243, 248, 251, 254, 264, 268,
274, 285, 288, 290, 291, 299, 301,
305, 309, 312, 316, 333, 339, 341,
342, 347, 352, 353, Figs. 6, 14 (in
pocket)
Snee, William, *et al*, Heyn 1 (well 421),
SBP, 349-379, 410
Snell, F. A., and McCollum, Burton,
XVIII, 118
Snelling, W. O. X, 1019
Snellius expedition to Netherlands
East Indies, RMS, 51, 350, 352;
XXII, 59
Snell's law, XXVIII, 615
Snri-A-Bar gas field, XXII, 922
geologic section through, showing
Cherokee formation, XXII, 920-
921
Sni Mills limestone, XXV, 31
Snider, Clark T., review, XXVIII, 1759
Snider, L. B., XI, 944
memorial of Ivan Vincent Bentz,
XXII, 1127
Snider, Luther C., PROB, 26; SBP, 3,
7; I, 32; III, 271, V, 173; VI, 5;
VIII, 322, 331; XI, 887, 1313, 1315,
XVII, 1438; XVIII, 568, 1134,
1138, 1141, 1148, 1156; XIX, 418;
XX, 1516; XXI, 40; XXIV, 1145,
2066; XXV, 952, 1652, 1653, 1657
current ideas regarding source beds
for petroleum, PROB 51
earth history, review, XVI, 1045
editorial note, XX, 1516
memorial of Arthur Clifford Veatch,
XXIII, 621
origin and evolution of petroleum,
foreword, PROB, 25
petroleum geologists in national de-
fense program, XXV, 1203
remarks at the fifty-third annual
meeting of the Geological Society
of America, XXV, 916
report of editor for 1933, XVIII, 701;
for 1934, XIX, 740; for 1935, XX,
651, for 1936, XXI, 659
report of president for 1940, XXV,
952
reviews, XIII, 395; XVIII, 151;
XIX, 1562; XX, 1131, 1133, 1374,
1375
suggested explanation for surface
subsidence in Goose Creek oil
and gas field, Texas, XI, 729
Snider, Luther C., and Brooks, B. T.,
probable petroleum shortage in
United States and methods for its
alleviation, XX, 15
Snider, Luther C., and Fairish, L. M.,
natural gas in Quebec and mari-
time provinces, GAS, 89
Snodgrass, C. S., XXVIII, 921
Snow, D. R., PROB, 401; XIII, 1096,
1105; XVI, 862; XVIII, 355
water encroachment in Bartlesville
sand pools of northeastern Okla-
homa, and its bearing on East
Texas recovery problem, XVI, 881,
1038
Snow, D. R., and Dean, David, PROB,
775
Rainbow Bend oil field, Cowley
County, Kansas, STR I, 52; IX,
(Snow)
974
Snow, L. G., XIII, 117, XXIV, 1215
Snow Hill, Arkansas, deep oil and gas
at, XXI, 1072
Snyder, J. W., SD, 468
Snyder, John Young, GAS, 782, IV,
118; VI, 186; VII, 647, IX, 495,
904; XXII, 1505, 1659
memorial of, XXIII, 454
report of president for 1929, XIV, 658
Snyder, John Young, and Crider, A. F.,
structure map of top of Nacatoch
sand in Pine Island field, Louisiana,
STR II, 173
Soap Creek dome, VI, 88
Soap Creek field, PROB, 702, 716;
XXVII, 465
Sobante, MSC, 65
Sobante anticline, MSC, 161, 163, 323
Sobante sandstone, MSC, 66, Fig. 14
(in pocket)
Society of Economic Paleontologists
and Mineralogists and its journals,
XXV, 1230
Socony-Vacuum Company, XXIX,
1120, 1124
Socorran series, XXV, 2109
Socav6 anticline, XXIX, 1128
Soda ash, PROB, 316
Soda-ash method of extraction of oil at
Bradford field, Pennsylvania and
New York, STR II, 439
Soda Lake, SC, opp. 80; XX, opp. 1626
Soda lakes of West Siberia, PROB, 915
Soda-lime feldspars, RMS, 602
Soddy, F. S., XVII, 1222
Soddy, F., and Ramsay, W., XXVIII,
934
Sodium, RMS, 455, 464
as dispersing agent, RMS, 537
in Atlantic sediments, RMS, 386
in clay minerals, RMS, 471, 485
in glauconite, RMS, 504
in sea water, RMS, 65, 143, 144
in shale, RMS, 509
in tidal deposits, RMS, 200
quantity of, in muds, RMS, 510
relative exchange power of, RMS, 535
Sodium bentonites, RMS, 479
Sodium bicarbonate, RMS, 458
Sodium bicarbonate waters from At-
lantic and Gulf Coastal Plain,
XXVI, 840
representative, from different water-
bearing formations in Atlantic and
Gulf Coastal Plain, analyses of,
XXVI, 839
Sodium carbonate, RMS, 458, 541
as dispersing agent, RMS, 538-540
Sodium chloride, RMS, 65, 454
effect of, on hydrocarbon-oxidizing
bacteria, XXVII, 1187
effect of, on oxidation factor, SBP, 57
Sodium chloride salt, XXVIII, 1618
Sodium citrate as dispersing agent,
RMS, 538
Sodium clay, RMS, 455, 463
Sodium diethyl-dithio-carbamate, use
of, for determining copper, RMS,
148
Sodium hydroxide, SBP, 38; RMS, 435,
538, 594
Sodium ions, RMS, 482, 483, 536
hydration of, in clays, RMS, 478
Sodium-magnesium ratio, RMS, 463
Sodium montmorillonites, RMS, 478
Sodium oxalate, RMS, 182, 541
as dispersing agent, RMS, 538, 540

- Sodium pyrophosphate as dispersing agent, RMS, 538
- Sodium saturated soil colloids, RMS, 543
- Sodium silicate as dispersing agent, RMS, 538
- Sodium sulfate, SBP, 36
- Sodium sulphate, abundance in New Mexico, XXV, 152
- in New Mexico, new source for, XXV, 152
- maximum, analyses of brines on basis of, XXV, 155
- produced from High Plains lakes of Llano Estacado, XXV, 160
- production of, XXV, 160
- production of, in southwestern states, XXV, 159
- Sodium sulphate-bearing brines, west of Pecos River, character of pockets retaining, XXV, 153
- Sodium sulphate brines, formation of, west of Pecos River, XXV, 157
- potential prospecting area for, XXV, 158
- Sodium sulphate-producing lakes in Ward, Terry, and Lynn counties, Texas, and sulphate brines in New Mexico, map, XXV, 153
- Sodium sulphate test wells showing possible economic value, XXV, 154
- Sodium sulphates and magnesium sulphates, deposits of, in Como Bluff anticline, XXVIII, 1212
- Sodium thiosulphate treatment in preparation of minerals for study, RMS, 594
- Soebi Blanco conglomerate, age of, XXIV, 1571
- Soehngen, N. L., IX, 1294
- Soela Islands, Obi, and New Guinea, Jurassic strata on, XXII, 17
- Soergel, W., RMS, 411
- Soft-rock deformation, experiments on, XIX, 271
- Sohio Petroleum Company, XXIX, 695
- Sohn, I. G., XXIX, 549, 551
- Sohnngen, N. L., PROB, 40, 41, 263, 266, 919; RMS, 425; XV, 445, 446, 449, 452; XXVII, 1176, 1179, 1186, 1187
- Sohnngen, N. L., and Fol, J. G., XXVII, 1181
- Soil, RMS, 430, 464, 484, 485, 550, 552, 553
- Soil and soil-gas analyses, XXIV, 1404
- Soil air, analyses of, by Russian and German workers, XXIV, 1471
- Soil-air analysis prospecting, difficulties, XXIV, 1473
- Soil-air sampling, XXIV, 1471
- advantages over soil analysis, XXIV, 1473
- Soil analysis, basis for use of, in locating oil pools, XXIV, 1444
- for ethane and propane, XXIV, 1404
- gaseous constituents shown by, XXIV, 1403
- geochemical exploration, discussion of, XXIV, 1434
- geochemical exploration, with some speculation about the genesis of oil, gas, and other mineral accumulations, XXIV, 859
- objections to, XXIV, 1466
- Soil analysis survey, results of, in Hartsville and Canisteo townships, Steuben County, New York, XXIV, 1470
- (Soil)
- results of, in Independence Township, Allegany County, New York, XXIV, 1470
- Soil auger, use of, in sampling, RMS, 527, 640
- Soil colloids, RMS, 536
- isoelectric point of, RMS, 486
- saturation of, with sodium, RMS, 543
- Soil Conservation Service, RMS, 631, 639, 640
- Cooperative Laboratory, RMS, 632
- Soil gases, radioactivity of, XVIII, 63, 273
- Soil mechanics, principles of, review, X, 314
- Soil minerals, RMS, 533, 534, 537
- Soil processes, RMS, 155
- Soil sampling, XXIV, 1465
- Soil studies, RMS, 485
- Soils, ratio of organic matter to carbon in, SBP, 18, 19
- Sokol, Rudolf, *Geologisches Praktikum*, review, XI, 1237
- Sokolnikoff, I. S., and Sokolnikoff, E. S., XX, 1006
- Sokolov, V. A., XXIV, 1464
- Sola, Manuel Gutierrez, GAS, 1000; MEX, 157
- Solano County, California, CAL, 13
- outcrop section D, SBP, 167-194, 411
- Potrero Hills gas field, XXIII, 1230
- Solar energy, RMS, 81
- factors influencing amount that reaches sea, RMS, 82
- Solar radiation, RMS, 58
- amount of, absorbed in sea, RMS, 83
- depth of penetration of, RMS, 81, 83
- influence of, on currents, RMS, 82
- Soledad conglomerates, Buckeye field, GC, 752; XIX, 396
- unconformities of, at Buckeye field, XIX, 396
- Soledad formation, XXV, 2006
- Soledad Mountain, California, outcrop section T, SBP, 167-194, 411
- Soledad sandstone (Catahoula), XXIV, 2133
- Soledad volcanic conglomerate, sandstone, and tuff, XXV, 2003
- Solenhofen beds, RMS, 517
- Solid, definition, CD, 20
- Solid material dissolved in a given sample of sea water, RMS, 61
- Solids, flow of matter through, XXVIII, 1514
- Solids and liquids, difference between, CD, 22
- Solignac, M., XVI, 445
- Solís, MEX, 153, Fig. 32 (in pocket)
- Solís limestone, MEX, 55, 56, 59, 68
- Solitario uplift, PROB, 572; XV, 1030; XIX, 247
- in southwest Texas, pre-Carboniferous sequence in, XV, 1037
- Solomon Creek member, XXVII, 608, 616
- fauna of, XXVII, 617
- Solomon Creek section of Seguin formation, XXVII, 610
- Solomon Creek section and Smiley's Bluff section of Seguin formation, XXVII, 611
- Solomon gypsum, II, 75
- Solomon Hills, PROB, 758
- Sols, alumina, RMS, 485
- Soluble barium compounds in Appalachian brines, origin of, XXIV, 490
- Soluble material in oil shale, IX, 1025
- Solubility as affected by pressure, RMS, 64
- of calcium carbonate in sea water, RMS, 147, 377, 379, 403
- of gas, STRAT, 749
- of gas in oil, XXV, 1320
- of gases in sea, RMS, 71
- of nitrogen in water, RMS, 68
- of oxygen in water, RMS, 68
- Solubility determinations, XXV, 855
- Solute concentration of subsurface waters, PROB, 923
- Solution, RMS, 454
- effect of, on rounding, RMS, 45
- effected by circulating meteoric waters, PROB, 519
- in bioherms, PROB, 359
- of gas in oil, PROB, 181
- of limestone, PROB, 412
- of salt at Côte Blanche dome, GC, 1026; XX, 179
- of shells in ocean, RMS, 374, 377
- oversaturated, of CaCO₃ in sea, RMS, 292
- secondary, XXIX, 1540
- Solution and subsidence at Jefferson Island, GC, 1013; XIX, 1632
- Solution caverns in Greenhorn limestone, XVIII, 1502
- Solution cavities, GAS, 392, 425; MEX, 38, 169, 170, 207
- Solution effects of changes in levels of water tables, XX, 1397
- Solution patterns, XX, 1402
- Solvents used in colorimetric tests of oils, XXI, 1485
- Somali Basin, RMS, 398, 401
- Sombodja field, V, 417
- Some effects of capillarity on oil accumulation, I, 140
- Some factors of Central American geology that may have a bearing on origin of petroleum, IV, 263
- Some foraminiferal correlations in Eocene of San Joaquin valley, California, XXIV, 2049
- Some oil field waters of Gulf Coast, III, 310
- Some physical principles of the origin of petroleum, III, 345
- Some problems of Appalachian structure, XXV, 416
- Somers, Ransom E., XII, 598, 944; XIII, 677
- reviews, XII, 1121; XXIII, 1106
- Somerset field, III, 299, 308
- Somerville, J., and Woolnough, W. G., XX, 1033
- Sommerville field, XIX, 518
- Sonder, R. A., XXIV, 1549, 1550
- Sonoma County, XXVI, 1137
- Sonoma-Santa Rosa district, MSC, 136
- Sonoma tuff, CAL, 303
- Sonora, eastern, Cretaceous section in Arivechi area, XXVIII, 1186
- northeastern, Cretaceous section in Cabullona area, XXVIII, 1187
- northeastern, Cretaceous section in El Tigre area, XXVIII, 1187
- State of, MEX, 8, 92, 95
- Sonora Desert, XX, 1282, 1283
- Sonora formation, VI, 13
- Sonora sand, XXIII, 831
- Sonoran climate at Rancho La Brea, CAL, 264
- Sonoran geanticline, CAL, 75, 76
- Sonoran portal, XXVIII, 313
- Sooy conglomerate, STRAT, 124
- productive in Wherry pool, Kansas, XXIV, 1002

(Soo)

- Wherry pool, STRAT, 123, 124, 126
 Soper, E. K., limitations of ground water as aid in determination of geologic structure, XVI, 335
 Sorby, XXII, 1375
 Sorby, Henry Clifton, MEX, 207; RMS, 41; X, 1057; XI, 624, 875, 880
 Sorby's theory of variation of ratio of solids to voids with depth, XI, 625
 Sørensen, S. P. L., RMS, 61
 Sorento dome, GAS, 832
 Sorghum Hollow field, V, 295
 Sorokin, A. I., and Simonovich, XVIII, 624
 Sorting, RMS, 3, 33, 169-174, 193, 209, 210, 228-240, 255, 528, 564-590
 coefficient of, RMS, 189, 209, 564, 569, 581
 coefficient of, relation of, to Phi terminology of Krumbein, RMS, 569, 570
 degree of, RMS, 178, 213, 560
 effect on concentration of glauconite, RMS, 512
 effect on grain size, RMS, 34, 190
 effect on shape of particles, RMS, 35
 in Baltic sediments, RMS, 310
 in Barataria Bay sediments, RMS, 189, 190
 in delta deposits, RMS, 167
 local, RMS, 33, 34
 of Bethel sandstone, XXVIII, 93
 of sands, RMS, 233, 257
 on beaches, RMS, 215
 on mudlumps, RMS, 172
 progressive, RMS, 34-36
 relation of, to turbulence, RMS, 80
 Soshkina, K. D., XXII, 772
 Sosio beds correlated with Word of Texas, XXIV, 275
 of Italy, XXIV, 272, 274
 Sosva-Losva watershed, XXI, 1441
 Soto la Marina, MEX, 143
 Soulaire, Abbé Giraud, XXIV, 1753
 Soule, R. M., RMS, 648
 Sound, velocity of, in sea water, RMS, 71
 Sounding lead, RMS, 221
 Soundings, RMS, 254
 Soup bowl basin, PROB, 362
 Sour gas, GAS, 455
 Sour Lake dome, Texas, GAS, 707
 cap-rock production at, GC, 3; XVIII, 502
 flank production at, GC, 6; XVIII, 505
 Sour Lake field, I, 46; II, 34; III, 87; V, 243, 333
 Sour Lake pool, flank production in, XX, 526
 Source of Corniferous oil in eastern Kentucky, XXII, 1452
 of energy, PROB, 263, 266, 268, 302
 of gas at Monroe field, GAS, 762
 of hydrogen, suggested natural: hydrogenation of oil, XXIV, 1475
 of Jurassic sediments, PROB, 165
 of natural gas in Michigan, GAS, 801
 Source of oil, PROB, 182, 292, 311, 396, 449, 451, 567
 bearing of water analyses on the problems of, STR I, 382
 Belridge field, PROB, 197
 Buckeye field, four possibilities, XXIV, 1976
 disseminated, PROB, 310
 Elk Hills field, PROB, 202
 Emba salt-dome region, XXIII, 509

(Source)

- Granite Ridge pools, PROB, 295
 Illinois, geological, XXVII, 817
 indigenous, PROB, 519
 Kern River field, PROB, 204
 local, PROB, 294, 296, 312, 459, 460, 468
 Lost Hills field, PROB, 197
 McKittrick field, PROB, 199
 Mexico, PROB, 390
 Oklahoma City field, PROB, 412
 Red basin, Szechuan, Triassic marine limestone, XXVIII, 1438
 widespread, PROB, 304
 Source of oil and gas, PROB, 519
 in Big Lake field, Texas, theories, STR II, 524
 in Wall Creek and Dakota sands in Elk Basin field, Wyoming and Montana, STR II, 585
 Source of organic matter in sediments, RMS, 436-438
 of oxygen, PROB, 266
 of Pennsylvanian sediments of Arkansas coal field, XXI, 1418
 of Permian redbeds, XIV, 785
 of petroleum in reservoirs, PROB, 676
 of producing sediments in Elk Basin field, Wyoming and Montana, STR II, 584
 of samples used for determinations of radioactivity, XXIV, 1537
 of sediments in Oklahoma coal field, conditions of deposition and, XXI, 1404
 Source and date of accumulation of oil in Granite Ridge pools of Kansas and Oklahoma, XV, 1431
 Source and reservoir rocks, rôle of, XXIV, 1880
 Source bed, exercise on amount of, required to furnish Oklahoma City oil pool, XXV, 1706
 Source beds, PROB, 6, 28, 247, 271, 295, 307, 332, 402, 404, 529, 567; SBP, 380, 392
 amount of organic matter in, to make oil, SBP, 165-167
 basic assumption in study of, XXI, 1379
 basic data on samples analyzed in study of, SBP, 412
 basis for determination of relation of properties of, to oil zones, SBP, 83-87
 Bradford field, Pennsylvania and New York, STR II, 429
 Caddo field, Louisiana, STR II, 190
 character of, PROB, 471
 Colombia, XXIX, 1135
 containing animal organisms, PROB, 182
 containing plant remains, PROB, 182
 cover, and related geologic factors in Northwest Basin, Australia, XX, 1065
 criteria for recognizing, XXI, 1378, 1392
 Dewey area, Oklahoma, STR II, 376
 Eldorado field, Kansas, STR II, 166
 Elk Hills fields, California, probably Maricopa diatomaceous shales, STR II, 44
 Florence field, Colorado, STR II, 79, 87
 for petroleum, current ideas regarding, PROB, 51
 generally fossiliferous, PROB, 62
 Hewitt field, Oklahoma, STR II, 293

(Source)

- Homer field, Louisiana, STR II, 223
 hypotheses concerning, PROB, 271
 Iles dome, Colorado, STR II, 96
 in Dakota sand in northwestern Colorado, STR II, 97
 Kevin-Sunburst field, Montana, STR II, 259
 Lance Creek field, Wyoming, STR II, 608
 limits used in classifying sediments as, XXI, 1381
 Little Lost Soldier dome, Wyoming, STR II, 650
 Long Beach field, California, STR II, 71
 Lost Soldier district, Wyoming, STR II, 642, 645, 665
 Moffat dome, Colorado, STR II, 96
 New York oil fields, STR II, 282, 283
 nitrogen-reduction ratio as index of, SBP, 384-392
 northwestern Colorado fields, STR II, 96, 103, 107
 of Gulf Coast crude oil, PROB, 136
 Kreyenhagen formation, PROB, 194
 of oil, PROB, 717
 Source beds of petroleum, RMS, 192, 369, 424, 429
 investigation of, American Petroleum Institute and United States Geological Survey, XXV, 1921
 list of wells studied in investigation of, SBP, 417
 note of explanation of scheme of Table 151, SBP, 530
 stratigraphic units and symbols used in study of, SBP, 413
 Source beds, oil fields of United States, PROB, 58
 Oklahoma and Kansas, studies of, XXI, 1377
 origin of, SBP, 3
 original organic material in, PROB, 53
 Osage County field, Oklahoma, STR II, 382
 Petrolia field, Texas, STR II, 555
 Pine Island field, Louisiana, STR II, 179
 Pine Island field, Louisiana, Comanche in, STR II, 182
 preliminary study of, in late Mesozoic rocks on west side of Sacramento Valley, California, XVIII, 1346
 problems of, SBP, 402
 recognition of, by means of properties of sediments, SBP, 392-394
 relation of oil and gas fields to the occurrence of, PROB, 458
 relation to reservoir rocks, PROB, 291, 294
 relative rank of properties as possible means of recognizing, XXI, 1395
 Rock River field, Wyoming, STR II, 618
 Santa Maria field, California, STR II, 18, 21
 Seminole district, Oklahoma, STR II, 334, 335
 Smith-Ellis field, Texas, STR II, 567
 Ventura Avenue field, California, STR II, 33
 Virgil pool, Kansas, STR II, 149
 Source book in geology, XXIII, 1579
 Source environment of petroleum different from that of coal, XX, 1478
 Source material affected by changes in sea level, PROB, 513
 Source material for petroleum and

(Source)

- natural gas, PROB, 99, 110, 148, 161, 182, 398, 469, 484; XX, 797
of petroleum and source material of coal, differences between, XX, 1478
proximity of, to reservoir rocks, PROB, 296
Source materials, for biochemical production of petroleum, XX, 294
of glauconite, RMS, 506-509
Source rock, PROB, 25, 26, 134, 338, 368, 426, 565, 727
Artesia field, New Mexico, STR I, 119
effects of metamorphism on débris in, XV, 161
Nemaha Mountains region, Kansas, STR I, 68
petroleum, in northwestern Venezuela, Cretaceous limestone as, XV, 229
Source rocks, XXIX, 1742
lithology of, XXVI, 1755
of oil, and barred basins, references, XXI, 1156
Source rocks of oil, and sedimentation in barred basins, XXI, 1101, discussion, XXI, 1350
Source rocks of petroleum—a symposium of opinion, discussion, XXIV, 496
of petroleum, genesis of, under conditions differing from those of the present, XXI, 1104
problem of, bound up with problem of origin of oil, XXIX, 874
research on, XXVII, 924
Source rocks and stratigraphy, XXIX, 873
Source sediments, American Petroleum Institute research investigation on origin and environment of, XIV, 311
of petroleum, XXI, 766
of petroleum, origin and environment of, review, XVII, 199
of petroleum, paleo-biochemical conditions of, XXI, 766
of petroleum deposits, origin and environment of, XIV, 1465
Sources and conditions of sedimentation of Oriskany sandstone as indicated by petrology, XXII, 541; discussion, XXII, 1108
South and Central America, correlations of Lower Oligocene of, with that of southern Mexico, MSC, 110, 177, 179
South Adams field, XXVII, 831
South Africa, RMS, 401; V, 672
correlation of lower Coal Measures of New South Wales with middle Ecca of, XXV, 406
fusion isotherms for granite in, CD, 32
geology of, XXI, 1497
oil showing in granite, VI, 369
South African mountains, strike of, CD, 209
South America, CAL, 162, 302; MSC, 20, 168, 169; RMS, 126, 223, 446
South America, Africa, and Australia, Mississippian and Pennsylvanian in, XXIX, 132
South America, clock-wise twisting of, CD, 148
difficulties hindering exploration and development in, XXIX, 560
distribution of Devonian areas in, XX, 1209

(South)

- free oil in ammonites in Colombia, XXVIII, 875
northern, most promising hunting ground for new oil fields in Western Hemisphere, XXVI, 1211
northern, Trinidad, and Barbados, stratigraphy of, XXVII, 92
observations on geology of Santa Elena Peninsula, Ecuador, review, XI, 1238
oil development in Colombia, I, 156
oil possibilities of, in light of regional geology, XXIX, 495
outline of geology and development of petroleum fields, Peru, V, 585
petroleum geology of Colombia, XXIX, 1065
pipe lines in, GAS, 1091
prospective petroliferous basins and troughs of, XXIX, 558
Recent foraminifera from Atlantic Coast of, MSC, 12
Recent foraminifera from west coast of, MSC, 12
reconnaissance geology in state of Anzoategui, Venezuela, XXI, 233
references on oil possibilities of, XXIX, 561
references to tectonic maps, CD, 126
sediments of, RMS, 225
southern, XXIX, 497
southern, paleogeographic features of, XXIX, 496
upwelling near, RMS, 126
South America and Africa, similarity of coasts an argument against drift theory, CD, 80
South American and African geology, similarities and dissimilarities of, CD, 120
South American cordillera, general outline of geological history of, XXIII, 1420
South American Oil Company, Boone 1 (well 370), SBP, 292-335, 409
South Anahuac field, XXIII, 880
South arch, PROB, 702; XXIX, 1265
Ruerdon formation in, XXIX, 1280
Sawtooth formation in, XXIX, 1275
Swift formation in, XXIX, 1285
South Arkansas, gas fields in, XXVI, 1254
South Arkansas and North Louisiana, developments in 1941, XXVI, 1250
South Arkansas stratigraphy with emphasis on older Coastal Plain beds, XXII, 953
South Atlantic, biologic relations in, XXIII, 1667
distribution of basins in, XXIII, 1667
South Atlantic Ocean favorable for study of relationship of sediments to environment, XXIII, 1666
South Atlantic Ocean, sediments of, XXIII, 1666
South Belridge field, XXVII, 871
California (well 22), SBP, 130-153, 403
South Bend, Texas, Marble Falls production in, XII, 97
South Bend field, V, 503
South Bend pool, XXIII, 848, 854
South Bright, RMS, 290, 292
South Blackwell field, Oklahoma, STR I, 158, 171
South Blue Springs field, XXV, 1407
South Buckeye field, sections through, showing stratigraphic relationship of oil and water zones, XXIV, 1972

(South)

- showing contours on base Bell shale, XXIV, 1956
South Buckeye pool in Gladwin County, Michigan, XXII, 663
South Burbank and Burbank oil fields, Osage and Kay counties, Oklahoma, map showing initial daily yields of wells, XXV, 1176-1177
significance of initial daily production of wells in, XXV, 1175
South Burbank pool, Osage County, Oklahoma, XXI, 560
production at, 561, 566
wells, XXI, 564
South Burbank sand bar, XXI, 565
South Burnell field, Bee County, Texas, XXII, 755
South Buttonwillow dome, XXVII, 870
South Caesar field, XXVII, 743
South Carolina, MSC, 239; RMS, 209; XXII, 807
Cretaceous of, XXII, 808; XXIX, 918
map, XXIX, 917
oil and gas at Summerville, XXII, 801
Triassic in, XXIX, 918
Vicksburg group in, GC, 358; XIX, 1162
subsurface stratigraphy, XXIX, 917
South Casper Creek field, Tensleep water in, XXIV, 1298
South Casper Creek structure, Sundance water in, XXIV, 1281
South Chenango field, XXVII, 733
South China area, Jefferson County, Texas, XIV, 1087
production from Frio sand in, XXIV, 1087
South Cotton Lake, XXII, 740
South Cotton Lake area, regional subsurface map, XXV, 1907
torsion-balance maps of, XXV, 1900, 1902
South Cotton Lake field, Chambers County, Texas, XXV, 1898
cost of drilling at, XXV, 1913
development in, XXV, 1913
electrical log cross section through, XXV, 1908
Frio sand contour maps, XXV, 1914, 1916
geophysical exploration of, XXV, 1898
isopach map contoured on interval from *Heterostegina* limestone to Frio sand No. 1, XXV, 1918
Marginulina sand contour map, XXV, 1910, 1911
production at, XXV, 1905
stratigraphy in, XXV, 1920
structure and producing sands at, XXV, 1912
South Cowden field, gravity of oil at, XXV, 1050
South Crowley oil field, Acadia Parish, Louisiana, XXIII, 883; XXV, 1013; XXIX, 799
South Cut Bank field, section, XXIX, 1300
South Dakota, PROB, 275, 276
bearing of geologic features in, upon oil possibilities, VII, 507
Camp Crook, XXIV, 1111
correlation of sections from Yellowstone National Park, to Spearfish, XXI, 753
developments in 1939, XXIV, 1009
important dry holes in, XXVII, 859

- (South)
log of wildcat well in Pennington County, XXIII, 1234
Middle Jurassic in, XXIX, 1019
Minnelusa of Black Hills of, XIV, 619
oil possibilities, VI, 44, 496, 551; VII, 507, X, 800
Ordovician fossils from upper part of type section of Deadwood formation, XX, 1329
possibilities of oil in western Dewey County, review, VII, 303
section, XXVI, 1573
southern, structure section, FOP, 79; XXV, 1511
structure in North Haakon County, review, X, 533
test in, during 1940, XXV, 1113
two deep water wells near Rapid City, XXVII, 646
Viola well core from, XXVI, 123
western, cross section of northeastern Utah to, XXIII, 1149
South Dakota and Wyoming stratigraphy, VII, 510
South Dayton salt dome, Liberty County, Texas, SD, 558; I, 45; IX, 655
South Dome, California (wells 19, 20), SBP, 130-153, 403
Ector County, Texas, XXIII, 1533
South Earlsboro field, Oklahoma (well 297), SBP 255-285, 408
South Electra fold, XXIII, 845
South Elk Basin, XXIX, 1600
South Elton, Louisiana, XXII, 743
South Fairport pool, PROB, 776, 777
South fields extending northward from Tuxpan River, XXVIII, 315
South fields ridge, MEX, 131, 203, 204
a fold, not a faulted structure, MEX, 220, 222
South Fitts pool, XXII, 1560
South fold, XXIV, 1052
South Foreland, RMS, 334
South Fork and Heart Mountain thrusts, Park County, Wyoming, XXV, 2021
Tertiary structural and stratigraphic history, XXV, 2045
South Fork thrust, XXV, 2030
base of, XXV, 2035
horizontal displacement of, XXV, 2031
map, XXV, 2032
map and cross sections showing remnants of Heart Mountain thrust and their relation to, XXV, 2024
sections, XXV, opp. 2034, opp. 2035
source of, XXV, 2038
South Fork thrust mass, structure of, XXV, 2035
South Fork Valley, structure in, 2031
South Geary dome, Cloverly, Dakota, and Lakota waters in, XXIV, 1267
South Groesbeck, GAS, 678
South Groesbeck field, Limestone County, Texas, XXIV, 1067; XXV, 1087; XXVI, 1055
South Groesbeck structure in Mexia fault zone, Texas, STR I, 339
South Heart section of Tertiary of Dakota basin, XXVII, 1577
South Houma field, XXIII, 884
South Houston anomaly, XXIX, 214
South Houston area, reflection seismograph survey, XXIX, 213
torsion balance gradient map, XXIX, 212
- South Houston field, Harris County, Texas, map, XXIX, 211
production at, XXIX, 210
South Houston salt dome and oil field, Harris County, Texas, geophysical history of, XXIX, 210
South Joaquin, Shelby County, Texas, 731
South Joiner gas area, GAS, 679
South Lake Charles field, XXIX, 795
South Liberty-Dayton, PROB, 123, 124, 144
South Liberty dome, Texas, GAS, 710
effect of character of rim syncline on production at, XX, 1422
South Liberty field, Oligocene production at, GC, 11; XVIII, 510
South Liberty Oil Company, SD, 564, 568
South McCallum anticline, XIII, 1281
South Mid-Continent, recent developments in, XXIV, 1025
South Moline pool, PROB, 293
South Mountain, California, SC, 98, XX, 1644
origin of Sespe formation of, XII, 743
Sespe deposits of, CAL, 155, 176; XIII, 493
South Mountain district, CAL, 42, 257
South Mountain field, California, PROB, 190, 742, 755, V, 459; VIII, 810
South Nemaha mountain area, Kansas, map of oil and gas fields, STR I, 55
South Noodle pool, XXVI, 1045, XXVIII, 837
South-north cross section from Pecos County through Ector County, Texas, to Roosevelt County, New Mexico, XXIV, 15
from Pecos County, through Winkler County, Texas, to Roosevelt County, New Mexico, XXIV, 29
South Olla field, XXVI, 1272
Wilcox producing sands, XXVI, 1273
South Oregon Basin, XXVIII, 797
South Overisel pool, XXIV, 986; XXV, 1131
South Pacific, MSC, 168. (See Pacific)
South Pampa pool, XXIII, 1007
South Park, Colorado, Permian algal reef in, XVII, 863
stratigraphy of northeastern and east-central parts of, XIX, 1339
South Park Oil Company, XXI, 989
South passes, RMS, 160, 164, 165, 169
South Permian basin, XXV, 102
West Texas, structural and stratigraphic development of, XVI, 189
West Texas and New Mexico, problems of Anadarko basin similar to those of, XXV, 74
West Texas and New Mexico, stratigraphic features of, XXV, 79
West Texas and New Mexico, structural features of, XXV, 75, 84
South Plains area, XXV, 103; XXVIII, 807
South Polar Basin, XXIII, 1667
South Ponca, PROB, 293, 821
South Roanoke, Louisiana, XXII, 742
South Sand Hills pool, XXVI, 1398
South Sandwich Swell, XXIII, 1667, 1671
South Santa Ynez fault, CAL, 49-51
South Shenango Township, Pennsylvania (well 415), SBP, 349-379, 410
South Sulphur area, Murray County, Oklahoma, areal geology of, XXIX, 189
- (South)
sections, XXIX, 190
South Tallmadge pool, XXV, 1131
South Texas, STRAT, 730
activities in 1937-1938, XXII, 750
condensate processed in, in 1940, XXV, 1042
Cretaceous fault line in, XXIX, 782
developments and status of oil reserves in, 1939, XXIV, 1069
South Texas, developments in 1938-1939, XXIII, 860
in 1942, XXV, 1037
in 1942, XXVII, 739
in 1943, XXVIII, 858
in 1944, XXIX, 777
South Texas, discoveries, deeper horizons, and extensions in 1943, XXVIII, 860
discoveries in 1940, XXV, 1039
discoveries in 1942, XXVII, 742
Eocene in, XXV, 1037
Jurassic in, XXIX, 1427
Lower Eocene trend in, XXIX, 783
map, showing pools developed prior to 1938 and pools discovered during 1938 and part of 1939, XXIII, 862-863
Miocene in, XXVI, 1005
oil and gas fields, XXIV, 1070; XXV, 1038, XXVI, 1002; XXVII, 740
oil and gas fields in, map, XXIV, 1808, XXIX, 778
Oligocene in, XXVI, 1005
post-Eocene in, XXV, 1037
pre-Eocene in, XXV, 1037
pre-Trinity deposits in, XXVII, 1232
problem of pre-Trinity deposits in, XXVII, 1228
references on subsurface formations of, XXIX, 1468
Reynosa problem of, and origin of caliche, GC, 550
salt-dome region of, XXI, 1042
salt domes of, SD, 718, IX, 536
sand lensing in, XXVII, 744
structural features of, XXI, 1042
subsurface Lower Cretaceous formations of, XXIX, 1416
surface fracture system of, GC, 251; XVII, 1194
Upper Eocene in, XXIX, 783
South Texas basin, salt domes in, XXVII, 1244
South Texas coastal plain, regional structure of, GC, 288; XIX, 335
South Texas district, developments in, 1936-1937, XXI, 1042
future prospects in, XXI, 1047
subdivisions of, XXI, 1047
South Texas dome, normal stratigraphic section, IX, 556
South Texas domes, SD, 719, 721, 728, 738, 771; IX, 536
bibliography, IX, 589
geology of, IX, 546
map, IX, 537
physiography of, IX, 539
South Texas fields discovered in 1943, XXVIII, 859
discovered in 1944, XXIX, 780
South Texas Geological Society, annual meeting, October, 1940, XXIV, 1864
field trip, XXIV, 2066
student awards, XXIV, 194, 2019, 2021; XXV, 1607
South Texas pools, production at, XXIX, 782

- South Texas Section, American Association of Petroleum Geologists ninth annual mid-year meeting, San Antonio, November, 1937, XXI, 1615
- South Tyler field, Smith County, Texas, XXVIII, 1646
- gravity of oil at, XXIX, 770
- South Vernon field, Texas, STR I, 294-302
- South Vernon fold, XXIV, 1052
- South Veinon pool, Texas, STR I, 299
- South Wells limestone member, PTNM, 580; XXVI, 580
- South Willow Creek, waters in, XXVI, 1373
- South Zealand field, XXVII, 833
- South-central Michigan, oil production in, XXII, 408
- South-Central Plateau of Mexico, XX, 1291
- South-central United States, Permian-Carboniferous orogeny in, XV, 991; XVI, 102
- Southeast Brame pool, Oklahoma, XXIII, 831
- Southeast Extension, Hewitt field, Oklahoma, STR II, 297
- Southeast Greeley field, XXVIII, 743
- Southeast Mt. View field, California, XXIV, 1118
- gravity of oil at, XXIV, 1118
- Southeast Pass, Louisiana, RMS, 169
- Southeast Stroud pool, XXVIII, 781
- gravity of oil at, XXVIII, 782
- production at, XXVIII, 782
- Southeast Texas, GC, 676
- stratigraphic section, GC, 718; XVII, 1372
- Southeastern Illinois oil field, PROB, 559, 560, 564, GAS, 819, 822, 825, XXIII, 815
- production at, XXI, 782
- statistics, PROB, 565
- Southeastern New Mexico and West Texas, map showing fields and wildcats, XXV, 1058
- Southeastern states, developments in 1944, XXIX, 815
- distribution of rocks at surface in, XXVII, 904
- references on developments in 1944, XXIX, 834
- Southeastern United States, Cretaceous in, FOP, 144; XXV, 1576
- development map, XXVI, 996
- developments in 1941, XXVI, 991
- development in 1942, XXVII, 990
- developments in 1943, XXVIII, 801
- map, FOP 144; XXV, 1576
- Oligocene stratigraphy of, XXVIII, 1313
- possible future oil provinces of, FOP, 143; XXV, 1575
- trend of geophysical activities in, XXVI, 996
- Upper Cretaceous in, XXVII, 905
- Southern Alberta, STRAT, 273; XXIX, 654
- Southern Brazil, geological map of, XIX, 1775
- Southern California, MSC, 16, 133-135, 168, 169, 235; RMS, 95, 136, 219, 220, 258-266
- application of barred-basin theory in, XXI, 1139
- as a structural type, XXI, 549
- Chico in, CAL, 119
- continental shelf of, CAL, 1, 3, 9, 31
- correlation, CAL, 230, 231, 303
- (Southern)
- development in, since 1923, XII, 625
- Eocene in, CAL, 122, 144
- generalized tectonic map of, SC, opp. 146; XX, 1692
- geologic formations of part of, and their correlation, VII, 411
- map showing topographic and structural features, SC, opp. iii; XX, opp. 1529
- nitrogen in sediments of, RMS, 262
- Pliocene correlation, CAL, 230, 231
- post-Pliocene diastrophism of, CAL, 3, 255
- pre-Mariposa granitoid rocks in mountains of, CAL, 95
- rifts of, CAL, 39
- stratigraphic features of Reef Ridge shale in, XXIII, 24
- structural evolution of, MSC, 91, 158, SC, iii, 5, 136; XX, 1529, 1551, 1682
- tectonic map, SC (in pocket)
- tectonic provinces of, XXI, 550
- Tertiary provinces of, XXI, 550
- Upper Miocene of, MSC, 17
- Southern California and East Indies, parallels in structural evolution of, XXI, 553
- Southern California basins, RMS, 260
- compared with Eel River basin in Northern California, XXI, 552
- Southern California coast, RMS, 254
- map of, RMS, 247
- water temperature of, CAL, 291
- Southern California dynamic topography off coast of, RMS, 116
- Southern California geology, and Los Angeles earthquakes, CAL, 9, 39, 91
- Southern California tectonic provinces, SC, 3, map in pocket; XX, 1549
- Southern Coast Ranges, CAL, 1, 11, 12, 64, 66, 94, 99, 198, 274, 292
- Southern Crude Oil Purchasing Company, XXV, 595
- Southern fields Mexico, GAS, 1002-1006; MEX, 20, 67, 107, 108, 140, 145, 203, 204, 216, PROB, 393, 398
- analyses of gases, MEX, 225
- buried topographic features, MEX, 162
- Colorado group waters in, XXVI, 1340
- Cretaceous history of, analogous with that of Sierra del Abra, MEX, 205
- El Abra limestone in, MEX, 36, 40
- gases in, MEX, 224
- occurrence of volcanic plugs in, MEX, 151
- of Montana, Cloverly formation waters in, XXVI, 1352
- pressures in, MEX, 229
- structure, MEX, 162
- subsurface compilation map of, MEX, Fig. 32 (in pocket)
- Tampico Embayment, GAS, 999
- Southern fields district, basaltic intrusions in, MEX, 149, 206
- Southern fields ridge, MEX, 52, 140, 203, 204, 206
- Southern Franciscan area, CAL, 28, 30, 31, 82, 84, 93
- Southern Gas and Fuel Company, GAS, 771
- Southern Gas Lines, Inc., GAS, 770
- Southern Gas Producing Company, GAS, 567
- Southern geosynclinal basin, SC, 112; XX, 1658
- Southern geosyncline, SC, 8; XX, 1554
- Southern Illinois, Coal Measures in, XXIII, 1385
- Southern Louisiana, subsurface Miocene of, XXIV, 435
- Southern Michigan, oil and gas production in, XXII, 411
- Southern Montana fields, PROB, 716
- Southern Natural Gas Corporation, GAS, 772
- Southern North Sea, petrological relations of sediments of, RMS, 343-347
- Southern oil fields, the mounds of, SD, 15
- Southern Pacific Company, SD, 442, 502, 503
- Southern Peninsula of Michigan, geology of, XXI, 1599
- oil and gas fields in, XXII, 129
- Southern Permian basin, geography and geology of, XXI, 837
- Southern Petroleum Co., SD, 627, 628
- Southern Plains, gas reserves in, GAS, 21
- Southern Range anticline, Trinidad, XXIV, 2107, 2114
- Southern Salt Syndicate, SD, 380
- Southern states, exploratory wells in 1944, XXIX, 636
- Southern States Company, Inc., GAS, 784
- Southern Union Gas Company, GAS, 381, 572
- Southern Ute dome, GAS, 381
- Southern Ute structure, PROB, 933
- Southwell, J. H., XXV, 1220
- Southwest passes, Louisiana, RMS, 160
- Southwest Strait, CAL, 165
- Southwestern Association of Petroleum Geologists, historical sketch of the organization, I, 6
- Southwestern district of Michigan, map, XXV, 1127
- Southwestern Colorado section of La Plata sandstone, analysis of, XXV, 1746
- Southwestern Gas Company, GAS, 501
- Southwestern Illinois, Coal Measures in, XXIII, 1382
- Southwestern Michigan, developments, in 1940, XXV, 1129
- in 1941, XXVI, 1109
- Southwestern Petroleum Company, Garrison 1 (well 351), SBP, 292-335, 409
- Southwestern states, production of sodium sulphate in, XXV, 159
- Southwestern United States, decline of Great Basin, XVI, 1
- symposium on Pennsylvanian and Permian stratigraphy of, XIII, 883
- Soviet Council of petroleum industry, geologic and technologic work of, review, VII, 447
- Soxhlet extraction, modification of, SBP, 65, 66
- of fluid from core, XXVII, 67
- Soxhlet extractor, RMS, 594
- for porosity determinations, VIII, 734; X, 998
- Soyster and Taylor, XIX, 518
- Spa Peak, XXIV, 1555
- Space arrangement of components in crinoidal sediment, XXVI, 1715
- Space lattices, RMS, 617
- Spacing, close, economic importance of, XXVIII, 239
- closer, in certain California fields in 1942, permission for, XVII, 863

- (Spacing)
 economic, of oil wells, XIX, 876
 in repressuring work, XXII, 192
 of new wells, XXII, 1086
 of wells in Bend Arch district, GAS, 648
 of wells in New Mexico in 1940, XXV, 1046
 of wells in West Texas in 1940, XXV, 1046
 wide, in Keokuk pool, XXIII, 245
 Spacing and intensity of interference figures of minerals, RMS, 620
 Spacing pattern, Anse la Butte dome, XXVII, 1130
 for Saxet field, XXIV, 1834
 rigid, difficulties in unfavorable structural locations, XXVIII, 249
 Spacing plan in Greenwich pool, XXIII, 644
 Spacing programs for gas production, XXV, 1293
 Spacing-recovery relationships, Texas fault-line fields, XXVIII, 245
 Spacing rule, 40-acre, effect in curtailing production, XXVI, 1072
 Spadra shale, XVIII, 1052
 Spain, E. L., Jr., XXVII, 1041
 Spain, E. L., Jr., and Wilson, Charles W., Jr., age of Mississippian "Ridgetop shale" of central Tennessee, XX, 805
 Upper Paleozoic development of Nashville dome, Tennessee, XX, 1071
 Spangler, W. B., XXVI, 1657
 Spanglard limestone, STRAT, 445
 Spanish Needle Creek field, GAS, 832
 Sparks, Dale Darnell Dolsun, memorial of, XXII, 627
 Sparks, L. N., Survey, Texas (well 348), SBP, 292-335, 409
 Sparks fault, GAS, 349; XIV, 1018, 1030
Sparsicostata zone, MSC, 113
 Sparta, electrical logs, typical, XXIV, 703
 Sparta and Wilcox, high percentage of wells carried to, productive, XXIV, 705
 Sparta and Wilcox cores, analysis of, XXIV, 710
 Sparta and Wilcox sand development, section from Caldwell Parish to southern Evangeline Parish including logs from Eola and Ville Platte field wells showing down dip extent of, XXIV, 1902
 Sparta beds, GC, 765; XX, 76; XXV, 1375
 Sparta field, GAS, 832, 833
 Sparta formation, XXII, 1508; XXIII, 299
 in south Arkansas, XXII, 981
 Monroe field, GAS, 747
 (Tca) (Eocene), SBP, 337-349, 415
 Sparta oil field, typical, Ville Platte, Evangeline Parish, Louisiana, XXIV, 706
 Sparta producing sands, porosities of, XXIV, 711
 Sparta-Queen City zone, XXIII, 1410
 Sparta sand, SD, 333; XXV, 1379; XXVII, 734; XXVIII, 273; XXIX, 26, 40, 790, 800
 Bellevue field, Louisiana, STR II, 242
 fresh water from, XXIX, 41
 Homer field, Louisiana, STR II, 201
 Louisiana, GC, 393; X, 236, 281; XVII, 623
- (Sparta)
 producing, photomicrograph of, XXIV, 712
 Urania field, Louisiana, STR I, 95
 Ville Platte field, Louisiana, XXII, 738
 Sparta-Wilcox production, XXIII, 877
 Sparta-Wilcox, productive updip from and within Conroe zone in Texas and Louisiana, XXIII, 874
 Sparta-Wilcox trend, XXV, 1365
 Eocene correlation chart, XXIV, 702
 Texas and Louisiana, XXIV, 701
 Sparta-Wilcox trend map; old and recent Sparta-Wilcox fields, XXIV, 714
 Spath, L. F., XIV, 299; XXVII, 262, 271, 1483, 1504, 1517, 1519; XXVIII, 1157; XXIX, 1021, 1022, 1023, 1467
 Spavinaw district, Oklahoma, pre-Cambrian in, XXV, 1625
 Spavinaw granite, IV, 174
 Oklahoma, new evidence concerning age of, XXVII, 1626
 Spavinaw section of Osage, XXIII, 333
 Speakers service, XXIII, 1597
 Spear, SD, 595
 Spearfish formation, XXVI, 1563
 Spearfish redbeds, XXVI, 349
 Spears, Walter, XXVII, 1410; XXIX, 1417
 Special features of sediments, RMS, 409-524
 Species, diagnostic, of *Operculinoides* zone, XXIV, 441
 guide, in Eocene formations, MEX, 106
 Specific gravities and collapsing pressures, mud laden fluids and tables on, review, VI, 382
 Specific gravity, RMS, 542-552, 595
 effect of, on sorting, RMS, 33, 38
 high, of crudes from Boryslaw sandstone, XXI, 1190
 in cores, determination of, XXVII, 81
 of crude oils of Gulf Coast, depth variation of, XXI, 924
 of heavy liquids, RMS, 596
 of oil, MEX, 107, 173, 179, 181, 184, 196, 197, 200, 202, 209, 210, 216, 219, 223. (See Gravity of oil)
 of sediments, RMS, 178
 or A P I. gravity, most widely used standard for preliminary grading of petroleum, XXI, 1464
 Specific-gravity measurements, results of, XXVII, 81
 Specific-gravity relations at Belle Isle, XV, 1342
 Specific heat, RMS, 71, 74
 of water, RMS, 68
 Specific volume, RMS, 62, 110, 113
 Speck Mountain bed, III, 143
 Spectroscopic methods, RMS, 603
 Speechley horizon, PROB, 478
 Speechley sand, PROB, 476; IV, 29; V, 83, 366
 Scenery Hill gas field, Pennsylvania, STR II, 449
 Speed, SD, 595
 Speed, Carleton D., Jr., application of name "Ferguson Crossing dome," Brazos and Grimes counties, Texas, XXIII, 1092
 La Blanca structure, Hidalgo County, Texas, XXI, 947
 report of resolutions committee for 1939-1940, XXIV, 940
 restriction of name "Carlos," Grimes
- (Speed)
 County, Texas, XXIII, 1091
 Sejita structure, Duval County, Texas, XXIV, 482
 suggestions for organization of study groups, XXIII, 1715
 Speedometer and plane table, elevations with XXVIII, 1534
 Speeds member, XXV, 687
 Spellacy anticline, PROB, 200
 Spencer, Arthur C., II, 134; XII, 823; XVIII, 944, XXIII, 1090
 Spencer, Arthur C., and Goldman, Marcus I., correlation of Cross' La Plata sandstone, southwestern Colorado, XXV, 1745
 Spencer, E. M., Pierce, H. A., XIX, 1229
 Spencer, J. W., XII, 135; XVI, 36, 37
 Spencer pool, XXVI, 1019
 Spergen limestone in Washington County, Indiana, XXIV, 811
 Spens, P. A., XXI, 238
 Spethmann, Hans, RMS, 298, 319
 Spezia, Giorgio, SD, 469
 Sphaeroidininae, MSC, 342
 Sphalente, PROB, 656
 Spene, RMS, 602; XXVII, 175; XXVIII, 87
Sphenopteris beds in Australian Coal Measure series, flora of, XXV, 378
 Spherical particles, settling velocity of, RMS, 542
 Sphericity of pebbles, RMS, 35-38, 40
 Sphericity and roundness of Lowe granodiorite pebbles from Arroyo Seco, XXIX, 1240
 view of sand grains illustrating concepts of, XXIX, 1236
 Spice, Wm. H., Jr., developments in South Texas in 1943, XXVIII, 858
 Spicer, H. Cecil, XXI, 1193
 rock temperatures and depths to normal boiling point of water in the United States, XX, 270
 Spicules, RMS, 287-289
 of Bigfork chert, XXI, 8
 Spieker, Edmund M., SBP, 196; XII, 25, XXII, 1261; XXIII, 663
 petroleum geology of part of western Peace River district, British Columbia, VI, 112
 problem of secondary tilt—Harker's solution corrected, XXII, 1255
 radio transmission and geology, XX, 1123
 review, VII, 443
 Spieker, Edmund M., and Reeside, J. B., Jr., XIX, 1498, 1500
 Spielmann, Percy E., genesis of petroleum, review, XII, 454
 Spilker, A., and Kramer, G., X, 898; XVII, 1253
 Spiller pool, XXIII, 864
 Spiller sand, XXIV, 1665
 Spindle, J. E., STRAT, 239
 Spindletop, Jefferson County, Texas, PROB, 111, 112, 114-116, 118, 119, 121, 126, 128, 132, 144-148, 151, 153, 166, 670; GAS, 707
 evidence against vertical migration of crude oil at, XXI, 937
 variation and migration of crude oil at, GC, 309; XIX, 618
 Spindletop crude oils, GC, 309, 311; PROB, 113, 152, 153; XIX, 618, 620; XXI, 488
 Spindletop dome, Jefferson County, Texas, an example of a field with three types of production, STR II,

(Spindletop)

- 683
 Beaumont clays of, XXI, 478
 Dakota water in, XXIV, 1263
 geology of, XXI, 478
 Pleistocene of, XXI, 478
 sections, XXI, 485-487, 489
 Sundance water in, XXIV, 1281
 typical cap-rock production at, GC, 3; XVIII, 502
 Spindletop field, Jefferson County, Texas, faulting at, XXI, 488
 stray sands at, XXI, 488
 subsurface map of, XXI, 481, 483
 topographic map of, XXI, 479
 typical section of flanks of, XXI, 482
 Spindletop gushers, record of, XXI, 476
 Spindletop oil field, Jefferson County, Texas, XXI, 475
 Spindletop pool, I, 47, III, 87; IV, 10; V, 212, 245, 333, 445, 689
 flank production in, XX, 526, XXI, 478
 review, VI, 383
 Spindletop salt dome and oil field, Jefferson County, Texas, SD, 478, IX, 594
 Spinel, RMS, 602; XXVIII, 86
 Spiral faecal pellets, RMS, 518
Spirifer arenosus zone, XXIV, 1988
Spirifer beds, XXIV, 262
Spirifer mosquensis stage, XXIV, 248
Spirifers, XXIV, 792
Spiroplectammina, MSC, 187, 189
 Spline swivel type of core drill, XIV, 575
 Splitting, sample, RMS, 528, 600
 Spofford, H. N., XVIII, 1525, XXVI, 1470
 Holly field, De Soto Parish, Louisiana, XXIX, 96
 Pecan Gap chalk: new localities in Red River and Bowie counties, Texas, XVI, 212
 review, XIX, 127
 Spokane, Washington, RMS, 471
 Sponge spicules, RMS, 332, 379; XXVII, 629
 Sponges, XXII, 908
 in Tamasopo limestone, MEX, 60
 Spooner, William Calvin, GAS, 774; GC, 44, 391, 393, 394, 396; PROB, 309, 417, 666; SD, 211, 219, 269; IX, 170, 905; X, 3, 11; XII, 1070; XIII, 683, 1338, 1341; XIV, 505, 832, 983; XV, 533, 535, 940; XVI, 177; XVII, 614, 616, 622, 623, 624, 627, 1049, 1460; XVIII, 1069, 1261, 1270, 1281, 1292; XIX, 698; XX, 821; XXI, 1272; XXII, 976, 1474, 1478, 1666; XXIII, 193, 1401; XXV, 1375, 1376; XXVI, 1472, 1487; XXVII, 1229, 1236, 1410; XXIX, 25, 35, 37, 40, 1417
 development in southern Arkansas and northern Louisiana in 1938, XXIII, 896
 discussion of age of Gulf Border salt deposits, XVIII, 1292
 Homer field, Claiborne Parish, Louisiana, STR II, 196
 interior salt domes of Louisiana, SD, 269; X, 217
 oil and gas geology of the Gulf Coastal Plain in Arkansas, review, XIX, 575
 production in East Carroll Parish, Arkansas, XII, 765
 Rainbow City field, Arkansas, XII, 763, 952

(Spoon)

- salt in Smackover field, Union County, Arkansas, XVI, 601
 Stephens oil field, Columbia and Ouachita counties, Arkansas, STR II, 1
 Spooner, William Calvin, and Hull, Joseph Poyer Deyo, oil and gas pools of north Louisiana, VI, 179, 259
 "Sporbo" from California Miocene, RMS, 522
 Spoiro shale, XVIII, 454
 Spore shale from Alaska, XIII, 832
 Spot-plate method of determining calcium carbonate, SBP, 79
 Spraragen, L., magnetometer survey of Louisiana, review, XIII, 1494
 Spratt, J. Grant, GAS, 260; XIX, 1433; XXIV, 1622
 stratigraphy of Colorado shale in southern plains of Alberta, ALTA, 43; XV, 1171
 Spratt, J. Grant, and Taylor, Vernon, XXIV, 1634
 Spray River formation, XXVII, 41
 Spread, degree of, in histograms, RMS, 588
 Sprengel tube, RMS, 596
 Spring Coulee well, stratigraphy of, ALTA, 137; XV, 1265
 supplementary paper, ALTA, 151; XV, 1279
 Spring Creek formation, XXV, 1653
 in Tennessee oil fields, STR I, 252
 Spring Creek limestone member, XXVIII, 1626
 Spring Creek oil field, Tennessee, STR I, 245, 252
 structure, XI, 914
 Spring Hill, West Virginia (well 428), SBP, 349-379, 410
 Spring Hill-Sarepta gas field, Webster and Bossier parishes, Louisiana, VII, 546
 gas production from, VIII, 555
 Spring Valley field, PROB, 169, 691
 Springer, Frank, XXV, 2109; XXVI, 4, 13, 1193
 Springer, Frank, and Wachsmuth, Charles, XXV, 2109
 Springer formation, GAS, 593; VI, 7; XXI, 13; XXV, 1665; XXVII, 802
 Ardmore basin, XVIII, 1021
 Springer series, XXIX, 142, 144
 Springer shale, XXV, 11
 Springfield coal No. 5, XXVI, 1590
 of western Illinois, XXIII, 1390
 Springfield plateau, GAS, 539, 546
 Springs and mounds, SD, 264
 Springvale manjak vein in Barbados, XXIV, 1576
 Springfield shale, XXIV, 788
 Sproule, XXII, 1149, 1150
 Sproule, J. C., XXIX, 1617
 discussion of *in situ* theory of origin of oil in McMurray sands, XXII, 1152
 origin of McMurray oil sands, Alberta, XXII, 1133
 Sprunk, G. C., XXVII, 1206
 Spud sampler, RMS, 639
 Spur well, I, 95
 Spurger field, Tyler County, Texas, GAS, 728; XXII, 738
 Spurrier-Riverton oil field, Tennessee, STR I, 245, 250; V, 168, 652
 structure, XI, 912
 Squaw Bay dolomite (Saginaw sand) productive in Buckeye field, XXIV, 1965

- Squaw Bay formation productive of oil in eastern and central parts of Michigan basin, XXVII, 594
 Squaw Bay limestone, fossils of, XXVII, 594
 section, XXVII, 594
 Squaw Bay limestone and dolomite member of Traverse formation, XXVIII, 183
 Squaw lenticular sand productive in Appalachian region, XXV, 803
 Squaw sand, PROB, 460, 494, 501, 506; V, 404
 Scenery Hill gas field, Pennsylvania, STR II, 446
 Square Lake field, XXIX, 751
 Squeeze cementing, XXIV, 1374
 Squeeze job, method of conducting, in well, XXIII, 1662
 Squeezing of sediments, relation to accumulation, PROB, 305
 Squeezing out to the side, greater in silica than in sial, CD, 191
 Squirrel sand, VI, 471
 Ssachanoff, A., and Wirabianz, XV, 620
 Stability of a suspension, RMS, 535
 of deep water, RMS, 91
 of ocean, RMS, 59
 Stabilization and conservation, distinction between, XXII, 572
 Stable bottom profile of equilibrium, RMS, 9
 Stabler, Herman, PROB, 869, 935, 941; IX, 929, 944; XVIII, 1455; XXIV, 1215, 1221; XXVI, 1318, XXVII, 419
 Stabler, Herman, and Dole, R. B., XXII, 1350
 Stach, Erich, *Kohlenpetrographisches Praktikum*, review, XII, 868, 953
Lehrbuch der Kohlenpetrographie, review, XX, 830
 Stadler sand, XXV, 814
 Stadnichenko, Taisia, XV, 83; XVII, 50, 1231; XIX, 594, 597, 603, 606, 610, 613; XXII, 771; XXVII, 1195
 geographic names of Russian Sakhalin, discussion, XI, 307
 memorial to David White, XX, 630
 microthermal studies of some "mother rocks" of petroleum from Alaska, XII, 823
 review, XX, 830
 some effects of metamorphism on certain debris in source rocks, XV, 161
 Stadnichenko, Taisia, and White, David, GAS, 937, 938
 microthermal observations of some oil shales and other carbonaceous rocks, X, 860
 Stadnikoff, G., PROB, 43, 44; SBP, 2; XV, 612, 622; XX, 283, 289, 293, 294; XXIX, 1743
 Stadnikoff, G., and Weizmann, A., XV, 623; XVII, 1253
 Stefanini, G., XIX, 533
 Stafford, C. J., XIX, 1406
 Stafford, C. F., III, 349
 Stafford County, Kansas, Zenith pool, STRAT, 139
 Stafford pool, XXV, 1109
 Stage, MSC, 10
 significance, MSC, 90, 93, 96
 terms for subdivisions, MSC, 90
 Stage and zone, differentiation, MSC, 94
 Stages in Cretaceous, paleontologic record for, XXVII, 268
 procedure followed in defining,

(Stages)

- XXVII, 268
stratigraphic demarcation of, XXVII, 267
- Stages of level of Great Salt Lake, XXII, 1316
- Stages and zones, Oppel's, MSC, 99
- Stagnant basins, RMS, 261, 357
- properties of, RMS, 96, 98
- Stagnant channels, RMS, 171
- Stagnant conditions, RMS, 266, 357-369
- Stagnant deposits, organic content of, RMS, 447-450
- overlying other sediments, RMS, 362
- Stagnant marine environments in Ordovician, RMS, 369
- Stagnation, RMS, 95, 167, 444
- causes of, in basins, RMS, 101
- completeness of, in Norwegian fjords, RMS, 360
- high degree of, in tropics, RMS, 100
- in tropical regions, RMS, 363
- of bottom waters, RMS, 260
- Stahlecker, and Von Huene, F., XIX, 1751
- Stainbrook, M. A., XXIV, 164; XXV, 2111, 2122; XXVII, 594
- Stainer, X, PROB, 998, XII, 798, 799, 800, 803; XVIII, 1165
- Staining of drill cuttings for calcite-dolomite differentiation, XXI, 949
- Stait, H. T., III, 312
- Stati, H. T., SD, 616
- Stalder, Walter, X, 712; XVIII, 1348; XXIX, 998
- gas on Marysville Buttes, Sutter County, California, XVII, 443
- memorial of Rudolf R. Pollok, XIII, 1237
- Monterey (Salinas) shales in Pine Canyon, Monterey County, California, VIII, 55
- new productive horizon in California, XV, 201
- 1941 supplement to Sutter (Marysville) Buttes development, Sutter County, California, XXVI, 852, 1155
- structural and commercial oil and gas possibilities of central valley region, California, XVI, 361
- Strainaker sand in South Blackwell field, Oklahoma, STR I, 172
- Stamey, R. A., and Judson, Sidney A., GC, 910; XX, 561
- overhanging salt on domes of Texas and Louisiana, GC, 141, XVII, 1492
- Stamey, R. A., Judson, S. A., and Murphy, P. C., GAS, 707; PROB, 663; XVII, 1493, 1515
- overhanging cap rock and salt at Barbers Hill, Chambers County, Texas, XVI, 469
- Stamey, R. A., Montgomery, J. C., and Easton, H. D., Jr., Greta oil field, Refugio County, Texas, GC, 648, XIX, 544
- Stamford, Nebraska (well 199), SBP, 194-243, 406
- Stamp, L. Dudley, geology of oil fields of Burma, XI, 557
- natural gas fields of Burma, XVIII, 315
- Stampian (Rupelian), MEX, 132
- Stamps fault, XXVI, 1259
- Stamps oil field, XXVI, 1259
- Standard of Cretaceous system,

(Standard)

- XXVII, 262
- Standard deviation, RMS, 574; SBP, 10
- Standard deviation units, RMS, 577
- Standard field, XXV, 1033
- Standard gas field, XXVI, 1273
- Standard Oil Company, GAS, 143; SD, 274, 291; XXI, 135, 983, XXII, 1659; XXVIII, 745
- of California, GAS, 118, 135, 175, 188, 198, 204, 205; SBP, 186; XXI, 580
- of California, 2-35-Q (well 17), 8-1-P (well 11), 21-7-Q (well 12), 51-17-Q (well 13), Armstrong 81-10-P (well 10), Carter 1 (well 153), Freeman 1 (well 36), Gerber 1 (well 26), Irvine 1 (well 95), Johnson 6 (well 171), Jones Community 6 (well 93), Koontz 7 (well 164), Sanchez 1 (well 144), South Whittier Community 1, 3 (wells 179, 180), Vance 1 (well 43), Walker 15, 16 (wells 169, 170), Weisel 13 (well 104), Whitehead 5 (well 97), SBP, 87-167, 403-406
- of Louisiana, GAS, 774; XXII, 721; XXIV, 1027
- of New Jersey, VII, 280
- of Texas, XXIV, 482
- Piedmont well No 1, check list of foraminifera from, MSC, 51
- Piedmont well No 1, faunules from, MSC, Fig. 14 (in pocket)
- Standard Oil Development Company, XXVI, 1656
- Standard Permian section of North America, XXIII, 1673, XXV, 80
- Standard Petroleum Company, GAS, 1002
- Standard section of a system, boundaries in, XXIV, 284
- character of, XXIV, 339
- inadvisability of excluding a promising series from, because non-marine and lacking distinctive fossil faunas, XXIV, 355
- inadvisability of excluding rocks of debatable systemic affiliations from, XXIV, 352
- Standardization in compiling and reporting data on oil reserves, XXVIII, 1217
- Standards in correlation, XV, 367
- Standing waves, RMS, 128, 129
- Stanford University, MSC, 3, 21-23, 33, 51, 54, 55, 119, 120, 124, 186, 247; SC, vii; XX, 1533
- Stanford University micropaleontological collection, MSC, 184
- Stanhope field, V, 276, 281
- Stanislaus County, CAL, 193
- Stanislawow district, Poland, XVII, 1096
- Stanley, E. R., XI, 159, 163
- Stanley, Leon, XXII, 1307
- Stanley, M. Wood, memorial of, XIII, 1089
- Stanley, T. B., Jr., XXIX, 23, 1170
- Stanley and Jackfork formations of Ouachita geosyncline, Arkansas and Oklahoma, age of, as indicated by plants, XVIII, 1010
- Stanley group, XXII, 853, 856
- of Ouachita Mountains, XXII, 864
- Stanley Mountain Franciscan, Nipomo Quadrangle, California, geologic map, XXVII, 199
- Stanley sand zone, XXIX, 823

- Stanley shale, III, 149, V, 549, 552, 566, 679; XVIII, 1033, XXI, 11, 1009, XXV, 1651
- age of, XXI, 12
- (Csl) (Pennsylvanian), SBP, 259, 261-280, 414
- fossils in, XVIII, 988, 989
- in Oklahoma, XI, 1320
- Pennsylvanian fossils from, XXI, 12
- plants from, XXI, 12
- Stanolind Oil and Gas Company, XXI, 876, XXIII, 686, 917, 922; XXIV, 45, 1031; XXV, 595, 1842; XXVII, 1155; XXVIII, 843, XXIX, 210, 706, 1028
- Bacon 1 (well 358), Harley 1 (well 321), Smith 1 (well 336), SBP, 292-335, 408, 409
- Mahoney 3 (well 227), SBP, 194-243, 406
- Stansbury Island, XXII, 1309
- Stanton, XV, 793
- Stanton, F. M., SBP, 21
- Stanton, T. W., CAL, 68, 98, 108, 112, 114; MEX, 59, STRAT, 275, VI, 113, 119, VII, 168, 368, 612; XI, 2, 241, 450, 747, 751, 753; XIV, 1071; XV, 412, 422, 425, XVIII, 1351, 1412, 1701, 1703, XXI, 432; XXII, 525, 535, 537; XXIII, 41, 1068, XXVII, 117, 191, 254, 280; XXVIII, 1184, 1189; XXIX, 1025, 1448
- stratigraphic names, XIV, 1070
- Stanton, T. W., and Diller, J. S., XVIII, 1350
- Stanton, T. W., and Hatcher, J. B., XV, 1135, 1187, 1198
- Stanton, T. W., and Turner, H. W., XXIV, 1729
- Stanton limestone, II, 121; V, 66, 546, 565, 568, 578, 580
- Stanton-Plattsburg-Iola group limestones, V, 276
- Staples, Larremore, and Lytton Springs line of faults in Guadalupe, Caldwell, and Bastrop counties, XXIX, 1734
- Staples-Lytton Springs fault, XI, 833
- Stapleton sand, V, 149; VI, 322, 374
- Stapleton zone in Eldorado field, Kansas, STR II, 166
- Stapp area, plane-table survey of, XXII, 894
- Stapp conglomerate member, XXII, 893
- Stappenbeck, Richard, PROB, 89; XIX, 1742, 1752; XXVIII, 1456, 1457, 1459, 1476
- Star-shaped domes in Emba salt-dome region, XXIII, 505
- Starches, PROB, 37; RMS, 443, SBP, 58
- Starfish, XXVI, 1195
- Stark, C. O., and Lounsbury, D. E., XXVIII, 579
- Stark, J. T., XIII, 1454
- Stark gas field, XXVI, 1081
- Stark-Summit County area storage pool, XVIII, 1573
- Starke, Eric A., memorial, XVIII, 967
- Starkey, R. L., RMS, 423; SBP, 22
- Starks, Louisiana, GAS, 711
- Starks field, Calcasieu Parish, Louisiana, XXIX, 798
- Hackberry foraminiferal zonation at, XXIII, 1835
- variation of A.P.I. gravity of oil at, with depth, PROB 115

- Starr and Hidalgo counties, Texas, XXI, 493
 Miocene, Pliocene, and Pleistocene formations in Rio Grande region, XXI, 491
 Starr-Hidalgo county line, Texas, XXI, 494
 idealized north-south section near, XXIX, 1729
 Stassfurt district, SD, 187; IX, 1247
 Stassfurt type of salt structures, SD, 190, 192; IX, 1250
 Staszic, XV, 14
 State of oxidation in a sediment, RMS, 95
 State Asylum No. 1, XXIII, 851
 State Bridge formation, iedbeds of, XXVI, 1397
 type section, XXVI, 1392
 State Consolidated Oil Company, GAS, 162
 State deep test well, Jackson gas field and, XXII, 1286
 State Defense Guards, the geologist and, XXVI, 282
 State Geological Surveys, classification of Mississippian and Pennsylvanian rocks by, XXIX, 127
 State Line field, Allegany County, New York, XXII, 253; XXV, 1144; XXIX, 668
 State Line gas field, Pennsylvania and New York, structure map of, XXII, 259
 State Line pool, XXVIII, 732
 State Mining Bureau of California, CAL, viii, 99, 276
 State surveys, more extensive field courses needed for training young geologists in petroleum geology, XXIV, 1388
 States of matter, CD, 20
 States Oil Corporation, XXVI, 1043
 Stathers, S. C., IX, 905; X, 242; XIV, 745; XXII, 1659
 Static pressure, PROB, 809
 Stationary conditions in ocean, RMS, 54, 106
 Statistical analysis, and graphic presentation, of sedimentary data, RMS, 193, 194, 558-591
 Statistical investigation of effects of structure upon oil and gas production in Osage, II, 407
 Statistical methods, SBP, 9-12
 Statistics on basis for locating exploratory holes in 17-states area, XXIX, 1585
 on oil reserves, map of United States showing status as to, XXIX, 1582
 on proved reserves and exploratory drilling in 17-states area, XXIX, 1584, 1586
 Staub, Rudolph, XV, 1048; XVII, 218; XXVIII, 781, 932; XXIV, 1606
 · *Bewegungsmechanismus der Erde*, review, XII, 1029
 Staub, Walther, MEX, ix, 131-133, 135, 136, 138-140, 143, 148, 161; XXIII, 1724
 zur Entstehungsgeschichte des Golfes von Mexico, review, XVII, 99
 Stauffer, Branson, and Mehl correlations for Glenwood-Joachim formations, XIX, 1115
 Stauffer, Clinton R., CAL, 63; GAS, 64; PROB, 366; XIX, 1114, 1115; XX, 1333; XXV, 810
 Minnesota's oil and gas possibilities, X, 190
 Stauff, J. Lauer, XII, 3
 memorial of, XVIII, 715
 Staunton Coal III, XXIII, 1389
 Staunton dome and gas field, GAS, 832
 Staurolite, RMS, 602, 609; XVIII, 1575; XXVIII, 86
 Staurolite zone, XXIV, 2096
 Staurolite zone assemblage of minerals, XXIV, 2088
 Stavropol district, gas in, XVIII, 752
 Steamboat Butte, gravity of oil at, XXVIII, 796
 Steamboat Springs, Colorado, outcrop section k, SBP, 243-255, 411
 Stearic acid, RMS, 422
 Stearn, Noel H., Hotchkiss superdip: a new magnetometer, XIII, 659
 Stearns, M. D., and Cook, C. W., XXII, 132, 135
 Stearns, Norah Dowell, XX, 705, 710
 investigations of law of flow under low gradients, XX, 705
 Stebinger, Eugene, PROB, 697; STRAT, 273, 274, 335; VII, 264, 610; XIII, 785, 792; XV, 1134, 1136; XXIX, 1267
 Steed, W. L., GAS, 997
 Steele, F. M., GAS, 2
 Steele formation, PROB, 171
 Steele, shale, PROB, 172; V, 204, 208; XXII, 1027; XXIV, 1231
 gypsum-bearing, XXIV, 1230
 in Lost Soldier district, Wyoming, STR II, 647
 (Klp. Kup) (Cretaceous), SBP, 193-197, 200-255, 415
 Steele shale waters, XXIV, 1313, 1314
 Steen dome, Texas, SD, 222, 231-234, 236; VI, 58; X, 23-29
 Steen-Palestine fault zone, XIII, 428
 Steen shale, SD, 212, 266
 Stefanescu, S., XVI, 1264
 Steffens pool, XXIII, 855
 Steffey, Robert L., XVII, 41
 Stehlé, H., XXIV, 1550
 Stehn, XXII, 3
 Stehr, R. A., New Hope field, Franklin County, Texas, XXIX, 836
 Steidtmann, Edward, XX, 1396; XXI, 949
 Steiger, G., XII, 913
 Stein, Aurel, XXIV, 751
 Stein, F. B., Calhoun field, Columbia County, Arkansas, XXIX, 459
 Stein, Ira H., XV, 409; XXIII, 1795
 Stein, Paul, *Leitfaden der Tiefbohrtechnik*, review, XVI, 616
 Stein sand in Centralia-Sandoval area, Illinois, STR II, 129
 Steinbeck and Carpenter, XII, 735
 Steinberger, C. R., and Kornfeld, M. M., Edna gas field, Jackson County, Texas, XXV, 104
 Steinberger Petroleum Corporation, XXV, 107
 Steinbrecher, H., Moos, A., Stutzer, O., and Enke, Ferdinand, *Deutsches Erdöl*, review, XVIII, 1092
 Steinecke, Max, CAL, 219
 Steiner, George, IX, 811
 memorial of, XV, 105
 torsion-balance principles as applied by original Eötvös torsion balance, X, 1210
 Steiner, L., Rotary-Bohrmaschinen und ihre Antriebe, review, XXI, 631
 Steinert, Kansas (well 242), SBP, 255-285, 407
 Steinkopf, W., and Zelinsky, XX, 290
 Steinmann, XXIX, 1076, 1087
 Steinmann, G., XVII, 212, 219; XXIX, 517
 Steinmeyer, R. A., bottom sediments of Lake Pontchartrain, Louisiana, XXIII, 1
 phases of sedimentation in Gulf Coastal Prairies of Louisiana, XIV, 903
Steinsals und Kalsalse, XXII, 1284
 Stelfox, Reichie S., memorial of, XVII, 1021
 Stella, XXV, 1012
 Stellwagen cup sampler, RMS, 638-639
 Stelzner, R., XXVIII, 1456
 Steno, Nicolas, MSC, 79, XXIV, 1752
 Stenzel, H. B., MEX, 113, 114; XXVI, 53, 262; XXVIII, 1320; XXIX, 1319, 1320, 1724
 new zone in Cook Mountain formation, the *Crassatella texalta* Harris — *Turritella cortezi* Bowles, XXIV, 1663
 Stenzel, H. B., Turner, F. E., and Hesse, J., brackish and non-marine Miocene in southeastern Texas, XXVIII, 977
 Stephens, Hal G., XXIX, 221
 Stephens, Wm. D., IV, 17
 Stephens and Eastland counties, Texas, geological structure of, IV, 159
 Stephens County, Oklahoma, deep well near Marlow, XXII, 1106
 Stephens County, Texas, developments during 1940, XXV, 1070
 gas in, XXVI, 1045
 geology, IV, 159
 gravity of oil in, XXVI, 1046
 relation of accumulation of oil to structure, STR II, 470
 relation of initial production to ultimate production of wells completed in Smithwick (Gray) limestone, Breckenridge field, XXV, 1589
 Stephens field, Arkansas, STR II, 1; XXVI, 1255
 properties of crude oil at, STR II, 14
 Stephens field, Texas, XXVIII, 837
 Stephenson, C. C., XXVIII, 948
 Stephenson, C. D., PROB, 774; XII, 707; XXI, 1542; XXIII, 562
 an oil field in T. 25 N., R. 8 E., Osage County, Oklahoma, STR II, 378
 Verden sandstone of southwestern Oklahoma, IX, 626
 Stephenson, Elizabeth E., reviews, XX, 228; XXII, 222
 Stephenson, Eugene Austin, GAS, 1017, 1027, 1101, 1106; SBP, 357; XVII, 1536; XXII, 1441
 memorial of Leon J. Pepperberg, XXI, 970
 reviews, XVII, 1148; XXII, 1693
 Stephenson, Eugene Austin, and Amstutz, P. T., Jr., optimum producing rates for Arbuckle limestone wells, review, XXIX, 1783
 Stephenson, Eugene Austin, and Bennett, Holly Reed, decline and production of Ranger field, IV, 221
 open-flow gauge and working capacity of gas wells, IX, 217
 Stephenson, Eugene Austin, and Davis, Ralph E., synclinal oil fields in southern West Virginia, STR II, 571
 Stevenson, J. J., PROB, 12
 Stephenson, Lloyd William, GAS, 654; MEX, v, ix, 23, 31, 41, 44, 47, 59, 67, 71, 72, 100, 101, 110, 124;

- (Stephenson)
 PROB, 331, 382, 665, 666, 779, RMS, 243; SD, 211, 214, 229, 239, 240, 247, 248, 249, 257, 258, 265, 266, 273, 300; STRAT, 615; IV, 127; VI, 331; VII, 367, 612; IX, 137, 168, 1159; X, 3, 21, 31, 32, 39, 41, 49, 50, 57, 58, 221, 248; XI, 3, 11; XII, 41, 42, 1011; XIII, 683, 684; XIV, 789, 853, XV, 532, 549, 794; XVI, 205; XVII, 41, 46, 489, 1003, 1005, 1007, 1008; XVIII, 989, 1067, 1068, 1246, 1253, 1506, 1507, 1512, 1519, 1523; XIX, 335, 336, 1362; XXI, 807; XXII, 803, 806, 810, 811, 1649; XXV, 1224, XXVI, 36, 43, 49, 54, 55, 56, 57, 165; XXVII, 262, 276, 596, 597, 1060; XXVIII, 328, 524, 1129, 1134, 1136, 1147, 1180, 1679, 1718, XXIX, 81, 83, 175, 886, 916, 919
 age of Brownstown marl of Arkansas, discussion, XIII, 1073
 chance of more oil in southwestern Texas, VI, 475
 fossils from limestone of Buda age in Denton County, Texas, XXVIII, 1538
 identification of fossils of Gulf Coastal Plain, X, 39
 notes on stratigraphy of Upper Cretaceous formations of Texas and Arkansas, XI, 1
 Prairie Bluff chalk and Owl Creek formation of eastern Gulf region, XXI, 806
 significance of Upper Cretaceous fossils from wells in Mississippi, XXIX, 1008
 stratigraphy of Upper Cretaceous formations of Texas and Arkansas, discussion, XI, 308
 summary of faunal studies of Navarro group of Texas, XXV, 637
 Taylor age of San Miguel formation of Maverick County, Texas, XV, 793
 unconformities in Upper Cretaceous series of Texas, XIII, 1323
 zone of *Exogyra cancellata* traced twenty-five hundred miles, XVII, 1351
 Stephenson, Lloyd William, and Dane, C. H., notes on Taylor and Navarro formations in east-central Texas, XII, 41
 Stephenson, Lloyd William, and King, P. B., XXI, 806
 Stephenson, Lloyd William, and Monroe, Watson H., XXVII, 606
 stratigraphy of Upper Cretaceous series in Mississippi and Alabama, XXII, 1639
 Upper Cretaceous deposits in Mississippi, review, XXV, 1601
 Stephenson, Lloyd William, and Reese, John B., Jr., comparison of Upper Cretaceous deposits of Gulf region and western interior region, XXII, 1629
 Stephenson, Lloyd William, and Veatch, A. C., VII, 380
 Stephenson, Lloyd William, and Veatch, J. O., XXIX, 920
 Stephenson, Lloyd William, and Veatch, Otto, XXII, 796; XXVII, 596; XXVIII, 998
 Stephenson, Lloyd William, et al., XXIX, 929
 Stephenson, Lloyd William, Adams, George I., Butts, Charles, and Cooke, Wythe, PROB, 666
 Stephenson, Lloyd William, Logan, William N., and Waring, Gerald A., PROB, 666
 Stephenson, Lloyd William, Ross, Clarence S., and Miser, Hugh D., XVII, 772
 Stephenson, M. B., XXVIII, 980, 981
 Stephenson, R., XVII, 1305
 Stereogram correlations in South Permian basin, XXV, 81
 Stereograms, XXVI, 221
 Lewis, to show correlation of upper Permian sedimentary rocks of West Texas and New Mexico, XXIV, 13
 used in interpretation of problems of Permian basin, XXV, 74
 Stereographic net, meridional, XXII, 1263, 1267
 polar (equatorial), XXII, 1264
 Stereographic net and new mathematical solutions to problem of two tilts—with applications to core orientation, XXIII, 663, 671, 674, 675
 Stereographic projection, XXII, 1267
 problem of two tilts and, XXII, 1261
 Stereoscopic instruments, XXIX, 1761
 Stereoscopic vision with overlapping contact prints, XXIX, 1756
 Sterile waters, relation of, to plant and animal life, RMS, 357
 Sterling Oil and Refining Company, XXI, 948
 Sterlitamak district, XXII, 759
 Sterlitamak oil field, columnar section of well in, XXVI, 406
 Sterlitamak region, Artinsk microfaunas of, XXIV, 261
 Sternberg, C. M., XI, 249
 Sterry field, XXVIII, 743
 Stetson, Harlan True, earth, radio, and the stars, review, XVIII, 1209
 Stetson, Henry C., RMS, 1, 209, 231, 241, 632, 636, 650, 662
 summary of sedimentary conditions on continental shelf off east coast of United States, RMS, 230
 Stetson-Iselin sampler, RMS, 661
 Stetson modified biological dredge, RMS, 637
 Stetson modified Mann sampler, RMS, 636
 Stetson rock dredge, RMS, 638
 Steuben, Allegany, and Cattaraugus counties, New York, map of oil fields, STR II, 270
 Steuben County, New York, Marsh pool, STR II, 269
 (well 412), SBP, 349-379, 410
 Steubing, William C., memorial of, XXVIII, 693
 Stevens, A. B., and Coberly, C. J., GAS, 1103; XXV, 1311
 Stevens, A. R., XXV, 853
 Stevens, Donald R., and Gruse, William A., chemical technology of petroleum, review, XXVII, 652
 Stevens, E. H., XXV, 2022, 2026, 2028, 2031, 2036
 Stevens, George, SD, 286; X, 234
 Stevens, George D., XXI, Pl. C, opp. 1086
 Stevens, George D., and Goldstone, W. L., Jr., Esperson dome, Liberty County, Texas, GC, 857; XVIII, 1632
 Stevens, John B., VIII, 613, XVII, 695, 711
 comparative study of San Joaquin Valley oil fields, VIII, 29
 Stevens, Grant, Haskell, and Seward counties, Kansas, and Texas County, Oklahoma, Hugoton gas field, STRAT, 78
 Stevens County, center of producing area in Hugoton field, XXIII, 1056
 Stevens porosimeter, XXV, 853
 Stevens sand, XXIII, 937; XXIV, 1027; XXIX, 651
 Stevens series, XXIX, 1379
 Stevens zone sand productive at Strand field, XXIV, 1118
 Stevenson, X.D., 1549
 Stevenson, C. D., XXIII, 1806
 Stevenson, Frank V., XXV, 2111, 2123, 2158, XXVIII, 831
 Onondagan equivalent in New Mexico, XXVII, 222
 Stevenson, J. J., I, 29, 149; XII, 804; XXIII, 1188; XXIV, 313, 321; XXV, 161
 Stevenson, L. W., I, 33
 Stevenson, Marj., PROB, 39, 41
 Steward's Mill field, XXVIII, 845
 Stewart, XX, 1559
 Stewart, Charles H., XVI, 385
 Stewart, Dan, XXVI, 18
 Stewart, H. A., STRAT, 327
 memorial of Henry Jessup Packard, XV, 106
 Stewart, Irvine E., memorial of Howard Walde Kitson, XVI, 115
 Stewart, J. S., STRAT, 301; XI, 239, 247; XII, 3; XVI, 789; XVIII, 1390; XIX, 1432, 1436, 1440
 Stewart, J. S., et al., SD, 611
 Stewart, Katherine C., XX, 1590; XXV, 1234
 Stewart, Murray, VII, 606
 Stewart, Philip Charteris Anstruther, memorial, VII, 321
 Stewart, Ralph B., CAL, 135, 145, 146, 156, 157, 158, 180; SC, 13; XXIV, 741; XXVI, 165; XXVII, 191, 1260; XXVIII, 485, 512
 Stewart, Ralph, and Woodring, W. P., GAS, 133
 Stewart, Roscoe E., XXV, 1234
 Stewart, Roscoe E., and Cushman, J. A., MSC, 79
 Stewart, Roscoe E., and Stewart, Katherine C., MSC, 28, 32, 79, 196, 201, 219, 221, 223, 239, 248, 253, 281, 282, 307, 316, 321, 328, 332, 334, 336, 345, Fig. 14 (in pocket)
 "Lower Pliocene" in eastern end of Puente Hills, San Bernardino County, California, XIV, 1445
 Stewart, Roscoe E., Cushman, J. A., and Stewart, K. C., MSC, 26, 193, 196, 211, 223, 230, 232, 240, 243, 251, 258, 260, 264, 266, 273, 288, 299, 301, 328, 330, 335, Fig. 14 (in pocket)
 Stewart field, XXVII, 744
 Stewart sand, GAS, 267
 Ster, K., SD, 201, 207
 Stigler anticline, GAS, 530
 Stiles, E., SD, 600
 Stiles, E., and Hager, D. S., Blue Ridge salt dome, Fort Bend County, Texas, SD, 600; IX, 304
 Stiles, Edward B., IV, 284; X, 703
 Stille, Hans, SD, 45, 46, 47, 118, 142, 164, 198, 200, 208; SC, ix, 49, 136,

- (Stille)
 141; IX, 326, 327, 440, 1228, 1258, 1260; XII, 113, 468, 471; XVII, 217; XIX, 806, 807, 1254, 1255, 1257, 1264; XX, 857, 876, 877, 1482, 1484, 1491, 1535, 1595, 1682, 1687, 1688; XXI, 279, 352, 1273, 1596; XXII, 1285; XXIII, 512, 1580, 1723; XXIV, 1588; XXV, 1403, XXVI, 806, 821, 823, 824, 829, 833; XXIX, 1078
 asymmetric folds with reference to German salt bodies, XVI, 169
 folding in salt domes, IX, 1258, 1260
Grundfragen der vergleichenden Tektonik, review, XI, 1123
 honorary member of American Association of Petroleum Geologists, XXI, 540
 present tectonic state of the earth, XX, 849
 60th anniversary volume, XXI, 352
 theory of cause of orogeny, CD, 6
 upthrust of salt masses of Germany, SD, 142; IX, 417
 Stille, Hans, and Schluter, H., European oil and gas occurrences and their relationship to structural conditions, XVIII, 736
 natural gas occurrences of Germany, XVIII, 719
 Stille, Hans, Lotze, Fr., Lemke, E., and Martini, H. J., *Geotektonische Forschungen*, review, XXI, 1357
 Stilley, Earl M., new pay at Rock Crossing, Wilbarger County, Texas, XXI, 525
 Stillman, XV, 457
 Stills, primary, XXVII, 1597
 secondary, XXVII, 1598
 Stillwater formation, XXI, 1520; XXIV, 1997
 Kansas, X, 792
 Oklahoma, X, 792
 Stimson, Jesse LeRoy, SBP, 6, 9; XXI, 1378; XXV, 1933
 Stinnett pool, XXIII, 1044
 drilled on seismograph prospect, XXVII, 760
 Stipp, Thomas F., CAL, 135; XXIV, 1215; XXV, 1228
 relation of foraminifera to origin of California petroleum, X, 697
 Stirling channel, XXV, 397
 Stirlon, R. A., MSC, 71, 133, 157, 173, 174; SC, 43; XIX, 526; XX, 1589; XXIII, 518, 533; XXVIII, 1003
 abstract, XXII, 1717
 Stith pool, XXV, 1080
 Stock, Chester, CAL, 155, 176, 181, 188, 222, 264, 266, 305; MSC, 152, 174; SC, 17, 27, 43; XII, 133; XIX, 526; XX, 223, 1563, 1589; XXIII, 518, 533; XXV, 195; XXIX, 958
 deep-well record of fossil mammal remains in California, XIX, 1064
 Stock Chester, and Bode, Francis D., SC, 28
 Stock, Chester, and Buwalda, J. P., XXVI, 165
 Stock, Chester, and Furlong, E. L., XII, 743
 Stock type of dome in Emba salt-dome region, XXIII, 503
 Stockdale, Paris B., XVI, 149, 644; XXIV, 767; XXV, 2127; XXIX, 136
 Mississippian formations, STRAT, 172, 198
 Stockdale black shales (Silurian) of (Stockdale
 Scandinavia and Great Britain, postulated origin of, XXIII, 1189
 Stockdale graptolite shales (Silurian) of Great Britain and Scandinavia, deposition in deep embayments, XXIII, 1182
 Stockfish, K., RMS, 199, 204; XXVIII, 725, 727
 Stockmen's sand, Turner Valley field, GAS, 45
 Stocks and laccoliths in Utah favorable for trapping oil and gas, XXVI, 197
 Stockweather bed, III, 143
 Stoddard, Amos, SD, 6, 395; IX, 837
 Stodder, Charles, XII, 1109
 Stokes, II, 151
 Stokes, G. G., RMS, 541, 542, 544, 545, 546, 550, 554
 Stokes, W. N., XVI, 1021
 Stokes' law, RMS, 542-548
 Stokes rotary drill, V, 520
 Stoll, Arthur, and Willstaetter, Richard, XIV, 1459
 Stoller, J., XII, 487; XVIII, 724, 725, 726, 727, 733
 Stone, Frederick, VI, 104
 Stone, R. W., PROB, 18; XXVII, 1181
 Stone, R. W., and Calvert, W. R., VII, 8
 Stone, R. W., and Strawinski, R. J., XXVII, 1179
 Stone Cameron field, V, 422
 Stone Corral anhydrite, XXIII, 1058
 Stone Corral dolomite, STRAT, 86, 96
 especially useful in reflection-seismograph prospecting, XXIII, 1775
 section across Rice, Reno, Kingman, and Harper counties, where it lenses out into redbeds, XXIII, 1778
 useful as key markers in redbeds of Kansas Permian, XXIII, 1775
 Stone Corral dolomite-anhydrite in western Kansas and adjoining states, XXIII, 1774
 Stone Corral dolomite ledge at type locality in Rice County, Kansas, XXIII, 1775
 Stone Corral member, Hugoton field, STRAT, 86, 98
 in Kansas subsurface, XXIII, 1781
 in Cimarron series, XXIII, 1767
 unconformable on Ninnescah, XXI, 1557
 Stone reef on coast of Brazil, XXIII, 563
 Stone reefs of Brazil, XXIII, 577
 features of Verden sandstone similar to, XXIII, 577
 Stonefort limestone coal, XXIII, 1385
 Stoner, O. E., XII, 1015, 1021
 Stones River field, V, 611
 Stones River group, V, 646, 654
 correlations of, XXIV, 1649
 in Tennessee, XXIV, 1647
 Stone's Switch sand, GC, 491; XVII, 1314
 Stonewall County, Texas, Aspermont pool discovery, XXIV, 1839
 Custer formation in, XXI, 461, 462
 Stonewall fault system, XXI, 1008
 Stonewall formation, XXVI, 347
 Stonewall quadrangle, Oklahoma, geology of, IX, 355
 Stonewall syncline, XXIV, 54
 Stony Creek field, POP, 119; XXV, 1551
 Stony Butte field, XXVII, 450
 Stony Creek field, GAS, 106, 107
 carbon ratio variations, PROB, 90
 Stony Mountain formation, XXVI, 347
 Stony River anticline, GAS, 993
 Stookey, D. G., XXV, 25
 Stookey, D. G., Weller, J. M., Wanless, H. R., and Cline, L. M., interbasin Pennsylvanian correlations, Illinois and Iowa, XXVI, 1585
 Storage, effect of, on operations of Consolidated Natural Gas Company, XXVIII, 1581
 Storage of gas, causes contributing to need for, XXIV, 1483
 resulting stability, XXVIII, 1583
 results of, by Peoples Natural Gas Company and New York State Natural Gas Corporation, XXIV, 1493
 underground—Farmington field—Tioga County, Pennsylvania, XXIV, 1493
 underground, in area near Murrysville, XXIV, 1488, 1492
 underground, our experience with, Manufacturers Light and Heat Company, Pittsburgh, Pennsylvania, XXIV, 1478
 underground, our experience with, The Peoples Natural Gas Company, XXIV, 1482
 underground—Salem, Penn., and Hempfield townships, Westmoreland County, Pennsylvania, XXIV, 1485, 1492
 Storage of natural gas in Appalachian area, XXVIII, 1583
 valuable to gas industry, XXVIII, 1595
 Storage of sediments, means of, RMS, 528
 Storage, reconditioning problems in preparing pools for, XXVIII, 1587
 transmission of natural gas favorably affected by, XXVIII, 1583
 underground, GAS, 1096
 withdrawals of gas from, XXIV, 1488
 Storage area, selection of, XXVIII, 1584
 Storage cycle, Consolidated Natural Gas Company, XXVIII, 1580
 Storage operations, advantages in connection with sales, XXVIII, 1581
 East Ohio Gas Company, XXVIII, 1573
 Hope Natural Gas Company, XXVIII, 1568
 New York State Natural Gas Corporation, XXVIII, 1577
 Peoples Natural Gas Company, XXVIII, 1575
 Storage pool, Colvin, showing limits of production in Murrysville sand, XXVIII, 1586
 conditioning gas for input in, XXVIII, 1589
 data to record in connection with, XXVIII, 1589
 East End Tioga, graph showing coning effect on rock pressure of input and output operations, XXVIII, 1591
 effect of coning on deliverability of, XXVIII, 1590
 method of input and output from, XXVIII, 1588
 Storage pools, active, operated by subsidiaries of Consolidated Natural Gas Company, data on, XXVIII, 1567

(Storage)

- advantage of diversification in types and sizes of, XXVIII, 1581
 economic problems in connection with, XXVIII, 1592
 of Consolidated Natural Gas Company, XXVIII, 1562
 operated by East Ohio Gas Company, data on, XXVIII, 1564
 operated by Hope Natural Gas Company, data on, XXVIII, 1563
 operated by New York State Natural Gas Corporation, data on, XXVIII, 1566
 operated by Peoples Natural Gas Company, data on, XXVIII, 1565
 small pools favorable for, XXVIII, 1593
 Storage problems in connection with war, XXV, 1271
 underground, XXVIII, 1584
 Storage project, purpose of, XXVIII, 1584
 Storage projects, deliverability determinations in connection with, XXVIII, 1589
 in Ohio, West Virginia, and Pennsylvania, XXVIII, 1568
 Storage purposes, use of depleted fields for, XXIX, 670
 Storage rights, problems of acquiring, XXVIII, 1587
 Storer and Warren, XVII, 1254
 Storm, L. W., PROB, 659; XII, 1167; XIII, 946; XXI, Pl. C, opp. 1086
 résumé of facts and opinions on sedimentation in Gulf Coast region of Texas and Louisiana, XXIX, 1304
 Storm, Willis, GAS, 621; PROB, 73, 600, 602
 carbon ratios, VII, 291
 carbon ratios of Cretaceous coals in New Mexico in their possible relation to oil, VIII, 519
 Fox oil and gas field, Oklahoma, VI, 367
 Smith-Ellis oil field, Brown County, Texas, STR II, 556
 "2-4" shallow oil and gas field, Oklahoma, V, 626
 Velma oil and gas field, Oklahoma, V, 627
 Storm, Willis, and Row, Charles H., XXI, 1086, Pl. E, opp. 1087
 Storm, Willis, and Tomlinson, C. W., Graham field, Oklahoma, VIII, 593
 Storm floods, RMS, 204
 Storm waves, RMS, 237
 Stormer, XIII, 1468
 Stormer, K., PROB, 41; XXVII, 1179
 Storms, RMS, 182, 189, 207, 208, 228, 252, 269, 273-275, 496
 effect of, on delta deposits, RMS, 169
 on North Sea, RMS, 326
 Storer, F. H., and Warren, C. M., XX, 280
 Storrow fellowships in geology and geography, XIV, 336
 Story of a billion years, review, XVII, 566
 of great geologists, XXIX, 1520
 Stose, George W., STRAT, 28; VII, 169; XIII, 594; XIV, 1071; XX, 923; XXIII, 1068; XXV, 1620, XXVI, 41
 Stose, George W., and Jonas, Anna I., XII, 161
 Stouder, Ralph E., XVI, 232, 239, 242
 Chester rocks of Meade, Hardin, and

(Stouder)

- Breckinridge counties, Kentucky, XXII, 267
 Stout, Wilbur, SBP, 357, STRAT, 385; XI, 1026; XIV, 806; XXI, 1415, XXII, 1183; XXV, 795, 800, 819; XXIX, 168
 an historical document of interest to petroleum geologists, XXII, 1687
 source material for petroleum and natural gas, XX, 797
 Stout, Wilber, and Carman, J. Ernest, GAS, 848, PROB, 430
 relationship of accumulation of oil to structure and porosity in Lima-Indiana field, PROB, 521
 Stout, Wilber, and Lamey, Carl A., Paleozoic and pre-Cambrian rocks of Vance well, Delaware County, Ohio, XXIV, 672
 Stout, Wilber, Lamborn, R. E., and Schaaf, Downs, XXIV, 487
 Stout, Wilber, Lamborn, R. E., Ring, D. T., Gillespie, J. S., and Lockett, J. R., natural gas in central and eastern Ohio, GAS, 897
 Stout pool, XXI, 1010
 Stovall, Prof., XXV, 1683, 1691
 Stovall, J. Willis, and Schoff, Stuart L., geology and ground water resources of Cimarron County, Oklahoma, review, XXVIII, 877
 Stow, Marcellus H., XX, 1163; XXII, 1108, 1109, 1110
 Stow, Marcellus H., conditions of sedimentation and sources of Oriskany sandstone as indicated by petrology, XXII, 541, discussion, XXII, 1108
 Stowell field, Texas, XXVII, 734; XXIX, 790
 Stoyanow, A. A., XXI, 1160; XXVIII, 1189
 Strabo, XIX, 472; XX, 904
 Strachan, Clarice B., biographical sketches of W. A. J. M. van Waterschoot van der Gracht and Edward O. Ulrich, XX, 1265
 Strachan, Clyde G., abstract, XI, 1239
 Strahan, XII, 800
 Strahan, A., XVI, 1030
 Strahn and Pollard, XI, 291
 Straight-gravity dam, XXVI, 1808, 1812
 Straight-gravity structure, XXVI, 1820
 Strain ellipsoid, some applications of, XIII, 1449; discussion, XIV, 231
 Straits of Diver, RMS, 343
 of Florida, RMS, 108, 116, 283
 of Gibraltar, RMS, 227
 of Karimata, RMS, 349
 Strake, George W., XVII, 559
 Strake Petroleum Corporation, GC, 793; XX, 740
 Strake sand, Hardin field, STRAT, 568
 Straley, H. W. III, review, XXII, 501
 Strand line, deposits associated with, RMS, 153
 Strand lines, changes in, during Cenozoic era in Gulf Coast region, XXIX, 1320
 Strand oil field, Kern County, California, XXIV, 1118, 1333
 isopach map, XXIV, 1337
 producing zone, XXIV, 1336
 section down to producing zone, XXIV, 1336
 Stevens zone sand productive at, XXIV, 1118

(Strand)

- structure contours on top of Stevens sand, XXIV, 1335
 Stranger formation, XXII, 831
 Strata, identification and correlation of, by use of paleontology, XXIV, 1754, 1763
 Stratal units, MSC, 90, Fig. 14 (in pocket)
 Stratford dome, XXIII, 1029, 1050
 Stratford formation, in Oklahoma, IX, 988
 Stratford shale, XXI, 1518, 1521; XXV, 1682
 Stratification, RMS, 4, 197, 525, 526
 in Baltic, RMS, 308, 311
 in East Indies, RMS, 351
 of beach deposits, RMS, 208
 of crinoidal sediments, XXVI, 1726
 of ocean water, RMS, 277
 of tidal-flat deposits, RMS, 197, 198
 types of, XXVI, 1724
 Stratified water, effect of, on upwelling, RMS, 123
 Stratigram showing columnar sections in Franklin Mountains, Texas, XXIV, 158
 Stratigraphers, RMS, 582
 Stratigraphic and paleontologic studies of wells in Florida, XXVI, 1425, 1426
 Stratigraphic and structural development of South Permian basin, West Texas, XVI, 189
 Stratigraphic and structural research, radioactivity cross sections and their use in, XXV, 1783
 Stratigraphic and structural traps, production from north-central Texas, controlled by, XXI, 1019
 Stratigraphic accumulation of petroleum, XXI, 768
 Stratigraphic accumulations, Eocene, XXIV, 1948
 geochemical and fluorographic methods of locating, XXVI, 1205
 of oil, prospecting for, XXI, 712
 Stratigraphic analysis, XXVI, 1697
 detailed, techniques of, XXIV, 1359
 flow outline of laboratory operations in, XXVI, 1700
 Stratigraphic basis of studying relationship of properties of sediments to oil zones, SBP, 381-384, 394, 395
 Appalachian, SBP, 374-377
 California, SBP, 145-151
 California outcrop samples, SBP, 191-194
 East Texas, SBP, 326-331
 Gulf Coast, SBP, 345-347
 Mid-Continent, SBP, 278-283
 Rocky Mountains, SBP, 236-240
 Rocky Mountains outcrop samples, SBP, 253-255
 West Texas, SBP, 288-290
 Stratigraphic change from porosity to non-porosity, fields dependent on, XX, 525
 influence on interpretation of geophysical investigation, XXI, 204
 Stratigraphic changes in Midway and Wilcox sediments across Sabine uplift, section, XXIX, 50
 Stratigraphic classification, MSC, 90
 of the Pennsylvanian rocks of Kansas, XXI, 275
 principles of, XXIX, 127
 Stratigraphic classification and nomenclature, XXIX, 1208
 Stratigraphic classification table of

(Stratigraphic)

- Paleozoic strata of north-central Texas, XXIV, 66
- Stratigraphic column, Alberta, GAS, 11
- East Texas, PROB, 421
- East White Point field, Texas, XXV, 1974
- Edna gas field, XXV, 109
- Moose Mountain area, XXVII, 40
- of young Tertiary deposits in main oil fields, southwest Trinidad, XXIV, 2103
- Refugio field, Texas, XXII, 1194
- showing competent and incompetent units, Wind River Canyon area, Wyoming, XXIII, 1452
- West Ranch field, XXVIII, 200
- Stratigraphic columns, post-Oligocene, for Ridge Basin, XXIII, 531
- Stratigraphic comparison of Polish crude oils, XXI, 1182
- Stratigraphic complexities, West Texas Permian, PTNM, 543; XXVI, 543
- Stratigraphic correlation in east-central United States, XXII, 1520
- Stratigraphic correlation and nomenclature in plains of southern Alberta, ALTA, 1, XV, 1129
- Stratigraphic cross sections through central Kansas, with top of Lansing group (Pennsylvanian) as datum plane, to show subdivisions of Mississippian and names of outcrop equivalents in Missouri, XXII, 1592, 1593
- Stratigraphic data in Kansas, XXII, 675
- Stratigraphic dating, percentage method of, XXIV, 2051
- Stratigraphic distribution of foraminifera in California Miocene, MSC, 79
- of foraminifera in Miocene shale, Reliz Canyon, Monterey County, California, MSC, Table I (in pocket)
- of Oklahoma discoveries in 1939, XXIV, 1021
- of Oklahoma discoveries in 1940, XXV, 1098
- of Oklahoma discoveries in 1941, XXVI, 1065
- of petroleum, XI, 764
- Stratigraphic divisions in Texas, classification of, XXIII, 149
- Stratigraphic drill, use of, in Oklahoma, XXVII, 794
- Stratigraphic evaluation of Burkeville exposures based on fossil fauna and stratigraphic relationship of beds, XXVIII, 997
- Stratigraphic factors limiting knowledge of subsurface reservoir conditions, XXII, 571
- Stratigraphic features of Reef Ridge shale in southern California, XXIII, 24
- of South Permian basin, XXV, 79
- Stratigraphic geology, relation to gas occurrence, GAS, 1077
- Stratigraphic intervals, shortened, PROB, 296
- Stratigraphic map, definition, XXIX, 1250
- Stratigraphic names, XIV, 1070
- use of, XXII, 763
- Stratigraphic nomenclature, American Association of Petroleum Geologists report of committee on, XV, 700

(Stratigraphic)

- discussion, XXV, 2195
- of Cretaceous system of Rocky Mountain region, need for revision of, XXI, 1592
- references on, XXV, 2201
- technique of, discussion, XXIV, 2038
- used in Honda district, correlation of, XXVI, 800
- Stratigraphic occurrence of oil and gas in Rocky Mountain region, PROB, 726
- Stratigraphic occurrences of foraminifera in Miocene of California Province, MSC, 137
- Stratigraphic oil reserves, XXI, 163
- Stratigraphic or lithographic traps, future reserves in, XXVIII, 910
- Stratigraphic pools, discovery of, XXI, 704
- Stratigraphic position, influence on oil-bearing reservoir, PROB, 291
- of Big Lime of west Texas, XI, 721
- of formations in northeastern Oklahoma, XXIII, 326
- of typical California formations, MSC, 160
- Stratigraphic principles, review of, XXIV, 343
- Stratigraphic range of guide species of foraminifera for Chapapote, Temporal (Guayabal), and Aragon formations, MEX, 106
- Stratigraphic relations, basal, of Mississippian and Devonian systems in central United States, XXIV, 775
- of deep-sea sediments, RMS, 409-414
- of Forest Hill sand and Red Bluff clay, XXVIII, 1323
- of Marianna limestone, XXVIII, 1328
- of oil and gas produced from sands at base of Pennsylvanian, PROB, 774
- of outcrop sections in California, SBP, 168
- of outcrop sections in Rocky Mountain area, SBP, 195
- of Pitkin formation, XXIV, 415
- of Upper Cretaceous in Great Valley, California, XXIX, 956
- Stratigraphic relationship of molluscan, echinoid, and vertebrate faunas to foraminiferal sequence, summary of, MSC, 136
- Stratigraphic reservoirs in University oil field, East Baton Rouge Parish, Louisiana, STRAT, 208
- Stratigraphic section, Amelia field, XXIII, 1642
- Clay Creek dome, GC, 760; XX, 71
- Como Bluff area, Wyoming, XXVIII, 1200
- Conroe field, GC, 794; XX, 742
- Dead Sea area, XX, 888
- Garber field, Oklahoma, STR I, 190
- northwest Germany, XII, 468
- of Chugwater formation, Embarras group, and Tensleep sandstone south of Freezeout Mountain, XXV, 889
- of formations encountered at Shongaloo and Cartersville-Sarepta, XXII, 1476
- of Midway-Wilcox of Sabine uplift, XXIX, 56
- of Morrison formation, Sundance formation, Jelm formation, and

(Stratigraphic)

- Alcova limestone northwest of Freezeout Mountain, XXV, 888
- of Mowry shale, Thermopolis shale, and Dakota group southeast of Freezeout Mountain, XXV, 887
- of pre-Chattanooga rocks in central Tennessee, XXVII, 1051
- of Upper Permian salt series in Hanover, XII, 471
- Ohio, XXIV, 676
- Orange field, GC, 891; XX, 542
- Rhenish oil province, XII, 492
- Sacramento Mountains, XXV, 2111
- Santa Maria Valley oil field, XXIII, 51
- Urania field, Louisiana, STR I, 94
- Wind River Canyon area, Wyoming, XXIII, 1447, 1453-1455
- Stratigraphic sections, Black Knob Ridge, XXI, 23-26
- Stratigraphic sequence of Gulf Cretaceous, Lisbon field, XXIII, 293
- Stratigraphic significance of fossils and sediments, XXVII, 940
- Stratigraphic studies, XXVII, 933
- in California, progress of, XXVI, 153
- Stratigraphic studies of Baker-Glen-dive anticline, eastern Montana, XXIII, 461; discussion, XXIII, 1246; reply to discussion, XXIII, 1247
- Stratigraphic study, methods of, XXVI, 154
- Stratigraphic succession in Indiana, GAS, 846
- Stratigraphic summary of Silurian strata in western Tennessee, southeast Missouri, southern Illinois, and northeast Arkansas, XXVI, 3
- Stratigraphic terminology of Coalfield region, XXIV, 1728
- Stratigraphic thickness exposed between two dips, formulas for calculating, XVIII, 139
- in parallel folds, calculation of, XXVIII, 1376
- Stratigraphic trap, XXVII, 461, 754, 1304; XXIX, 877
- accumulation of oil in Boice well in the Devonian beds in Nebraska controlled by, XXIV, 1007
- accumulation of oil in Hunton group in Kansas associated with, XXIV, 1007
- at Cut Bank field in Glacier County, Montana, XXI, 1244
- at Kevin-Sunburst field in Toole County, northern Montana, XXI, 1244
- at Osage field in Weston County, Wyoming, XXI, 1245
- importance in California fields, XXIV, 1112
- Stratigraphic-trap method of prospecting, XXVII, 933
- Stratigraphic traps, XXV, 2010; XXVII, 738; XXVIII, 904; XXIX, 1189, 1745
- accumulation of oil in, in Laredo district, XXI, 1437
- associated with unconformities, XXVI, 36
- four groups, XXIX, 1748
- importance of, to future oil reserves, XXIX, 1233
- in Diablo Plateau, FOP, 104; XXV, 1536
- in East Indies, XXVIII, 1444
- seismic work of future concerned

(Stratigraphic)

- with location of, XXV, 1258
- Stratigraphic type of fields not susceptible to allocation based on ownership in place, XXII, 571
- Stratigraphic type oil fields, discussion, XXVII, 1392
- symposium on, XXIII, 1434
- Stratigraphic type oil fields and proposed new classification of reservoir traps, discussion, XXVII, 539
- Stratigraphic units, basis of, SBP, 80-87
- new technique for measurement of, XXVII, 220
- of Iowa series, lithologic descriptions and thicknesses of, in Illinois basin, XXIV, 227-228
- of lower Mississippian and upper Devonian of southwestern Pennsylvania, XXV, 163
- sampled in Appalachian area, SBP, 353
- sampled in Coast Ranges, California, SBP, 93
- sampled in East Texas Basin, SBP, 294
- sampled in Gulf Coast area, SBP, 336
- sampled in Mid-Continent area, SBP, 258
- sampled in Rocky Mountain area, SBP, 197
- sampled in West Texas area, SBP, 285
- table of, SBP, 412
- Stratigraphic units and symbols used in study of source beds of petroleum, SBP, 413
- Stratigraphic use, names suitable for, XXIV, 356
- Stratigraphic variation, effect on folding, V, 481
- Stratigraphic versus structural accumulation, XX, 521
- Stratigraphic wedge and unconformity conditions and the position of respective reservoirs, relations between, XXIX, 1565
- Stratigraphic zones, relative value of species of smaller foraminifera for recognition of, VII, 517
- Stratigraphical and structural studies in mining regions, XIX, 416
- Stratigraphical analysis and environmental reconstruction, XXVI, 1697
- Stratigraphical correlation chart of Tertiary and Cretaceous in Antillean-Caribbean region, XXIV, 1578-1582
- Stratigraphical data from wells in Aguada Barcodon, and Naranjo, MEX, 235
- Stratigraphical sequence in Barbados, XXIV, 1552
- Stratigraphy, PROB, 665; XXI, 711
- Amelia field, XXIII, 1641
- Anacapia, SC, 105; XX, 1651
- Anzoátegui, Venezuela, XXI, 234
- Anzoátegui, Venezuela, references on, XXVIII, 27
- Appalachian area, references on, SBP, 356
- Appalachian geosyncline, XXV, 796
- Appalachian region, PROB, 842, SBP, 349-357
- Archer County field, Texas, STR I, 424
- Argentina, XI, 266
- Arkansas-Oklahoma coal basin, XX, 1342

(Stratigraphy)

- Artesia field, New Mexico, STR I, 114
- Atlantic Coastal Plain, bibliography on, XXIX, 953
- Bernstein field, XXVII, 1601
- Black Knob Ridge, XXI, 2
- Buckeye field, GC, 742; XXIV, 1961
- Burbank field, Oklahoma, STR I, 221
- Cabin Creek field, West Virginia, STR I, 466
- Caliente Range, XXV, 211
- California, PROB, 737, SBP, 89-100
- California outcrop samples, SBP, 168, 169
- Carboniferous, of the Ouachitas with special study of the Bendian, XVIII, 1018
- Carson County, Texas, XXIII, 1011
- central Colorado, unconformities in, XVII, 353
- central Montana, GAS, 249
- Cincinnati Arch region, GAS, 854, 858, 865, 869
- Colombia, XXIV, 1611
- Colorado shale in southern plains of Alberta, ALTA, 43; XV, 1171
- Conroe field, GC, 795; XX, 741
- Copley pool, West Virginia, STR I, 444
- Cretaceous of Redding district, XXVII, 307
- Cretaceous and Eocene, of Barrilla and eastern Davis mountains of trans-Pecos Texas, XXII, 1423
- Crinerville field, Oklahoma, STR I, 198
- Crocker Flat landslide area, XXVI, 1612
- Dakota basin, XXVI, 1559
- Del Valle oil field, XXVI, 189
- Devonian in Kentucky, XXV, 669
- early Paleozoic, of Wichita Mountain uplift, Oklahoma, XIV, 623
- East Texas, SBP, 292-297
- East White Point field, XXV, 2007
- eastern and central United States, XXVII, 1016
- eastern Kentucky, STR I, 74
- eastern Midland basin, Texas, XXIV, 52, 54
- eastern Ohio, STR I, 139
- easternmost Ventura basin, California, XXIV, 1841
- Edna gas field, XXV, 107
- Emba salt-dome area, XXIII, 496
- Eola field, XXV, 1367
- Esperson dome, GC, 861; XXVIII, 1637
- Fairport field, Kansas, STR I, 37
- Franklin Mountains, Texas, XXIV, 160
- Freezeout Mountain-Bald Mountain area, XXV, 886, 887
- Garber field, Oklahoma, STR I, 177, 178
- Glenn pool, Oklahoma, STR I, 231
- Goldsmith field, XXIII, 1527
- Gore area, XXVI, 1377
- Government Wells field, GC, 636; XIX, 1136
- Gray County, Texas, XXIII, 998
- Gulf Coast, SBP, 335-339
- High Island dome, GC, 917; XX, 568
- Hoffman field, XXIV, 2128
- Hugoton gas field from type section in south Grant County, Kansas, XXIII, 1057
- Hutchinson County, Texas, XXIII, 1016
- Illinois Basin, XXIII, 1496; XXVIII, 1

(Stratigraphy)

- 65
- in Montana, comparative, VII, 159
- Irma field, Arkansas, STR I, 2
- Jennings dome, GC, 964; XIX, 1312
- Kay County, Oklahoma, STR I, 158
- Keokuk pool, XXIII, 222
- La Rosa field, XXV, 305
- Laramie Basin, XXVIII, 1199
- Laredo district, Texas, STR I, 390
- Lisbon field, XXIII, 284
- Los Angeles and Eel River basins, comparison of, XXI, 552
- Mesozoic, GAS, 18
- Mexia fault zone, Texas, STR I, 325
- Michigan, Ohio, Indiana, Illinois, Kentucky, and Tennessee, XXII, 1519
- Michigan fields, GAS, 791
- Mid-Continent, SBP, 257-262
- Miocene, in southern Louisiana, XXIV, 436
- Moab region, Utah, notes on, XI, 785
- Moore County, Texas, XXIII, 1029
- Morrison field, Oklahoma, STR I, 148, 152
- Mount Sylvan dome, GC, 1042, XXII, 1362
- Natchitoches area, Louisiana, XXIX, 27
- Nemaha Mountains, Kansas, STR I, 61
- Niceville, Okaloosa County, Florida, XXV, 263
- North Cowden field, XXV, 599
- northeastern and east-central parts of South Park, Colorado, XIX, 1339
- northern South America, Trinidad, and Barbados, XXVII, 92
- of Bendian of the Oklahoma salient of Ouachita Mountains, XXII, 852
- of Chico series, XXVII, 281
- of Coastal Plain of Georgia, XXII, 789
- of Colorado group, Upper Cretaceous, in northern New Mexico, XXIX, 232
- of Cotton Valley beds of northern Gulf Coastal plain, XXVIII, 577
- of deep well in Harrison County, West Virginia, XXVII, 1539
- of Dry Creek and Golden structures, Carbon County, Montana, revision of, XXII, 106
- of Eocene between Laredo and Rio Grande City, Texas, XXVI, 256
- of Foremost, Pakowki, and Milk River formations of southern plains of Alberta, ALTA, 53; XV, 1181
- of Hamilton group of New York, XXI, 311, 316
- of Hoxbar formation, Oklahoma, correction to, discussion, XXIII, 1083
- of Lake Pontchartrain sediments, XXIII, 19
- of Marmaton group, Pennsylvanian, in Kansas, XXIX, 1521
- of Midway group (Eocene) of southwest Arkansas and northwest Louisiana, XIX, 696
- of Mississippi lime in central Kansas, XXII, 1591
- of North Dakota, XXVI, 336, 1673
- of North Dakota, bibliography on, XXVI, 378
- of North Dakota, discussion, XXVI, 1414, 1776
- of northeastern Anzoátegui, Venezuela, XXVIII, 1

(Stratigraphy)

- of northern extension of Burlington limestone in Missouri and Iowa, XXI, 1158
- of Oakville, Lagarto, and Reynosa formations between Nueces and Guadalupe rivers, Texas, XVII, 523
- of Osage subseries of northeastern Oklahoma, XXIII, 325
- of outcropping Carboniferous and Permian rocks of Trans-Pecos Texas, XIII, 907
- of Panama and Costa Rica, notes on, III, 363
- of part of Cretaceous in Tyler basin, northeast Texas, revision of, XXIX, 170
- of part of southern Utah, VI, 199
- of Pennsylvanian formations of north-central Texas, preliminary paper on, III, 132
- of Permian in Oklahoma and Kansas, XXI, 1513
- of Permian redbeds of Kansas, XXII, 1755
- of producing sands in northern Louisiana and southern Arkansas, notes on, VII, 362
- of redbeds, contribution to, II, 114
- of region between Laredo and Rio Grande City, XXVI, 258
- of sediments of Indian Ocean, RMS, 405-407
- of some Lower Ordovician formations of Ozard uplift, XXIX, 296
- of Sundance formation and related Jurassic rocks in Wyoming and their petroleum aspects, XXI, 715
- of Tertiary marine rocks in Gippsland, Victoria, XXVIII, 278
- of Travis Peak formation, XXIII, 628
- of Upper Cretaceous series in Mississippi and Alabama, XXII, 1639
- of west side of Central Basin platform, Texas-New Mexico, XXIV, 32
- Oligocene of East White Point field, San Patricio and Nueces counties, Texas, XXV, 1967
- Oligocene, southern Louisiana, XXIV, 436
- Ontario gas fields, GAS, 60, 61
- Page field, XXV, 632
- Paleozoic, of Colorado, résumé of, XXIX, 1356
- Paleozoic, of Franklin Mountains, West Texas, XXIV, 157
- Payton pool, XXVI, 1635
- Pennsylvanian and Permian, of southwestern United States, symposium on, XIII, 883
- Pennsylvanian Hermosa formation in Elk Mountains, Gunnison County, Colorado, XIX, 1668
- Pennsylvanian system in Nebraska, review, XII, 869
- Permian, New Mexico and Texas, XXI, 859
- Permian basin, XXIV, 241
- Permian beds of northwestern Oklahoma, XV, 405
- Porter field, XXVIII, 178
- post-Fleming of coastal Texas and Louisiana, GC, 435; XIX, 654
- Powder Wash field, XXII, 1023
- pre-Pennsylvanian, of Big Lake field, Reagan County, Texas, XIV, 798
- pre-Pennsylvanian, of Front Range in Colorado, XVII, 375

(Stratigraphy)

- pre-Pennsylvanian, of Nebraska, XVIII, 1597
- Raccoon Bend field, GC, 680; XVII, 1463
- Rattlesnake Hills area, Washington, GAS, 224
- Red Coulee oil field, ALTA, 33, XV, 1161
- regional, in Hugoton field, XXIII, 1058
- regional, in Oklahoma, XXIV, 2007
- regional, of Mid-Continent, XXV, 1619
- regional, of southern United States, XXVII, 1411
- Rocky Mountains, SBP, 193-199
- Rocky Mountains, references on, SBP, 196
- role of, in oil discovery, XXIX, 872
- St Lawrence lowlands, GAS, 90
- St. Peter, résumé of, XIX, 1110
- Sand Hills area, Texas, XXIV, 119
- Santa Maria field, XXIII, 50
- Santa Ynez Mountains, XXVII, 3
- Santa Ynez-Santa Barbara area, SC, 88; XX, 1634
- Schuler field, XXVI, 1473
- Simpson group, XXV, 651
- smaller foraminifera for, VIII, 246
- south Arkansas, with emphasis of older Coastal Plain beds, XXII, 953
- South Cotton Lake field, XXV, 1920
- southern Arkansas, XXII, 956
- southern Oklahoma, GAS, 580
- southwestern United States, symposium on Pennsylvanian and Permian, XIII, 883
- Spring Coulee well, ALTA, 137; XV, 1265
- Spring Coulee well, supplementary paper, ALTA, 151; XV, 1279
- subsurface, Clay County, Texas, STR II, 545
- subsurface, in Salem area, XXIII, 1355
- subsurface, of Atlantic Coastal Plain between New Jersey and Georgia, XXIX, 885
- subsurface, of coastal plain of Texas and Louisiana, IX, 79
- subsurface, of Devonian, XXV, 692
- subsurface, of Kettleman Hills oil field, California, XVIII, 435
- subsurface, of Ramsey pool, XXIV, 1997
- subsurface, Wasson field, XXVII, 485
- subsurface pre-Pennsylvanian, of north Mid-Continent fields, notes on, V, 117
- subsurface pre-Upper Cretaceous, of southern Arkansas, northern Louisiana, and northeastern Texas, XXVIII, 578
- surface, in Salem area, XXIII, 1355
- surface, of Ramsey pool, XXIV, 1997
- systematic, superiority of, over log matching in effort to correlate beds in Illinois coal basin, XXIII, 1508
- Szechuan province, China, XXVIII, 1431
- Tampico District of Mexico, IX, 136
- Tejon Quadrangle, XXI, 213
- Templor Range, XXV, 1329
- Tertiary in Dakota basin, XXVII, 1568
- Tertiary, of Honda district, XXVI, 799

(Stratigraphy)

- Tertiary, of Louisiana, GC, 383, XVII, 613
- Tertiary, of Louisiana, review of, discussion, XVII, 869
- Texas, GAS, 655; VII, 532
- Texas-New Mexico Permian basin, XXIV, 40
- Texas Panhandle, X, 736
- Tri-County field, Indiana, STR I, 25
- Tupungato oil field, XXVIII, 1459
- Turner Valley, GAS, 42, XXIV, 1622
- Upper Cretaceous, of west side of Sacramento Valley south of Willows, Glenn County, California, XXVII, 279
- Upper Cretaceous formations of Texas and Arkansas, XI, 1
- Upper Permian, of West Texas Permian basin, XIX, 1010, 1544
- Urania field, Louisiana, STR I, 92
- Ventura Basin, SC, 98; XX, 1644
- versus structure in Rocky Mountain region, XXI, 1241
- Weatherford area, Oklahoma, XII, 705; discussion, XII, 1024
- West Texas, SBP, 285-287
- West Texas and southeastern New Mexico, XXVIII, 827
- Wheeler County, Texas, XXIII, 1035
- Wilbarger County, Texas, STR I, 294
- Wind River Mountains, XXV, 125
- Yates field, XXIV, 134
- Stratigraphy and age of Seguin formation of central Texas, XXVII, 608
- Stratigraphy and correlation of beds in Chinati Mountains, XXIV, 184
- Stratigraphy and crude oils, relationship of, in parts of Oklahoma and Kansas, XXV, 1801; XXVI, 284
- Stratigraphy and historical geology of Gulf Coastal Plain in vicinity of Harris County, Texas, XXIII, 145
- Stratigraphy and insoluble residues of Madison group of Mississippian of Montana, XXVI, 305
- Stratigraphy and lithology of rocks of Puente Hills, XXIV, 650
- Stratigraphy and lithology, subsurface, of Tuscaloosa formation in southeastern Gulf Coastal Plain, XXVI, 596
- Stratigraphy and micropaleontology of deep well at Niceville, Okaloosa County, Florida, XXV, 263
- Stratigraphy and occurrence of oil in West Texas district, references on, SBP, 287
- Stratigraphy and occurrence of oil and gas in East Texas region, references on, SBP, 296
- Stratigraphy and oil preservation, XXIX, 879
- Stratigraphy and oil prospects of Alberta, Canada, XI, 237; discussion, XI, 515
- Stratigraphy and oil zones of Mid-Continent area, references on, SBP, 257
- Stratigraphy and paleogeography, relations of, to petroleum geology, III, 286
- Stratigraphy and paleontology of Santa Maria district, California, XXVII, 1335
- Stratigraphy and reservoir rocks, XXIX, 877
- Stratigraphy and sedimentation of lower Mississippian in western Michigan, study of, XXV, 713

- Stratigraphy and source rocks, XXIX, 873
- Stratigraphy and structural history of east-central United States, XXI, 1519
- Stratigraphy and structure, northern Mexico, XXVIII, 315
- of Florida, with special reference to petroleum possibilities, review, XI, 893
- of Kelsey anticline, Upshur County, Texas, XVII, 656, 1015
- of Moose Mountain area, Alberta, XXVII, 38
- of northeastern New Mexico, IV, 73
- of Pennsylvanian and Permian rocks in Salt Creek area, Mosquito Range, Colorado, XIX, 971
- of Smoky Hill chalk in western Kansas, XIII, 595
- of southwestern Oklahoma, XIV, 37
- Permian, of parts of southeastern New Mexico and southwestern Texas, XIII, 957
- regional subsurface, of Florida and southern Georgia, XXVIII, 1673
- Stratton Ridge salt dome, Brazoria County, Texas, SD, 644; I, 44; V, 218, IX, 1
- effect of character of rim syncline on production at, XX, 1422
- shallow-water anomaly at, PROB, 896
- Stratum, XXIII, 1074
- Straub, Charles E., XIX, 1061
- discussion on drilling wells with diamond drill, V, 674
- effect of gravitational compaction on structure of sedimentary rocks, discussion, XI, 889
- Straub, L. G., RMS, 23, 26
- Straughan, George, XXVI, 35
- Strawinski, R. J., and Stone, R. W., XXVII, 1179
- Strawn, Canyon, and Cisco beds most important producing zones in west-central Texas, XXIII, 849
- Strawn and Cisco beds present in King well on South fold in Wilbarger County, Texas, XXIV, 1052
- Strawn basin, XIII, 574
- Strawn beds, XXI, 1019
- productive in Hull-Silk oil field, XXV, 1677
- productive in K.M.A. field, XXV, 1677
- Strawn-Canyon boundary in Bowers field, XXVII, 26
- Strawn faunas, XXIII, 1699
- Strawn field, III, 49, 93, 94; IV, 160
- Strawn formation, PROB, 402; III, 36, 48, 77, 94, 134, 138, 140, 146, 154, 158, 169, 173, 188, 296, 334; IV, 83, 122; V, 155, 378, 504, 545, 559, 562; XXI, 1019
- Bend arch area, GAS 613, 627; XXI, 1084
- Big Lake field, Texas, STR II, 511
- Bryson field, XVI, 183
- lenticular sands in, XXI, 1023
- Petrolia field, Texas, STR II, 546
- relation of accumulation of oil in, to structure, in Stephens County, Texas, STR II, 476
- shales of, probably the source of oil in Smith-Ellis field, Texas, STR II, 567
- Smith-Ellis field, Texas, STR II, 564
- Stephens County, Texas, STR II, 471, 472, 476
- Strawn group, XXVI, 205, 210; XXVII, 25
- production in, XXIV, 1049
- Texas, X, 462, 479
- Strawn limestone, XXV, 1067; XXIX, 763
- Strawn-Palo Pinto unconformity, GAS, 626
- Strawn production, XXIV, 1047, XXV, 1055; XXVI, 1033; XXVII, 764
- Strawn sand, XXIII, 857, XXVI, 1048; XXVII, 777, 779; XXVIII, 837; XXIX, 762
- productive in Bowers pool, XXV, pool, XXV, 1075
- Strawn sand production in Mathis pool, XXV, 1068
- Strawn sandstone, XXVII, 772, 775
- Strawn sandstones, Calloway-Henry gas field, GAS, 633
- Strawn series, XXV, 1065, 1069, 1663; XXVI, 1045; XXVII, 776
- Bryson field, STRAT, 541, 542
- Cross Cut-Blake district, STRAT, 551, 552
- Hull-Silk field, STRAT, 667
- north-central Texas, XXIV, 87
- Seymour pool, STRAT, 763
- Texas, XXIX, 164
- Walnut Bend pool, STRAT, 786
- Strawn series limestone productive in Page field, XXV, 636
- Stray gas sand in Michigan, XXI, 124
- Stray sand, XXIII, 808
- Hewitt field, Oklahoma, STR II, 294
- Kentucky, IV, 306
- Petrolia field, Texas, STR II, 552
- Spindletop, XXI, 488
- Stray sands of Michigan formation, gas production from, XXII, 132
- Streak salt, SD, 224
- Stream, derivation of sediments in, RMS, 271
- Stream bed, erosion of, RMS, 9
- Stream gradient, effect of, on sorting, RMS, 34
- effect of, on transport of debris, RMS, 18
- Stream patterns, Louisiana, XXIII, 1199
- Stream profiles, transverse, studies of, RMS, 28
- Stream sculpture on Atlantic slope, study in evolution of Appalachian rivers, review, XVI, 267
- Stream terraces, section through east Austin showing, XXIX, 1697
- Streaming, RMS, 8, 17
- Streamline motion in sea, RMS, 75
- Streamline theory of origin of sands in Golden Lanes, Kansas, XI, 1163
- Streams, RMS, 5-47
- bottom load of, RMS, 271
- classification of, RMS, 272
- mountain, abrasion in, RMS, 40
- suspended load of, in California, RMS, 272
- Streator coal, XXIII, 1391
- Streeter, Irving McKay, memorial of, XXIII, 277
- Striefes eines Geologen im Gebiet der Goayra-Indianer, Kolumbien*, review, XIII, 183
- Strength, definition, CD, 24
- of current in North Sea, RMS, 329
- of the earth, XXIX, 1630
- Strength and structure of the earth, XXV, 902, 1181
- Stress, defined, PROB, 613
- Stress differences associated with extreme topographic relief, XXIX, 1649
- Stresses in Appalachian foreland, diaccretion of, XXV, 419
- Striations on minerals, RMS, 604, 608
- Stibling, T. C., XX, 156
- Strike of South African mountains, CD, 209
- Strike and dip, graphic solution of, from two angular components, XIII, 1211; XV, 79, discussion, XV, 283
- symbols for, XI, 868
- Strike-slip fault, XXV, 2182
- Springfield, V. T., XXIX, 25, 886, 1171
- Stringtown shale in Black Knob Ridge, XXI, 2
- Stripper sands, XXVII, 1141
- Stripping wells, MEX, 171, 190, 213, 214, 217, 221, 223, 229, 230, 233, 234
- Strode sand, XXIX, 1268, 1275
- Strom, Kaare Munster, RMS, 96, 101, 447, 653, 654, XXIII, 1184, 1193; XXV, 1709
- land-locked waters and deposition of black muds, RMS, 356
- Strom coring tube, RMS, 653
- Stromatoporoids, XXIV, 1984
- Stromsosen, Norway, RMS, 447
- Strong, A. M., RMS, 281; XXIV, 666
- Strong, A. M., and Arnold, Ralph, XXVIII, 789; XXIV, 667
- Strong, M. W., PROB, 997; XVIII, 32
- Strontium, RMS, 149, 536
- in sea water, RMS, 143
- Strontium minerals in Big Hill dome, Texas, SD, 699; IX, 719
- Strothmann, Fred, XXIX, 221
- Stroud, Benjamin Kendrick, VII, 128, 674
- mud laden fluids and tables on specific gravities and collapsing pressures, review, VI, 382
- necessity for engineering in developing oil and gas properties, VI, 377
- Stroud, Benjamin Kendrick, and Payne, Paul M., VII, 621
- Stroud, Benjamin Kendrick, and Payne, F. T., preliminary report on proposed pipe line from Monroe gas field to New Orleans, review, VI, 383
- Stroud, Benjamin Kendrick, and Scott, W. W., VI, 188
- Stroud, Benjamin Kendrick, and Shays, Fred P., Monroe gas field, Louisiana, VII, 565
- Stroud, J. R., GAS, 676
- Stroud field, PROB, 411, 764
- Stroud pool, XXVI, 1046
- Structural and commercial oil and gas possibilities of central valley region, California, XVI, 361
- Structural and geological history of Jesse pool, Oklahoma, XXII, 1569
- Structural and isopach studies of Cretaceous system in Nebraska, wells used in, XXVI, 1519
- Structural and magmatic processes in isostatic layer, XXIII, 1320
- Structural and stratigraphic development of South Permian basin, West Texas, XVI, 189
- Structural and stratigraphic features, some, affecting relative amounts of oil production in Illinois, V, 311
- Structural and stratigraphic relations of Carboniferous-Permian boundary, XXIV, 319

- (Structural)
 of Wasson reservoir, XXVII, 508
 Structural and stratigraphic traps, production from north-central Texas, controlled by, XXI, 1019
 Structural and stratigraphical studies in mining regions, XIX, 416
 Structural and topographic basin, central Szechuan province, XXVIII, 1430
 Structural accumulations, Eocene, XXIV, 1945
 of oil, prospecting for, XXI, 712
 Structural arrangement of piercement traps, XXIX, 1576
 Structural axes in Illinois, XXII, 651
 in Illinois, map, XXI, 778
 in New York, GAS, 969
 in Pennsylvania, PROB, 464
 indicated by Midway and Wilcox surface sediments, Sabine uplift, Louisiana and Texas, XXIX, 49
 Structural basin, Big Lake pool located on rim of, STR II, 525
 Corpus Christi, postulated from salinity data, GC, 270; XIX, 317
 Structural basins, in Bend, Stephens County, Texas, STR II, 478
 Wyoming, PROB, 927
 Structural behavior of igneous rocks, XXI, 1500
 Structural bulge of lenticular sand body due to differential settling, XXII, 830
 Structural classification of oil deposits, VII, 582
 Structural closure, early, in northeast Texas, GAS, 664
 on formations in Conroe field, GC, 799; XX, 747
 Structural complexity of Appalachian foreland, XXV, 422
 Structural conditions, Burbank field, Oklahoma, STR I, 224
 eastern Ohio, STR I, 124
 European oil and gas occurrences and their relationship to, XVIII, 736
 Fitts pool, XXI, 1008
 importance in locating Texas pools, STR I, 324
 in oil fields of Bexar County, Texas, III, 299
 of oil and gas accumulation in Rocky Mountain region, United States, XXVII, 417
 Pine Island field, Louisiana, STR II, 172
 portions of eastern Ohio, XI, 945
 Salt flat field, Caldwell County, Texas, electrical survey of, XIV, 1177
 Tri-County field, Indiana, STR I, 27
 under which oil and gas have accumulated in Rocky Mountain states, XXVII, 466
 Structural contour map, Lisbon oil field, XXIII, 301
 of central Tennessee on top of Chattanooga shale, XXVII, 1044
 of central Tennessee on top of Pencil Cave, XXVII, 1045
 of Nashville, Tennessee, XXVII, 1048
 of southeastern Virginia drawn on Eocene-Miocene contact, XXIX, 84
 of southern peninsula of Michigan, PROB, 543
 on top of Knox dolomite, group, XXVII, 1046
 Structural contour maps, Refugio field, XXII, 1205, 1208, 1209, 1212
 Structural contouring, subsurface, XIII, 1559
 Structural contours on basal Miocene sand in West Columbia field, XXVI, 1459
 on Willis sand in Tomball area, Texas, GC, 464; XIX, 682
 on Willis sand, Lisse, and Beaumont, in southeast Texas, GC, 460, 461; XIX, 680, 681
 Structural control in Great Basin district and Sierra Nevada region, XVI, 19
 Structural criteria of unconformities, XXVI, 56
 Structural depressions of Pacific Coast, XXVIII, 324
 Structural development in Mid-Continent areas associated with deposits of petroleum, interpretation of local, PROB, 581
 of Las Animas arch, Lincoln, Cheyenne, and Kiowa counties, Colorado, XXIX, 1663
 of Las Animas arch, sections showing stages of, XXIX, 1667
 of trans-Pecos Texas, outline of, XIX, 221
 Wind River Canyon area, stages in, XXIII, 1482-1483
 Yates area, Texas, XXIV, 134
 Structural development and oil accumulation in Texas Permian, XIII, 1033
 Structural discordances, STR II, 695
 Structural disturbance in China, XXVIII, 1433
 Structural divisions of western Canada, POP, 18; XXV, 1450
 Structural elements as related to source of oil and gas, significance of, XXI, 208
 basic, of China, XXVIII, 1419
 of Montana plains, PROB, 701
 Structural environment indicators of reservoirs, XXIX, 1542
 Structural environments of reservoirs, XXIX, 1544
 Structural evolution of California and East Indies, correlation of, XXI, 559
 of Southern California, MSC, 91, 158; SC, iii; XX, 1529
 of Southern California and East Indies, parallels in, XXI, 553
 of Southern California, summary and conclusions, SC, 136; XX, 1682
 Structural exploration, use of electrical logging in, XXIII, 1304
 Structural features, Appalachian, map and cross section, XXV, 786, 790
 cross trending of, in north Texas, XXIII, 848
 identical throughout Pennsylvanian and Permian in Kay County oil fields, Oklahoma, STR I, 161
 in Michigan, glacial expression of: preliminary study, XIX, 1173
 in Mid-Continent oil fields, origin of local, PROB, 581
 in northwestern Colorado, STR II, 94
 main, and oil and gas fields of central and eastern Montana, XXIV, 1102; XXVII, 437
 main, and oil and gas fields of Colorado and northern New Mexico, XIV, 1105; XXVII, 451
 main, and oil and gas fields of eastern Utah and northern Arizona, XXIV, 1106; XXVII, 458
 main, and oil and gas fields of Wyo-
- (Structural)
 ming, XXIV, 1103; XXVII, 447
 major, of Florida and parts of Georgia and Alabama, XXVIII, 1727
 major, of Montana, PROB, 700
 major, and gravity anomalies in southeastern Oklahoma and parts of adjoining states, map showing relationship between, XXIV, 2144
 of Brenham salt dome, Washington and Austin counties, Texas, GC, 780, XIX, 1330
 of east side of San Joaquin valley, California, XIII, 101
 of Miocene in Santa Maria field, XXIII, 72
 of Mississippi embayment in southeast Arkansas, northeast Louisiana, and west-central Mississippi, XXIII, 1401
 of North Coast area of Colombia, XXIX, 1129
 of north-central Texas, XXIV, 98
 of Rocky Mountain region, XXVII, 426
 of South Permian basin in West Texas and New Mexico, XXV, 75
 of south Texas, XXI, 1042
 of south Texas and northeast Mexico, XXI, 1432
 of south Texas and northeast Mexico, map showing principal, XXI, 1430-1431
 of West Franklin formation of southwestern Indiana, XIII, 1301
 surface, of Central America, relation of deep-seated faults to, VII, 1
 Structural field conference, Big Horn Basin-Yellowstone Valley, 1937, XXII, 306
 Structural genesis, PROB, 610
 classified methods of, PROB, 611
 Structural geology, PROB, 665; XXVII, 1157
 Carson County, Texas, XXIII, 1009
 Coffeyville field, Kansas, STR I, 49
 Dakota basin, XXVI, 1567
 gas fields in Montana, GAS, 252
 Gray County, Texas, XXIII, 995
 Hutchinson County, Texas, XXIII, 1016
 James River-Hampton Roads area, XXIX, 85
 Moore County, Texas, XXIII, 1029
 of Sabine uplift, XXIX, 70
 outlines of, XXVI, 1160
 principles of, review, XV, 1399; XX, 1374
 regional, of Illinois basin, XXIII, 1357
 relation to occurrence of gas, GAS, 1080
 role of mechanics in, SC, 139; XX, 1685
 south end of Wind River Canyon, XXIII, 1468-1469
 southeastern Virginia, XXIX, 71
 Turner Valley, XXIV, 1620
 Ventura Avenue field, California, STR II, 27
 Wheeler County, Texas, XXIII, 1033
 Wind River Canyon area, Wyoming, XXIII, 1439
 Wind River Canyon area, Wyoming sections interpreting, XXIII, 1461
 Structural grain in central Tennessee, XXVII, 1049
 Structural habit, significance of, XIII, 409

- Structural history of Arbuckle Mountains, XXIX, 206
 of Billings field, Noble County, Oklahoma, interpreted in terms of isostasy, XXIV, 2006
 of Caliente Range, XXV, 200
 of Eastern Interior basin, XXIV, 850
 of Goldsmith field, XXIII, 1533
 of Illinois basin, XXI, 772
 of Keokuk pool, XXIII, 232
 of North Cowden field, XXV, 611
 of part of southeastern Utah from interpretation of geologic sections, XI, 809
 of Ramsey area, XXIV, 2000
 of Ridge Basin, California, XXIII, 518
 of Rocky Mountain district, PROB, 680
 of St George district, Utah, XXIII, 123
 of southern California, SC, 5; XX, 1551
 of three types of provinces in Coast Ranges, XXI, 551
 of Van Horn region, Texas, XXIV, 150
 of Wasson area, XXVII, 504
 of Wind River Canyon, XXIII, 488
 Structural history and stratigraphy of east-central United States, XXII, 1519
 Structural influence on accumulation of petroleum in California, PROB, 735
 Structural interpretation of recent gravity observations in southeastern Oklahoma, XXIV, 2143
 Structural map of base of Fort Hayes limestones in Nebraska, XXVI, 1532
 of central Texas, XXV, 1598, 1599
 of Natchitoches area contoured on top of Wilcox formation, XXIX, 28
 of southern Young County, Texas Datum, Bunker limestone, Cisco series, XXIV, 112
 of top of Dakota sandstone in Nebraska, XXVI, 1530
 of top of Greenhorn limestone, in Nebraska, XXVI, 1531
 of top of Niobrara formation in Nebraska, XXVI, 1533
 of west-central Texas Datum, base of Barnett formation, XXIV, 108
 on top of San Saba formation, showing Ouachita-Marathon overthrust, Bend flexure, and Concho, Muenster, and Electra arches, in north-central Texas, XXIV, 107
 Structural maps, early, of Schuler-Wesson area, XXVI, 1469, 1470
 of Tepetate field, XXII, 294-296
 requirements, GAS, 848
 Structural movements in Appalachian basin, XXV, 820
 within Arkansas-Oklahoma coal basin during deposition, XX, 1355
 Structural noses in Rockv Mountain region, XXVII, 464
 Structural origin of lake basins, XXV, 828
 Structural picture from seismograph data, XXVIII, 624
 Structural pinching on salt structures, PROB, 674
 Structural position of Cambrian beds during late Canyon time in north-central Texas, XXIV, 106
 Structural principles, universality of, STR II, 710
 Structural problems in Tejon Quadrangle, California, XXI, 219
 Structural prospecting, technique of, XXI, 198
 Structural provinces, section illustrating relationship of, to stratigraphy of central Tennessee, XXVII, 1055
 Structural ranges, MEX, 161
 Structural relation of Black Knob Ridge to rocks of Arbuckle Mountains, XXI, 22
 Structural relief, PROB, 426, 527, 819
 Structural research, use of field conference method in, XXII, 307
 Structural research work in Beartooth-Bighorn region, Montana and Wyoming, XVII, 680
 Structural resistance of overlying rock, relation to Bradford problem, XIX, 841
 Structural saddles, SC, 53; XX, 1599
 Structural study and thickness of major divisions of Cretaceous system in Nebraska, XXVI, 1517
 Structural terraces, XVII, 549
 accumulation of oil on, PROB, 400
 Structural theory for oil and gas migration and accumulation, present interpretations of, PROB, 253
 of accumulation of oil and gas, historical development of, PROB, 1
 of formation of oil and gas pools, XXIX, 1745
 Structural thinning of Jackson series at Conroe field, GC, 801; XX, 749
 Structural trap at Ardmore pool a faulted anticline, XXVII, 802
 Structural traps, PROB, 256; XXVIII, 904; XXIX, 1189
 for oil and gas, new interpretation of some laccolithic mountains and its possible bearing on, XXVI, 197
 possible, as result of overlapping rim synclines, XX, 1423
 Structural trends, general, in De Mares Concession, Colombia, map, XXIX, 1110
 in Colombia, XXIX, 1073, 1079
 of southeastern half of Texas and northeastern Mexico, GC, 263, 264; XVII, 1206, 1207
 showing oil fields and prospects in Russia, map, XXIII, 952-953
 tectonic map of Greater China showing direction of, XXVIII, 1418
 Structural trough at East White Point field, XXV, 1983
 Structural troughs, RMS, 154
 Structural type, Southern California as a, XXI, 549
 that has characterized discovery in Gulf Coast, progressive change in, XXIII, 873
 Structural units, horizontal classification of, into shields, shelves, and geosynclines, XXI, 1595
 vertical classification of, into basement, substructure, and superstructure, XXI, 1596
 Structural uplifts at East White Point field, XXV, 1981
 Structural versus stratigraphic accumulation, XX, 521
 Structural zones in Appalachians, XXV, 416
 Structure, I, 105
 a dominating factor in Homer gas field, Ohio, STR I, 137
 (Structure)
 accumulation of oil in Francisco pool, Indiana, governed by, STR II, 141
 Alberta gas fields, GAS, 6, 7, 32, 36, 39-41, 54, 57
 Amarillo district, GAS, 393
 Amelia field an elongate dome or anticline adjacent to a big fault, XXIII, 1645
 Anse la Butte dome, XXVII, 1149
 Arbuckle Mountains, XVIII, 569, 571
 Archer County fields, Texas, STR I, 421, 429
 Asia, review, XIV, 1231
 Baxter Basin gas fields, GAS, 332
 before end of Chugwater time, map of Grass Creek dome, Wyoming, showing, STR II, 633
 Bellevue field, Louisiana, STR II, 242; XXII, 1661, 1677
 Bend arch, Stephens County, Texas, STR II, 473
 Berea, compared with surface structure in eastern Ohio, STR I, 130
 Berea in Meigs County, Ohio, map, STR I, 131
 Big Lake field, Texas, STR II, 516, 517, 518
 Black Knob Ridge, XXI, 20
 Bowers field, XXVII, 35
 Bowlegs field, Oklahoma, map, STR II, 344
 Bradford field, Pennsylvania and New York, relation to accumulation of oil and gas, STR II, 419, 420, 431
 British Columbia, VI, 128
 Bunker Hill dome, Wyoming, STR II, 653
 buried-hill type at Petrolia field, Texas, STR II, 554
 Burkett-Seely pool, Kansas, VII, 483
 Cabin Creek field, West Virginia, STR I, 469
 Caddo field, Louisiana, STR II, 183, 184
 California, CAL, 27, 278; VI, 310, 314
 California fields, comparison, PROB, 759
 Carpathian Mountains, SD, 88, 89, 91; IX, 1166
 Cauca-Patia trough, XXIX, 532
 central Wilbarger County, Texas, relation of production to, STR I, 293
 Centralia-Sandoval area, Illinois, STR II, 120, 122
 character, and thickness of Oriskany sand in West Virginia fields, XXII, 1160
 Clinton sand in eastern Ohio, STR I, 146
 Coastal Plain of Georgia, FOP, 143; XXV, 1575
 Como Bluff, XXVIII, 1208
 compaction and its effects on local, PROB, 811
 complex, of Simpson group, XXV, 651
 Conroe field, GC, 798; XX, 745
 Creek County, Oklahoma, STRAT, 451
 Crinerville oil field, Oklahoma, XI, 1075
 Crocker Flat area, XXVI, 1620
 Cromwell field, Oklahoma, STR II, 302
 Cumberland pool, symmetrical elongate anticline, XXV, 1099

(Structure)

- Cunningham dome, XXI, 511
 Dakota basin, map, XXVII, 1584
 deeply buried, of Amelia, compared with shallow, prolific, piercement-type salt domes, XXIII, 1637
 Del Valle area, XXVI, 190
 Delaware Extension pool, Oklahoma, accumulation of oil and gas seemingly not influenced by, STR II, 362
 Depew area, Oklahoma, STR II, 368
 Structure determining accumulation of oil in Mississippian limestone in Martinsville field, Illinois, STR II, 137
 Earlsboro pool, Oklahoma, map, STR II, 345
 eastern coal field, Kentucky, STR I, 75
 Eastern Interior basin, XXIV, 965
 effect on oil accumulation in Ohio, STR I, 135
 effects of, upon oil and gas production in Osage, statistical investigation of, III, 407
 Eldorado field, Kansas, STR II, 163
 Elk Basin field, Wyoming and Montana, relation to accumulation of oil and gas, STR II, 580, 581, 583, 585
 Elk Hills field, California, STR II, 49, 51; section, STR II, 53
 Eola field, XXV, 1381
 Fairport field, Kansas, relation of oil accumulation to, STR I, 39
 favorable, analysis of, STR II, 672
 Ferris dome, Wyoming, STR II, 656
 Francisco pool, Indiana, STR II, 140
 Freezeout Mountain area, XXV, 890
 general, VI, 37
 general, of producing sands in eastern Ohio, XI, 1023
 general, of southern Permian basin, XXIV, 54
 General Petroleum field, Wyoming, STR II, 660
 geologic, Garber field, Oklahoma, STR I, 180
 geologic, in principal oil states, magnetic vector study of regional and local, XVI, 1177
 geologic, Nigger Creek field, Texas, STR I, 414
 geologic, of southeastern Utah, XIX, 1472
 geologic map of Irma field, Arkansas, STR I, 8
 geological, of Eastland and Stephens counties, Texas, IV, 159
 Goldsmith field, contoured on top of Sandy Gray dolomite, XXIII, 1532
 Government Wells field, GC, 635, 638; XIX, 1135, 1138
 Grand Rapids field, XXIV, 982
 Grandview-Marsing area, GAS, 234
 Grass Creek field, Wyoming, STR II, 629
 Greta field, GC, 656; XIX, 552
 Gulf Coast region a feature of sedimentation, XXIX, 1324
 Gulf Coastal Plain, VIII, 25
 Hewitt field, Oklahoma, STR II, 294
 Hoffman field, XXIV, 2131
 Homer field, Louisiana, STR II, 212, 215
 Honda district, XXVI, 829
 Iles dome, Colorado, STR II, 99, 100
 Illinois Basin fields, XXIII, 1505
 Illinois oil-field region, STR II, 117

(Structure)

- importance of, among accumulation criteria, STR II, 669
 in Dora pool on top of Senora limestone, XXIII, 693
 in gypsum, Harvey County, Kansas, IX, 1062
 in Oriskany gas wells, open-flow volume in relation to, XXII, 1162
 in Oriskany sandstone in West Virginia, map, XXV, 784
 Iniskin Bay field, Alaska Peninsula region, FOP, 10; XXV, 1442
 internal, of a sedimentary component, XXVI, 1704
 Irma field, Arkansas, STR I, 7
 Jennings field, Louisiana, X, 80; XXVII, 1107
 Kansas, VI, 77, 468; VIII, 448
 Kay County oil fields, Oklahoma, STR I, 161
 Kentucky, VI, 24
 Keokuk pool, contoured on Calvin sandstone, XXIII, 235
 Keokuk pool, contoured on Misener sandstone, XXIII, 234
 Kevin-Sunburst field, Montana, STR II, 260
 La Barge region, XXV, 1736
 La Rosa field, XXV, 306
 Lance Creek field, Wyoming, STR II, 607
 Lance Creek field, Wyoming, relation of accumulation of oil to, STR II, 609
 largely obscured by glacial drift in Illinois, XXI, 784
 Lisbon field, XXIII, 300
 Little Lost Soldier dome, Wyoming, STR II, 647
 Little River pool, Oklahoma, map, STR II, 346
 local, in Laredo district, XXI, 1437
 Louisiana, IV, 122, 181
 Lower Peninsula of Michigan, XXIV, 1952
 Luling field, Texas, STR I, 263-265
 Mexia fault zone, Texas, STR I, 335
 misinterpretation of, due to deviation of holes from vertical, XIII, 1133
 Missouri, review, VI, 156
 monoclinical, in Hugoton field, XXIII, 1058
 Montana, STRAT, 273, 283, 303
 Moose Mountain area, XXVII, 47
 Morrison field, Oklahoma, STR I, 152
 Mount Sylvan dome, GC, 1047; XIII, 1366
 New York and Pennsylvania fields, GAS, 965
 north Haakon County, review, X, 533
 northern Cincinnati arch region of Indiana and Ohio, map, FOP, 140; XXV, 1572
 northern part of Lost Soldier district, Wyoming, map of, STR II, 663
 Northwest Basin, Australia, XX, 1059
 of beaches, RMS, 207, 216
 of central Tennessee, XXVII, 1039
 of Coastal Plain sediments of southeastern Virginia, XXIX, 83
 of Cretaceous system in Nebraska, bibliography on, XXVI, 1536
 of earth's crust, XXI, 276
 of oil fields, MEX, 159
 of Oswego lime in South Burbank pool, XXI, 570

(Structure)

- of pre-Permian sediments in Sand Hills area, XXIV, 132
 of salt domes of Northwest Europe, as revealed in salt mines, SD, 45; IX, 326
 of sedimentary rocks, effect of gravitational compaction on, X, 1035
 of sedimentary rocks, effect of gravitational compaction: a discussion, XI, 621, 889
 of south Louisiana deep-seated domes, XXVIII, 1249, 1549
 of southeastern part of Tejon Quadrangle, California, XXI, 212
 of typical American oil fields, XIV, 628
 Oklahoma, VI, 228
 Oklahoma City field, XVI, 976
 on Bromide sand, Apache pool, XXIX, 103
 on top of beds of Taylor age, Florida, and parts of Georgia and Alabama, map, XXVIII, 1728
 on top of Ocala limestone, Florida and parts of Georgia and Alabama, map, XXVIII, 1726
 on Viola limestone, Apache pool, XXIX, 102
 Orange field, GC, 894; XX, 545
 origin in Mid-Continent fields, IV, 89
 origin of, Bowers field, XXVII, 36
 Osage County, Oklahoma, IV, 151; VI, 464
 Pacific coastal belt of northern Peru and Ecuador, XXIX, 537
 Pánuco River Valley, Mexico, X, 685
 Payette-Weiser area, GAS, 233
 Payton pool, XXVI, 1639
 Pennsylvanian, Seminole district, Oklahoma, STR II, 335
 Petrolia field, Texas, STR II, 548
 Petrolia field, Texas, map, STR II, 549
 physical, Texon zone in Big Lake field, Texas, STR II, 523
 Pittsburgh coal in eastern Ohio, map, STR I, 134
 pools in southern Oklahoma, GAS, 585
 porosity, and stratigraphic traps, search for, in West Texas, XXVIII, 827
 Powder Wash area in northwest Colorado, XXII, 1034
 pre-Pennsylvanian, at Seminole district, Oklahoma, STR II, 335
 present, map of Grass Creek dome, Wyoming, showing, STR II, 633, 634
 present, of post-Eocene in Caliente Range, XXV, 258
 present, Yates area, Texas, XXIV, 139
 produced by faulting subsequent to deposition of beds, diagrams contrasting with that produced by faulting contemporaneous with deposition, XXIX, 1327
 producing sands in eastern Ohio, STR I, 138
 Rattlesnake Hills, GAS, 225, 226
 regional, in Alberta, ALTA, 26; XV, 1154
 regional, Michigan basin, PROB, 533
 regional, of Emba area, XXIII, 499
 regional, of Florida and parts of Georgia, XXVIII, 1726
 regional, of West Texas and eastern New Mexico, map, XXV, 76

(Structure)

- regional, of West Texas-New Mexico region, index map, XXIV, 2
- regional, section through Orange field, GC, 899; XX, 550
- regional, South Texas coastal plain, GC, 288; XIX, 335
- regional geologic, Camp Polk area, XXIX, 1176
- Red basin, China, XXVIII, 1433
- relation between surface and subsurface of Tupungato field, XXVIII, 1475
- relation of accumulation to, at Crinerville field, Oklahoma, XI, 1082
- relation of gas to, in Urania field, Louisiana, STR I, 99
- relation of oil and gas accumulation to, in northwestern Colorado, STR II, 106
- relation of oil accumulation to, PROB, 255; STR II, 667, III, 90 (See Accumulation of oil)
- relation of producing territory to, PROB, 526
- relation of production to, in Martinsville field, Illinois, STR II, 137
- relation of quality of oil to, at El Dorado, Arkansas, VII, 350
- relation of regional, to oil and gas accumulation in Appalachian region, PROB, 843
- relation to production in five oil and gas fields of Kentucky eastern coal field, XI, 477
- relation to production in Kansas, VII, 75
- relation of petroleum accumulation to, PROB, 429
- Rocky Mountain states, FOP, 37, XXV, 1469
- Rosencranz area, Kansas and Colorado, use of thin bentonite beds in mapping, XIV, 1065
- Sacramento Mountains, New Mexico, XXV, 2110
- Saginaw field, Michigan, STR I, 105
- St Lawrence lowlands, GAS, 96
- Salt Creek anticline, Wyoming, STR II, 595
- Salt Creek field, Wyoming, map showing, STR II, 592
- Sand Hills area, Texas, XXIV, 131
- Santa Maria district, California, STR II, 18
- Santa Maria Valley oil field, complicated, XXIII, 70
- Santa Ynez region, SC, 92; XX, 1638
- Scenery Hill gas field, Pennsylvania, STR II, 447; map, STR II, 448
- Scenery Hill gas field, Pennsylvania, relation of oil and gas to, STR II, 447
- Schuler field, XXVI, 1487
- Searight pool, Oklahoma, map, STR II, 342
- Seminole district, Oklahoma, STR II, 338
- Seminole pool, Oklahoma, map, STR II, 343
- Sherard dome, Wyoming, map, STR II, 662
- significance of, in accumulation of oil in Tennessee, XI, 905
- South Burbank area, XXI, 561
- southern California, dynamics of oil field, VIII, 576
- southwestern Clay County, West Virginia, map showing, STR II, 575

(Structure)

- Stephens County, Texas, STR II, 471, 472, 476, 477
- Stephens field, Arkansas, STR II, 8
- subsurface, V, 17, 32, 42
- subsurface, Artesia field, New Mexico, STR I, 117
- subsurface, Brenham dome, GC, 785; XIX, 1335
- subsurface, Conroe field, GC, 799; XX, 747
- subsurface, Copley pool, West Virginia, STR I, 453
- subsurface, Crinerville field, Oklahoma, STR I, 200
- subsurface, eastern Kentucky, VIII, 152
- subsurface, Edna gas field, XXV, 113
- subsurface, Esperson dome, GC, 865; XVIII, 1640
- subsurface, Fairport field, Kansas, STR I, 39
- subsurface, Garber field, Oklahoma, STR I, 180
- subsurface, Glenn pool, Oklahoma, STR I, 235
- subsurface, Government Wells field, map contoured on producing horizon, GC, 637; XIX, 1137
- subsurface, Hoffman field, Duval County, Texas, contoured on top of Mirando sand zone, XXIV, 2130
- subsurface, Illinois, XXIV, 965
- subsurface, Laredo district, Texas, STR I, 396
- subsurface, Nemaha Mountains region, Kansas, STR I, 63
- subsurface, of some unsymmetrical anticlines in Rocky Mountains, XIII, 1275
- subsurface, Rainbow Bend field, Kansas, STR I, 54
- subsurface, Ramsey pool, XXIV, 1999
- subsurface, Urania field, Louisiana, STR I, 96
- subsurface, Westbrook field, Texas, STR I, 287
- subsurface contouring, VI, 317
- Sugar Creek field, an anticlinal dome, XXII, 1510
- Sugarland field, GC, 718; XVII, 1372
- Sulphur Bluff, XXI, 111
- surface, Artesia field, New Mexico, STR I, 117
- surface, coastal Texas and Louisiana, GC, 458; XIX, 677
- surface, Copley pool, West Virginia, STR I, 452
- surface, Crinerville field, Oklahoma, STR I, 200
- surface, Fairport field, Kansas, STR I, 39
- surface, Garber field, Oklahoma, STR I, 180
- surface, Glenn pool, Oklahoma, STR I, 235
- surface, Laredo district, Texas, STR I, 393
- surface, Nemaha Mountains region, Kansas, STR I, 63
- surface, Rainbow Bend field, Kansas, STR I, 53
- surface, Ramsey pool, XXIV, 1999
- surface, southeast Texas and south Louisiana, GC, 443; XIX, 661
- surface, Urania field, Louisiana, STR I, 96
- surface, Westbrook field, Texas, STR I, 287

(Structure)

- surface and subsurface, of Tri-County field, southwestern Indiana, XIV, 423
- surface rocks in Cushing field, Oklahoma, STR II, 400
- Suwa Basin near Kyoto, Japan, study of, by torsion balance, XIX, 58, 305
- Tanner Creek pool, West Virginia, map showing, STR II, 574
- Tembler Range, XXV, 1327
- Tertiary and Cretaceous Dakota basin, XXVII, 1582
- Texas coastal fields, GC, 670; XVIII, 525
- Texas Panhandle, IV, 272
- Thornburg dome, Colorado, STR II, 103, 104
- through south-central part of Adelaida Quadrangle, California, XXVIII, 473
- Tonkawa field, Oklahoma, VIII, 272, 292; X, 888
- top of Trenton limestone in Lima-Indiana field, PROB, 522
- topographic indications, VI, 37
- Tri-County field, Indiana, relation to oil accumulation, STR I, 30
- Tupungato field, XXVIII, 1465
- Turner Valley gas and oil field, Alberta, XVIII, 1417
- types of, GAS, 1080
- Utah, VI, 243, 245
- Vale-Ontario area, GAS, 239
- Ventura Avenue field, California, STR II, 27
- Ventura Basin, SC, 102, XX, 1648
- Vermilion Creek basin, GAS, 354
- versus stratigraphy in Rocky Mountain region, XXI, 2141
- vertical relief of production on, STR II, 674
- Viola limestone, Bowlegs field, Oklahoma, map, STR II, 354
- Virgil pool, Kansas, STR II, 145
- Warren County, Tennessee, GAS, 867
- Wasco field, an anticlinal dome, XXIII, 935
- Wertz dome, Wyoming, STR II, 651
- West Columbia field, Texas, STR II, 454
- West Ferris and Ferris domes, Wyoming, STR II, 657, 659
- wide variations in California oil fields, PROB, 228
- Wilbarger County, Texas, STR I, 296
- Wind River Canyon area, XXIII, 487, 489, 1455
- Wind River Mountains, XXV, 147
- Yakataga field, FOP, 10; XXV, 1442
- Yates field, Texas, STR II, 492, 494, 499
- Yates field, Texas, map, STR II, 493, 495
- Structure and accumulation, degree of relationship between, STR II, 709
- in Michigan basin and its relation to Cincinnati arch, PROB, 531
- Structure and geology of Amarillo region, preliminary notes on, IV, 269
- of Saxet field, XXIV, 1817
- surface, of Refugio field, XXII, 1195
- Structure and history of Antillean-Caribbean region, Paleogene of Barbados and its bearing on, XXIV, 1548
- Structure and microfossil localities of Chico Martinez Creek area, map, XXVII, 1373

- Structure and oil fields of Sweetgrass arch, Montana, XIII, 779
- Structure and porosity in West Texas Permian basin, relation of water analyses to, PROB, 869
- relationship of accumulation of oil to, in Lima-Indiana field, PROB, 521
- Structure and producing sands at South Cotton Lake field, XXV, 1912
- Structure and production, relation between, in Pine Island field, Louisiana, STR II, 180
- relation between, in Sallyards field, Kansas, V, 276
- Structure and reef growth in Permian in Pecos Valley, XXI, 891
- Structure and stratigraphy of Florida, with special reference to petroleum possibilities, review, XI, 893
- of Kelsey anticline, Upshur County, Texas, XVII, 656, 1015
- of Moose Mountain area, Alberta, XXVII, 38
- of northeastern New Mexico, IV, 73
- of Pennsylvanian and Permian rocks in Salt Creek area, Mosquito Range, Colorado, XIX, 971
- of Smoky Hill chalk in western Kansas, XIII, 595
- of southwestern Oklahoma, XIV, 37
- Permian, of parts of southeastern New Mexico and southwestern Texas, XIII, 957
- Structure and strength of the earth, XXV, 902, 1181
- Structure and surface geology, Refugio field, XXII, 1195
- Structure-contour map drawn on top of Yates sand, Payton pool, XXVI, 1642
- of Anse la Butte dome drawn on top of salt mass, XXVII, 1143
- of central Montana, VII, opp. 8
- of Gore area, contours drawn on top of Jacque Mountain limestone, XXVI, 1390
- of Montana plains, PROB, 696; review, XVI, 1045
- of oil field, first published, PROB, 19
- of pre-Pennsylvanian rocks in Cushing field, Oklahoma, STR II, 402
- of top of cap rock at Clay Creek dome, GC, 767; XX, 78
- of Union County, Arkansas, XXVI, 1472
- Structure contouring, discussion, XIV, 103
- Structure contours of Montebello field showing relative positions of productive features, XXIV, 1122
- drawn on top of Dakota sandstone on Las Animas arch, XXIX, 1664
- Structure contours and isopachs of Clinton formation, Ontario, GAS, 66
- Structure data on Mexia and Tehuacana fault zones, Texas, STR I, 353
- Structure elements of domes, XX, 51
- Structure finding by seismic profiles, XXIV, 1409
- Structure map contoured on top of Cotton Valley formation, Schuler field, XXVI, 1491
- contoured on top of James limestone, Schuler field, XXVI, 1491
- contoured on top of Jones sand, Schuler field, XXVI, 1492
- contoured on top of Langham sand, Amelia field, XXIII, 1646
- (Structure)
- contoured on top of Reynolds oolite porosity, Schuler field, XXVI, 1494
- of eastern Colorado and parts of adjacent states, XVII, 436
- of Esperson dome, GC, 868, 869; XXVIII, 1643, 1644
- of Jennings dome, GC, 979; XIX, 1326
- of Lance Creek field, XXIV, 1109
- of Moose Mountain area, XXVII, 48
- of Mount Sylvan dome, GC, 1046; XIII, 1365
- of New Harmony field, contoured on base of basal Golconda limestone, XXVI, 1597
- of Orange field, GC, 897, XX, 547
- of Ordovician producing horizon of pools in Butler and Marion counties, Kansas, PROB, 318
- Structure maps, geologic, and cross sections of areas in oil and gas states east of Mississippi River, and some producing states in Mid-Continent region, bibliography of, XXII, 431
- for Tennessee, list of, STR I, 254
- Structure section at Montebello field showing buried sand lens beneath "Old field," XXIV, 1124
- at Northeast Coalinga field, showing westward pinch-out of Gatchell sand and relationship between gas, oil, and water, XXIV, 1116
- from Georgia through Florida, FOP, 146; XXV, 1578
- from Tennessee through Mississippi, FOP, 150; XXV, 1582
- generalized, from Tennessee through Mississippi, redrafted for lantern-slide copy, XXVI, 1663
- of Santa Elena, XXVIII, 1173
- trending northwest through Coles Levee field, XXIV, 1117
- trending northwest through Paloma field, XXIV, 1120
- Ventura County, California, VIII, 804
- Structure section and geologic map of southern part of La Barge Ridge, Lincoln County, Wyoming, XXV, 1738
- Structure sections through sulphur area, Palangana, GC, 258, XVII, 1201
- Yates area, Texas, XXIV, 137, 139
- Structures, anticlinal and domal, of Russell region, Kansas, IX, 1063
- associated, maps of, XXIX, 1258
- chalk, in western Kansas, IX, 1064
- developed by differential settling, XXII, 825
- favorable, in eastern Gaspé, FOP, 124; XXV, 1556
- geologic, and producing areas in north Texas petroleum fields, III, 44
- large, flat, of Sparta-Wilcox trend, XXIV, 713
- northeast-trending, in coastal region of China, XXVIII, 1425
- of sedimentary units, RMS, 525, 526
- of western Chaves County, New Mexico, IV, 53
- oil and gas, classification of, STR II, 671
- oil-field, rôle of igneous intrusions in, STR II, 707
- produced by vertical compaction, X, 1064
- pseudo-tectonic, XVII, 1098
- salt-dome, experiments relating to, XIV, 483
- (Structures)
- salt-dome, relation of geophysics to, XIX, 356, 1069
- San Juan Basin, FOP, 75; XXV, 1507
- surface, of central and western Kansas, IX, 1061
- types of productive, PROB, 571
- unproductive, in Arkansas basin, GAS, 528
- Structures and oil showings in redbeds of Coke County, Texas, notes on, III, 117
- Strutt, CD, 43
- Stryker, F. M., V, 64, 68
- Stryker, M. D., V, 64, IX, 1208
- Stryker, W. L., XV, 201
- subsurface geology of Wilson County, Kansas, IX, 1207
- Strzelski, XVI, 1071
- Stuart, Alan, RMS, 607
- Stuart, Murray, PROB, 74; XI, 557, 561, 576; XV, 450, XXII, 1045; XXV, 2176
- geology of oil, oil-shale, and coal, review, XI, 429
- Stuart formation, Dora pool, STRAT, 414
- Stuart shale, V, 24, 283, 287; VI, 13
- in Dora pool, XXIII, 697
- Stubblefield anticline, GAS, 833
- Stubbs, XXV, 168
- Stubbs, J. T., XI, 223
- Stubbs, Sidney A., XXVIII, 1677, 1683
- Stuckey, J. L., XXIX, 910
- Student awards, XXIV, 2019
- American Association of Petroleum Geologists, XXIV, 194
- Houston Geological Society, XXV, 1606
- South Texas Geological Society, XXV, 1607
- West Texas Geological Society, XXIV, 194
- Student merit award, West Texas Geological Society, XXV, 1188; XXVI, 1169; XXVII, 659; XXVIII, 883
- Studies in scientific method, XXII, 502
- of insoluble residues from Mississippi lume of central Kansas, XXII, 1588
- of source beds in Oklahoma and Kansas, XXI, 1377
- Studley pool, XXVIII, 768, 771
- Studd, Charles, XII, 758
- Study of present California oil situation, VIII, 1
- of sedimentation and stratigraphy of lower Mississippian in western Michigan, XXV, 713
- of sediments, methods of, XXV, 1420
- of sediments of north Baltic and adjoining seas, review, XIX, 128
- Study group reports, XXIII, 1272; XXIV, 363
- Study groups, suggestions for organization of, XXIII, 1715
- Stulken, Edgar J., XXV, 1343
- Stump, Nugget, Twin Creek, and Preuss formations, stratigraphic section of, measured on South Piney Creek, XXI, 727
- Stump formation, XXI, 720, 753
- age and stratigraphic relations, XXI, 731
- in Idaho and Wyoming, XXI, 730
- in southeastern Idaho, XXIII, 1175
- Stumps (Lansing-Kansas City) pool, XXII, 672
- Stumps pool, XXII, 667
- Stuntz, Ross, GAS, 511

- Sturm, L. D., RMS, 424
 Stutzer, Albert, XXI, 139
 Stutzer, Otto, SD, 2, 707; SBP, 2; I, 58; IX, 727; XVII, 212, 215, 216, 217; XXI, 120; XXVI, 807, 808, 811, 819, 820, 823, 824, 828; XXIX, 532, 533, 1074, 1078, 1080, 1081, 1082, 1132, 1134
 editor, *Erdol-Muttersubstanz*, review, XIX, 1551
Erdol. Allgemeine Erdölgeologie und Überblick über die Geologie der Erdölfelder Europas, review, XVI, 104
 memorial of, XXI, 139
 original source of oil in Colombia, discussion, X, 1175
Streifzüge eines Geologen im Gebiet der Guajira-Indianer, Kolumbien, review, XIII, 183
sur Geologie und Mineralogie von Kolumbien (Sud-America), review, XIII, 865
 Stutzer, Otto, and Noé, Adolph C., XXVII, 1197
 Stutzer, Otto, and Scheibe, Ernst A., compilers, compilation of official geological studies in Colombia, 1917-1933, review, XIX, 1560
 Stutzer, Otto, Moos, A., Steinbrecher, H., and Enke, Ferdinand, *Deutsches Erdöl*, review, XVIII, 1092
 Stylolites, XXIII, 1530
 Stylolitic limestone, MEX, 28, 29, 34
 Styrian orogeny, MSC, 180
 Subalpine oil province, XII, 495
 Subalpinian, CAL, 157
 Sub-Andean or Llanos trough of Colombia and Venezuela, XXIX, 521
 Sub-Andean belt of Bolivia, geology of, XXIV, 1686
 oil possibilities of, and of plains on east, XXIX, 513
 Sub-Andean trough, XXIX, 559
 Cretaceous in, XXIX, 519
 of northern Bolivia, Peru, and Ecuador, XXIX, 516
 of northern Peru and Ecuador, XXIX, 518
 of northwestern Bolivia and southeastern Peru, XXIX, 517
 Subapenninian, CAL, 157
 Sub-Carpathian depression, XVII, 1096
 Sub-Carpathian province in Poland, XVII, 1084
 Sub-Carpathian zones, SD, 179
 Sub-Carpathians, SD, 101
 Subdivisions of Chester, XXII, 78
 of south Texas district, XXI, 1047
 Subfamily, MSC, 185, 186, 187, 189, 195, 196, 224, 227, 239, 243, 247, 252, 261, 287, 307, 317, 322, 323, 327, 331, 338, 342, 343, 346, 351, 356
 Sublimate, white, found in subsurface cores, XXIX, 1479
 Submarine banks, RMS, 285
 Submarine barchanes, RMS, 347
 Submarine basins, RMS, 446
 Submarine canyons, RMS, 220, 228, 245, 246, 252, 263, 267, 275-280, 284
 by-passing in, RMS, 276
 influence on sediment distribution, XXII, 207
 rate of sedimentation in, RMS, 276
 sediments in, RMS, 252, 254
 Submarine configuration. (See Bottom configuration)
 Submarine elevations, rocky bottom on, RMS, 268
 Submarine erosion, RMS, 268
 in Baltic, RMS, 317
 Submarine eruptions, MEX, 9
 Submarine fault scarps, RMS, 254
 Submarine geological data, some methods employed in obtaining, XIV, 98
 Submarine geological exploration, XVII, 442
 Submarine land slips, XVIII, 1003
 Submarine landsliding, RMS, 260
 Submarine metamorphism, RMS, 503
 Submarine photography, RMS, 205
 Submarine plateaus, RMS, 446
 Submarine ridges, RMS, 259
 Submarine terraces, RMS, 220
 Submarine topography off the California Coast: canyons and tectonic interpretation, XXV, 1940
 Submarine weathering, RMS, 507
 Submerged valleys, CAL, 3
 Submergence of continental floats due to decrease of sima density, CD, 50
 Subpolar convergence line, RMS, 402
 Subpolar regions, RMS, 396
 Subsidence, PROB, 625
 at mouth of Mississippi River, RMS, 160
 during growth of levees, RMS, 163
 in accumulation in Gulf Coast region, rôle of, XXIX, 1319
 in Bahama area, RMS, 285
 local, in western Kansas, XIII, 605
 of cap rock and overlying strata caused by solution of salt at Jefferson Island dome, GC, 999; XIX, 1618
 of surface in Goose Creek field, Texas, cause of, discussion, XI, 887
 of western part of Mid-Continent region during Permian time, XXIV, 111
 on Clay Creek salt dome, Washington County, Texas, and Chestnut dome, Natchitoches Parish, Louisiana, bearing of cap rock on, discussion, XV, 1105
 on deltas, RMS, 159, 165, 173, 174
 over mines and cavities, relation to pressure, XIX, 822
 recent, in Hamilton County, Kansas, XV, 201; discussion, XV, 708
 surface, in Goose Creek oil and gas field, Texas, suggested explanation for, XI, 729
 ultimate basis of deposition, accumulation, and incorporation of sediments, XXVI, 1753
 Subsidence and thickness, relative, XXV, 201
 Subsides in Wallace County, Kansas, XVIII, 1499
 Subsidized independent field work, XXIII, 1575
 Subsidized summer camps, XXIII, 1575
 Subsurface, nitrogen content of, RMS, 264, 265
 organic content of, RMS, 305, 441
 Subsurface Claiborne of Texas and Louisiana, tentative foraminiferal zonation of, GC, 425; XIX, 689
 Subsurface concentration of chloride brines, XVII, 1213
 Subsurface conditions in heavy oil producing area of Smackover, Arkansas, VII, 672
 Subsurface contour map of Illinois basin, XXIV, 963; XXV, 1118
 Subsurface contour maps of Salem field (Subsurface)
 on Bethel formation and on Devonian limestone, XXIV, 967
 Subsurface correlation methods in West Texas Permian basin, XIII, 171
 Subsurface correlation work important in discovery and development of Ranger zone at Wilmington oil field, XXII, 1052
 Subsurface cross section of Permian from Texas to Nebraska, XXIII, 1694, 1702
 of Permian from Texas to Oklahoma, XXIII, 1704
 Subsurface currents, RMS, 105
 Subsurface data on Covington County, Mississippi, GC, 369; XIX, 1148
 with reference to unconformities, limitations of, XXVI, 61
 Subsurface distribution of Hamilton group of New York and northern Pennsylvania, XXI, 311
 of pre-Mississippian rocks of Kansas and Oklahoma, XIV, 1535
 Subsurface environmental factors, XXVI, 1741
 Subsurface extent of upper Castile evaporite, XXIII, 1683
 Subsurface formations in Amelia field, XXIII, 1641
 Middle Devonian, in Illinois, XXVIII, 1519
 naming of, discussion, XXII, 1280
 Subsurface geologic maps of Texas Panhandle, XXIII, 988
 Subsurface geologic structure, Salem field, contoured on top of Benoit sand, XXIII, 1362
 Salem field, contoured on top of McClosky zone, XXIII, 1363
 Subsurface geology, XXVIII, 757; XXIX, 470
 most important guide for selection of wildcat locations, XXV, 1003
 of Chester series in Illinois, XXIV, 209
 of Iowa (lower Mississippian) series in Illinois, XXIV, 225
 of oil districts of north central Texas, III, 34
 of Sewell-Eddleman area, Young County, Texas, XXVI, 204
 Subsurface geology and structure of Refugio field, XXII, 1198
 Subsurface Lower Cretaceous formations of South Texas, XXIX, 1416
 Subsurface mapping in north and west-central Texas, XXVIII, 840
 Subsurface methods of discovery in Kansas in 1942, increased importance of, XXVII, 808
 Subsurface Miocene of southern Louisiana, XXIV, 435
 Subsurface Mississippian rocks of Kansas, XXV, 1410
 Subsurface observations in southeast Kansas, VIII, 445
 Subsurface pre-Upper Cretaceous stratigraphy of southern Arkansas, northern Louisiana, and north-eastern Texas, XXVIII, 578
 Subsurface processes and resultants, XXVI, 1763
 Subsurface recognition of unconformities, criteria for, XXVI, 36
 Subsurface reservoirs, fundamental data on, XXVIII, 1754
 Subsurface section at South Burbank, XXI, 562

- Subsurface sediments, bacteria in, RMS, 418
in Atlantic, RMS, 388-394
- Subsurface stratigraphy, north-central Texas, XXIX, 417
of Atlantic Coastal Plain between New Jersey and Georgia, XXIX, 885
of Atlantic Coastal Plain, sources of material used in study of, XXIX, 886
of Clay County, Texas, STR II, 545 of Devonian, XXV, 692
of Kettleman Hills oil field, California, XVIII, 435
of Santa Maria Valley oil field and adjacent parts of Santa Maria Valley, California, XXII, 45
of Yates field, Texas, STR II, 484-492
- Subsurface stratigraphy and lithology of Tuscaloosa formation in southeastern Gulf Coastal Plain, XXVII, 596
- Subsurface structural contouring, type of, XIII, 1559
- Subsurface structure, Amelia field, XXIII, 1645
Hoffman field, Duval County, Texas, contoured on top of Mirando sand zone, XXIV, 2130
mapping by making radioactivity surveys, XXV, 1783
of eastern Kentucky, VIII, 152
Sewell-Eddleman area, XXVI, 213
Wilmington oil field, XXII, 1053
- Subsurface studies, XXI, 711
most important in California fields, XXIV, 1125
reference against which results of other methods of investigation must check, XXIV, 1394
the one continuing technique in prospecting for petroleum, XXI, 710
- Subsurface study of Cherokee formation near Kansas City, Missouri, XXII, 918
of Ellenburger formation in West Texas, XXVI, 1398
of Greenwich pool, Sedgwick County, Kansas, XXIII, 643
of Jennings field, Acadia Parish, Louisiana, XXVII, 1102
of Pale beds and Foremost formation in Lethbridge-Brooks area of southern Alberta, ALTA, 69; XV, 1197
- Subsurface subdivisions of Lower Ordovician and Upper Cambrian rocks, section, XXIX, 421
of north-central Texas, objectives of investigation of, XXIX, 414
- Subsurface temperature gradients, PROB, 987
- Subsurface Tertiary zones of correlation through Mississippi, Alabama, and Florida, XXII, 984
- Subsurface water characteristics in Oklahoma and Kansas, PROB, 855
- Subsurface waters, deep, sulphate reduction in, PROB, 907
solute concentration of, PROB, 923
- Subsurface work, microscopic, in oil fields of United States, XV, 731
plus trend projection from previously developed structures responsible for discovery of Buckeye field, XXIV, 1957
- Subterranean water, segregation of oil and gas from, XVI, 924
- Sub-tropical atmospheric high, RMS, 118, 123
- Success Oil Company, SD, 621, 623
- Succession, orderly, of fossils, XXIV, 1753
- Succession and stratigraphic relations of Paleozoic formations in western states, diagram indicating, XXIV, 310
- Suchier, XX, 686
- Suction, RMS, 14
- Suction samplers, RMS, 654, 655
- Suess, Eduard, CD, 160; MSC, 180; SD, 111; IX, 422, 1189; XI, 57, 159, 493; XII, 951; XIII, 484; XVI, 171; XVIII, 245, 642; XX, 892; XXII, 1217, 1218; XXIV, 1606; XXV, 409
conception of plastic creep, CD, 38
distinction between sial and suma, CD, 10, 76
study of horizontal plan of Tertiary mountain belt, CD, 159
- Suffel, G. G., XVIII, 1672; XXIII, 1798; XXVIII, 1017, 1018, 1019
- Suffixes, use of, for stage terms and series terms, XXIV, 2041
- Sugar Creek field, XXIII, 902
- Claiborne Parish, Louisiana, XXII, 1504
contoured on base of Annona chalk, XXII, 1512
contoured on base of Massive anhydrite, XXII, 1511
isopach map, XXII, 1514
Schlumberger section, XXII, 1515
section of formations, XXII, 1507
structure in, an anticlinal dome, XXII, 1510, 1513
- Sugar Creek gas field, Louisiana, XXI, 1071; XXII, 722; XXV, 1036
- Sugar Loaf area, XIV, 1034
- Sugarland dome, GC, 178, 180-182; XIX, 364
discovery by torsion balance method, XIX, 20
- Sugarland field, Fort Bend County, Texas, GAS, 713; GC, 709; XVII, 1362
map showing calcite cap and Vicksburg formation, GC, 719; XVII, 1371
Oligocene production at, GC, 11; XVIII, 510
section, GC, 714; XVII, 1368
structural contour map on top of *Discorbis* zone, GC, 721; XVII, 1373
- Sugarloaf Mountain, composite section of McAlester shale on, XXI, 1416
- Sugarloaf syncline, GAS, 568
- Sugars, RMS, 443; SBP, 58
- Suggestions for organization of study groups, XXIII, 1715
of new method of making underground observations, IV, 83
- Suisun Bay, XXVII, 870
- Sukunka formation, VI, 116
- Sulfuric acid, SBP, 36
- Sullivan, D. C., XXIII, 1446
- Sullivan, E. C., XVIII, 359
- Sullivan and Greene counties, Indiana, standard section for Indiana Coal Measures, XXIII, 1385
- Sullivan County, Missouri, Des Moines series in, section, XXV, 46
Missouri series in, section, XXV, 46
- Sullivan Peak, section of Word formation at, XXIII, 1699
- Sully Springs section of Tertiary of Dakota basin, XXVII, 1576
- Sulphate, exchange of, for carbonate, in waters, XXIV, 1221
in oil-field waters, reduction of, XXVI, 848
in salt brines, amount of, often in direct ratio to distance from oil fields, XXIV, 492
in subsurface waters, reduction of, XXIV, 491
- Sulphate brines, map showing, in New Mexico, and sodium sulphate-producing lakes in Ward, Terry, and Lynn counties, Texas, XXV, 153
- Sulphate-free oil-field waters of Wyoming, explanation, XXIV, 1221
- Sulphate-reducing bacteria, XXVII, 1184
effect of, XXI, 1132
in California oil-field waters, X, 1293
in crude oil and oil-well brines, XXVII, 1182
in Illinois oil-field waters, X, 1289
in oil-field waters, X, 1286; XXVI, 848
in soils and waters of Illinois oil fields, XIV, 153
- Sulphate reduction by bacteria, PROB, 267, 875, 876, 878, 913, 917, 918; GC, 851; RMS, 423, 425; XX, 173; XXVI, 849
in deep subsurface waters, PROB, 836, 907
in oil-well waters, causative agents of, XIV, 139
inanimate organic theory of, PROB, 912
- Sulphate reduction and base-exchange in salty ground waters along Atlantic and Gulf coasts, XXVI, 838
- Sulphates, PROB, 143; RMS, 444, 485
as a source of oxygen, RMS, 151
in sea water, RMS, 65, 144
in tidal deposits, RMS, 200
problem of natural reduction of, X, 1270
reduction of, by bacteria in oil well waters, RMS, 424
reduction of, to hydrogen sulphide, RMS, 424
- Sulphide, effect on bacterial action, XXVII, 1184
- Sulphide minerals in Big Hills dome, Texas, SD, 699; IX, 719
- Sulphides carried by wind, RMS, 499
fish scales coated with, MEX, 16
of iron, genesis, PROB, 909
- Sulphur, GAS, 456; PROB, 37, 103, 123, 129, 142, 148, 152, 222, 223, 241, 361, 643; RMS, 422, 423, 429, 443
Big Hill, Matagorda County, Texas, GAS, 708; SD, 706, 715; IX, 726
Chapero ranch, SD, 772
cycle of, in sediments, RMS, 424
Damon Mound, Texas, SD, 640, 642; IX, 532
effect on character of crude oil, PROB, 143
effect on petroleum, XV, 461
Frasch process of mining, GC, 1016, 1021; XIX, 1635, 1640
Fruitvale field, PROB, 205
Hockley dome, Texas, IX, 1060
Hoskins Mound dome, Texas, GC, 839, 843, 850; XX, 161, 165, 172
in cap rock, IX, 43; XV, 519

- (Sulphur)
 in crude oil at Spindletop, GC, 314; XIX, 623
 in gas in Michigan fields, GAS, 804, 808
 in oils, XXVII, 1313
 in rock salt, XXI, 1292
 in salt domes, XIV, 1475
 in sea water, RMS, 143
 in tidal deposits, RMS, 199, 200
 Louisiana, GAS, 712; III, 243
 origin of, at Jefferson Island dome, GC, 1015; XIX, 1634
 origin of deposits in Texas, III, 245
 oxidation of, RMS, 424
 Pine Prairie dome, Louisiana, IX, 755
 Raccoon Bend field, GC, 680, XVII, 1463
 Texas and Louisiana salt domes, SD, 51, 53, 55, 79, 436, 599, 640, 642, 706, 715, 733, 774
 variation of, PROB, 131
 world production and consumption, SD, 716; IX, 736
 Sulphur and carbon content of crude oil, variation of, with age and depth, XXI, 927
 Sulphur and gypsum at Bryan Heights dome, SD, 684
 Sulphur and nitrogen-containing materials, formation of, XXIV, 1876
 Sulphur Bluff fault, XXI, 111
 Sulphur Bluff field, Hopkins County, Texas, XXI, 111, 1065; XXII, 733; XXIII, 894; XXV, 1087
 character of oil produced at, XXI, 111
 gravity of oil at, XXI, 1065
 Paluxy formation, XXI, 111
 structure in, XXI, 111
 Sulphur compounds, PROB, 239
 Sulphur content in oil, PROB, 118
 in sediments, PROB, 35
 of gas at Big Lake field, GAS, 446
 of gas at East Lea County high, GAS, 429
 of Playa del Rey crude, XIX, 186
 of water at Raccoon Bend field, GC, 698; XVII, 1481
 relationship of, to gravity in pre-Jurassic oils of Wyoming, XXVII, 1312
 Sulphur Creek, XXVII, 856
 Sulphur cycle in sediments, XXI, 627
 Sulphur deposit, Jefferson Island dome, GC, 1005; XIX, 1625
 section through, GC, 1007, 1008; XIX, 1626, 1627
 Sulphur deposits, Sicilian; similar to Gulf Coast sulphur, SD, 707
 Sulphur derivatives in distillates, XX, 290
 Sulphur-dioxide odor produced by dissociation of iron sulphate, XXIX, 1479
 Sulphur dome, Calcasieu Parish, Louisiana, SD, 452; XIV, 1079; IX, 479
 Sulphur dome section, PROB, 662
 Sulphur exploration at Jefferson Island, GC, 992; XIX, 1611
 Sulphur gas, GAS, 73
 Flat Cap-Win-Ivryton gas field, GAS, 944
 Tyrone field, GAS, 983
 Sulphur-gas reservoir, GAS, 334
 Sulphur Mine, Louisiana, SD, 50
 Sulphur Mine dome, I, 47
 Sulphur mining at Barba, Louisiana, GC, 1021; XIX, 1640
- (Sulphur)
 at Big Hill dome, Texas, IX, 732
 at Hoskins Mound, GC, 852, XX, 174
 in Texas, III, 242
 Sulphur Mountain, California, MSC, Fig. 14 (in pocket)
 outcrop section N, SBP, 167-194, 411
 Sulphur Mountain area, SC, 98; XX, 1644
 Sulphur Mountain fault, PROB, 190
 effects in Sulphur Mountain fields, PROB, 192, 193
 Sulphur salt dome, Louisiana, SD, 452; IX, 479
 shadowgraphic treatment of map of, XXV, bet. 2166 and 2167
 Sulphur Spring Creek, MSC, 73
 Sulphur Spring Gap, MSC, 200, 270, 296, 299, 323, 336, 344, 355
 Sulphur Springs, Texas (well 375), SBP, 292-335, 409
 Sulphur Springs formation, XXIV, 784
 unconformable on Ordovician, XXIV, 784
 Sulphur syncline, XXIX, 187, 195, 197
 Sulphur-treating plant at Lyons gas field, XXIV, 1793
 Sulphur-treating plants operating in Otis field, XXIV, 1789
 Sulphur water, GAS, 450
 action of, PROB, 198
 Huntsville field, GAS, 873
 in wells, MEX, 167, 202, 225, 228
 in West Texas oil, PROB, 373
 Raccoon Bend field, GC, 679, XVII, 1462
 Sulphur waters, occurrence of, in Gulf Coast of Texas and Louisiana, and their significance in locating new domes, SD, 774; IX, 35
 Sulphur well at Jefferson Island, GC, 1019; XIX, 1639
 Sulphuric acid, RMS, 435
 Sulphurous gas at Hacienda Chocoy, GAS, 1000
 at North Dayton, GAS, 709
 Sulu Sea, RMS, 348, 351
 circulation of, RMS, 352
 Globigerina ooze in, RMS, 351
 Suman, John R., PROB, 669; SD, 501, 558; III, 312; IX, 655, 1294; XII, 68; XIX, 877; XXV, 1222
 memorial of Edwin Theodore Dumble, XI, 439
 oil development in Texas and Louisiana coastal fields during 1920, V, 333
 petroleum production methods, review, V, 680, 682
 Saratoga oil field, Hardin County, Texas, SD, 501; IX, 263
 Suman, John R., and Baker, C. L., XXVIII, 979
 Suman, John T., III, 153
 Sumatra, RMS, 349, 350
 Eocene in, XXVIII, 1445
 Sumatra, Malaya, and Timor, Permian volcanic rocks in, XXII, 5
 Sumatra, Oeloe Aer fault zone, XXIV, 359
 oil production, XXVIII, 1444
 test-pit exploration in coastal plain of, XIV, 1439
 Triassic in, XXII, 8
 west, and south Java, geanticline of, XXII, 45
 Sumatra and Java, Netherlands East Indies, Miocene foraminifera from, XXVIII, 1758
- Sumatra geosyncline, oil possibilities, XXVIII, 1445
 Sumatra oil, V, 417
 Summary, continental drift theory, CD, 197
 general, of investigation of problem of source beds, SBP, 392-402
 of Canadian foothills belt, IV, 249
 of data on oil and gas pools of Mexico and Tehuacana fault zones, Texas, STR I, 387
 of faunal studies of Navarro group of Texas, XXV, 637
 of geology of natural gas fields of New York and Pennsylvania, GAS, 949
 of important developments in petroleum geology, 1943, XXVII, 1653
 Summary of properties of sediments, SBP, 397-402
 Appalachian, SBP, 374
 California, SBP, 129, 145
 California outcrop samples, SBP, 185
 central California, SBP, 145
 distance studies of relation of properties of sediments to oil zones, SBP, 386-388
 East Texas, SBP, 326
 Gulf Coast, SBP, 341
 Los Angeles Basin, SBP, 129
 Mid-Continent, SBP, 279
 Rocky Mountains, SBP, 236
 Rocky Mountains outcrop samples, SBP, 252
 stratigraphic studies of relation of properties to oil zones, SBP, 382-386
 West Texas, SBP, 287
 Summary of Rocky Mountain geology, XXIII, 1131
 Summer camps, subsidized, XXIII, 1575
 Summerbell, R. K., and Behre, C. H., Jr., PROB, 837
 Summerland field, CAL, 177; PROB, 209, 228, 742, 756
 Summers, Elizabeth B., XV, 1341
 Summit coal, XXV, 37
 Summit gas pool, Fayette County, Pennsylvania, XXV, 1140; XXVI, 1115, 1120; XXVII, 846; XXIX, 678
 producing from Huntersville chert and Oriskany, XXIV, 972
 Summit gas pool, Fayette County, Pennsylvania, wells completed and drilling in 1940, XXV, 1138
 in 1941, XXVI, 1117
 in 1942, XXVII, 843
 in 1943, XXVIII, 731
 Sumner, F. B., RMS, 648, 660, 661
 Sumner County field, Tennessee, STR I, 251
 structure, XI, 913
 Sumner County fields, Tennessee, V, 652
 miniature anticlines, STR II, 680
 Sumner group, GAS, 467; XXI, 505; XXIII, 1058
 (Cs) (Permian), SBP, 194, 258, 261-280, 414
 Hugoton field, STRAT, 87, 88
 Sun, influence of, on sea, RMS, 58
 Sun City pool, XXVI, 1081
 Sun Company, SD, 267, 503, 504; GC, 911; XX, 562
 Sun field, XXIII, 867
 Sun Oil Company, GAS, 807; GC, 758; XX, 69; XXIII, 867; XXIV, 1064,

(Sun)

- 1086, 1087, XXIX, 794, 796, 826, 899
 Beal 5 (well 331), Elder 1 (well 333), Fuller 1 (well 316), Grey 1 (well 319), Lloyd 10 (well 330), McGeehee 1 (well 359), Tate 1 (well 332), Walker 1 (well 328), SBP, 292-335, 408, 409
 Sun Pipe Line Company, XX, 778; XXIII, 1664
 Sun River section of Ellis group, XXIX, 1296
 Sunberg, Karl, memorial of, XXIII, 1282
 Sunburst sand, GAS, 267, 270, 273; PROB, 705, 711, 932, XXVII, 855; XXIX, 1597
 Alberta, GAS, 21
 Kevin-Sunburst field, Montana, STR II, 263, 264
 productive at North Cut Bank field, STRAT, 344; XXIV, 1107
 Sunburst sands, FOP, 20; XXV, 1452
 Sunburst zone, Border-Red Coulee field, STRAT, 287
 Sunbury-Ellsworth shale, XXV, 721
 Sunbury formation, XXII, 397; XXIV, 1966; XXVIII, 186
 a gray to black shale with some pyrite, XXIX, 7
 Sunbury shale, PROB, 460; V, 522; XXIV, 2153; XXV, 732, 803; XXIX, 13, 17
 black, approximate extent of, in western Michigan, XXV, 720
 eastern Kentucky, GAS, 936
 Sunda Shelf, RMS, 349
 Sundaland, resemblance to Mohavia, XXI, 556
 Sundance in northwestern United States, Jurassic of, correlated with European type section, XXI, 758
 in Wyoming and Colorado, oil fields of, where marine basin overlaps Entrada sandstone, XXI, 1261
 in Wyoming oil fields, XXI, 765
 Jurassic, sandstone, XXII, 680
 town of, Pahasapa water in, XXIV, 1308
 Sundance and Twin Creek formations, stratigraphic section of, measured on Gros Ventre River, XXI, 728, 729
 Sundance belt of production in Wyoming, XXI, 767
 Sundance fauna from Jurassic of Wyoming, XXI, 719
 Sundance fields, producing, anticlinal structure of, XXI, 767
 Sundance formation, GAS, 308, 313-315, 325, 327; IV, 38; V, 193, 257, 260; XXI, 732; XXII, 686; XXIII, 907; XXV, 136, 887, 888, 1152, 2035; XXVI, 349, 1562; XXVIII, 796, 1198; XXIX, 1019
 a prolific source of oil and gas in Lost Soldier district, Wyoming, STR II, 642
 age and stratigraphic relations, XXI, 746
 Big Horn Basin, XXI, 735
 Centennial Valley, XXI, 743
 correlation between Circle Ranch, Bull Lake, and Lander sections, XXI, 735, 737
 correlation between Cody, Kane, and Thermopolis sections of, XXI, 739
 correlation of, across Wyoming, XXI, 719

(Sundance)

- correlation of basal member of, with Nugget sandstone, XXI, 747
 correlation of Cody, Kane, and Thermopolis sections of, XXI, 741
 faunal relations in, XXI, 749
 (Js) (Jurassic), SBP, 193, 195-255, 415
 Medicine Bow Mountains, XXI, 743
 near Trabing Brothers Spring, in Freezeout Hills, XXI, 741
 problem of nomenclature involved within, XXI, 758
 productive at Wertz dome, XXIV, 1101
 Quealy dome, XXV, 1849
 Salt Creek field, Wyoming, STR II, 594
 stratigraphic section of, measured in Black Hills, South Dakota, XXI, 745
 stratigraphic section of, measured on Bull Mountain, Colorado, XXI, 744
 stratigraphic sections, Wyoming, XXI, 733-735, 738-740, 742-744; XXVIII, 1203
 theories of accumulation and distribution of oil in, XXI, 766
 unconformity within, XXI, 748
 up-dip migration in, XXI, 768
 Wind River Mountains, XXI, 735
 Wyoming, ammonites from, XXI, 718
 Sundance formation and related Jurassic rocks in Wyoming, stratigraphy of, and their petroleum aspects, XXI, 715
 Sundance formation waters, XXIV, 1274
 in Wyoming fields, analysis of, XXIV, 1272
 Sundance production, XXI, 764
 Sundance samples from Lance Creek field, XXV, 1848
 from Salt Creek field, XXV, 1848
 Sundance sand, PROB, 408, 409, 688, 838, 930, 935, 952; XXIII, 911, 913, 921; XXV, 1150, 1151, 1153
 Iles dome, Colorado, STR II, 95, 99
 Little Lost Soldier dome, Wyoming, STR II, 650
 Moffat dome, Colorado, STR II, 95, 103
 Nieber dome, Wyoming, XXV, 1849
 productive in Lance Creek field, Wyoming, XXIV, 1108
 Salt Creek field, Wyoming, STR II, 597
 Wyoming, PROB, 165
 Wyoming, correlation of, with Entrada sandstone in Utah, XXIII, 1155
 Sundance sandstone, XXV, 1861
 Iles dome, XXV, 1846
 Sundance section measured at Muddy Gap in Shirley Mountains, XXI, 741
 Sundance waters, Laramie basin, XXIV, 1278
 Poison Spider area, XXIV, 1278
 Powder River basin, XXIV, 1280
 representative, in Wyoming fields, XXIV, 1276
 solutions of sodium salts with small amounts of calcium and magnesium, XXIV, 1274
 Sweetwater basin, XXIV, 1276
 varying, in Salt Creek oil field, XXIV, 1282

(Sundance)

- Wyoming, typical, PROB, 941, 943
 Sundberg, Karl, XIV, 1179, 1181
 electrical prospecting for oil structure, XIV, 1145
 Sundberg electromagnetic method used in Balcones fault zone, XIV, 1179
 Sundt, Olaf F., recent developments in gravity prospecting on Gulf Coast, XIX, 19
 Sungard sandstones in Brazil, XXI, 104
 Sunken Lake sinkhole, XXVII, 577
 Sunlight, effect of, on plant growth in sea, RMS, 438
 Sunlight Basin area, base of thrust in, XXV, 2026
 Sunniland field, XXIX, 819
 reserves at, XXVIII, 804
 Sunnybrook, lower, sands, XXV, 818
 Sunnybrook horizon in Celina oil field, Tennessee, STR I, 248
 Sunnybrook pool, V, 169
 Sunnybrook sand, IV, 306
 Sunray basin, XXIII, 1029, 1032
 Sunray Oil Company, XXVI, 1066
 Wilson 1 (well 292), SBP, 255-285, 408
 Sunray pool, XXIII, 1032
 Sunset district, CAL, 316
 Cretaceous folds in, CAL, 109
 Sunset field, PROB, 793
 Sunset-McKittrick oil region, MSC, 107
 Sunset-Midway and Kern River fields, microlithology and micropaleontology of oil-bearing formations in, X, 482
 Sunset-Midway district, California, paleogeology of, XVII, 1126
 Sunset-Midway oil field, oil-well waters of, PROB, 910
 Sunset Valley, MSC, 2, 61, 85, 210, 214, 215, 229, 239, 253, 279, 302, 336, 338, 356
 Sunset Valley district, MSC, 56, 184-189, 191-194, 197, 198, 203, 205, 209, 211, 213, 216-226, 228, 231, 239, 240, 242-246, 249, 252, 255, 257, 259, 261, 266, 276, 290, 293-296, 305, 306, 316-318, 322, 329, 330, 332, 333, 337, 341, 343, 344, 346, 349, 350, 352, 353-355
 check list of foraminifera from, MSC, 57
 Supai formation, VI, 47, 205, 211, 224, 227; X, 824; XXI, 1252; XXIV, 621
 Arizona, fossils, X, 825
 Holbrook dome, X, 825
 Mongollon Plateau, X, 825
 Nevada, XX, 1199
 Super-cap-rock reservoirs, PROB, 669
 Super-cap sand fields, XV, 63
 Super-capillary openings in limestone, MEX, 169
 Supercentrifuge methods, RMS, 554
 Superga, Italy, MSC, 172
 Superga Hill, MSC, 175
 Supergene origin of clays, RMS, 485
 Superheating below continental masses, relief of, by their breaking up, CD, 51
 Superior of California, XXI, 1058
 Superior Oil Company, XXI, 1066; XXIII, 47; XXVIII, 792; XXIX, 792, 824
 Hernandez 1 (well 407), SBP, 335-349, 410
 of California, XXIII, 883; XXIV, 1087; XXIX, 745

- (Superior)
Torrance 63 (well 49), SBP, 87-153, 403
- Superposition of black muds on normal sediments, RMS, 362
- of Globigerina ooze on red clay, RMS, 405
- of sediments of different kinds in Indian Ocean, RMS, 398
- of strata, law of, XXIV, 1752
- Supersaturation, RMS, 143
- Supervision of public oil lands by United States Bureau of Mines, review, VII, 196
- Supplies for geophysical exploitation, problem of obtaining, XXVII, 952
- Supply and demand, GAS, 1091
- Sur district, CAL, 11, 38, 317
- Sur series, CAL, 64, 68, 82, 85, 86, 91, 94, 281; XXVII, 186; XXVIII, 453, 455
- Sur thrust, CAL, 30, 38, 41, 42, 44, 173, 184
- Suram massif, XVIII, 781
- Surata series, XXV, 1790
- Surf area of Huntington Beach field, GAS, 188
- Surface, F. M., and Malloy, Stewart C., XXVI, 1656
- Surface of lithosphere beneath ocean more rigid than continental surface, CD, 86
- of water, RMS, 67, 68
- Surface and seismic exploration party, combined, XXIX, 1781
- Surface and subsurface formations, correlation of, in two typical sections of Gulf Coast of Texas, XXIII, 1603
- Surface contouring, remarks on, VI, 317
- Surface currents, RMS, 236
- calculation of velocity of, RMS, 104
- in North Sea, RMS, 326
- in sea, RMS, 56
- Surface effects of reservoir rocks, PROB, 830
- Surface folds due to differential settling over buried hills, Nemaha Mountains region, Kansas, STR I, 72
- Surface formation of Depew area, Oklahoma, STR II, 366
- Surface formations, Amelia field, XXIII, 1641
- Lisbon field, XXIII, 299
- Mississippi, XXIV, 2033
- Mississippi, columnar section of, XXIV, 2034
- post-Fleming, of coastal southeast Texas and south Louisiana, GC, 432; XIX, 651
- southeast Texas, GC, 435; XIX, 654
- Surface geology, XXIV, 1392
- study of, XXVI, 154
- Surface geology and structure of Refugio field, XXII, 1195
- Surface history of the earth, review, XII, 452
- Surface indications of oil occurrence, XI, 686
- Surface influence on origin of Gulf Coast crude oil, argument against, XXI, 939
- Surface mapping, XXI, 710
- Surface mounds, Gulf Coast, I, 37
- Surface projection of axis and crest traces, graphic method for determining, at any depth of an asymmetrical anticline, V, 159
- Surface slopes maintained by wind, RMS, 121
- Surface structural mapping, detailed, discoveries resulting from, XXVII, 919
- Surface structures of central and western Kansas, IX, 1061
- Surface studies, XXI, 711
- Surface temperature of sea, RMS, 60
- as related to radiation, RMS, 87
- Surface tension, RMS, 601
- Surface tension, graphic representation of decrease of, by organic acids, according to Traube's rule, XXV, opp 2175
- of fluids, PROB, 278, 279, 283, 284
- Surface texture analysis of crinoidal sediment, XXVI, 1714
- of particles, XXIX, 1245
- Surface textures, RMS, 178
- Surface velocities, RMS, 236
- Surfaces, equal-potential, RMS, 109
- of clastic particles, RMS, 528
- of equal density, RMS, 123
- Surficial environments, ecologic factors inherent in, XXVI, 1742
- interpretative restoration of, XXVI, 1742
- Survant coal, XXIII, 1390
- Survey of a deep bore hole, X, 775
- of colleges attended by members and associates of the Association, XXIII, 1117, 1435
- of geology students, XXIII, 1280; XXV, 910; XXVI, 968; XXVII, 651; XXIX, 571
- of research opinion, XXIII, 436, 978
- Surveys in Texas. (See individual names of surveys)
- with magnetometer or torsion balance, control and adjustment of, XIII, 1163, 1570
- with oriented drill pipe, XIV, 597
- Suspended calcareous particles, RMS, 293
- Suspended fluvial material, RMS, 396
- Suspended load, RMS, 25
- of streams in California, RMS, 272
- ratio of, to bed load, RMS, 25
- ratio of, to discharge, RMS, 26
- samplers, RMS, 632
- Suspended material, RMS, 19, 271
- in rivers, RMS, 280
- means of determination of, RMS, 26, 27
- transportation of, RMS, 19
- vertical distribution of, in a current, RMS, 81
- Suspended silt, mode of transport, RMS, 28
- Suspension, RMS, 12, 15, 35, 36, 533
- Sussex-Shumake pool, XXIII, 852
- Suter, H. N., XXIII, 1854
- Sutherland, David A., XX, 899, 908, 909
- Sutherland, John IX, 712
- Sutherland, John C., SC, 13; XX, 1559
- Sutherland, John C., Buwalda, J. P., and Gazin, C. L., XXIII, 518, 552
- Sutter, H. H., and Renz, H. H., XXIII, 1242
- Sutter (Marysville) Buttes development, Sutter County, California, 1941 supplement to, XXVI, 852, 1155
- Sutter Butte gas field, California (well 3), SBP, 130-153, 403
- Sutter County, California, CAL, 288, 317
- (Sutter)
outcrop section C₁, SBP, 167-194, 411
- (well 3), SBP, 130-153, 403
- Sutton, A. H., XIV, 846; XXIII, 462, 469, 471, 472; XXV, 685, 2049, XXVI, 5
- Sutton, A. H., and Lamar, J. E., Cretaceous and Tertiary sediments of Kentucky, Illinois, and Missouri, XIV, 845
- Sutton, A. H., and Weller, J. Marvin, XXII, 272; XXIII, 1500; XXVIII, 92, 113, 117; XXIX, 136
- Mississippi border of Eastern Interior basin, XXIV, 765, 1133
- Sutton, Carl, XXIV, 672, 2041
- Sutton, D. G., XXV, 685
- Sutton, D. G., and Sutton, A. H., XXV, 687
- Sutton-Bowman, T., XV, 895
- Sutton Township pool, Ohio, XI, 951
- Suwa Basin near Kyoto, Japan, study of structure of, by torsion balance, XIX, 58, 305
- Suwannee fauna of Florida also characteristic of Avon Park limestone, XXVIII, 1682
- Suwannee limestone, XXII, 792; XXVIII, 1316, 1318, 1341, 1681
- Suwannee strait, XXVIII, 1681
- Svelvik moraine, RMS, 362
- Sverdrup, H. U., RMS, 54, 59, 88, 94, 103, 104, 116, 124, 126, 127, 130, 131, 274
- Swain, Frederick M., XXVII, 1410, 1466
- stratigraphy of Cotton Valley beds of northern Gulf Coastal plain, XXVIII, 577
- Swain, James F., interpretation of cable-tool drilling logs, XXVII, 997
- Swain, R. E., XIV, 1452
- Swallow, XIII, 884
- Swallow, C. G., I, 23, 24, 25; II, 71; XXIV, 298, 299
- Swallow, G. C., and Hawn, F., XXIV, 299
- Swamp, RMS, 156, 160
- in North Sea, RMS, 333
- mangrove, RMS, 283
- Swamp sediments, RMS, 166
- Swan, U. S., XXIV, 1363
- Swanson, C. O., XII, 1166
- Swanson, E. B., GAS, 334, 337, 344, 455, 983, 1096; XIX, 476
- Swartz, Frank M., STRAT, 538; XXII, 542, 1108, 1109, 1110; XXV, 795
- Swartz, J. H., XVI, 1264
- Swartz, J. H., and Lee, F. W., XVI, 1328; XVIII, 40
- Swastika sand, PROB, 402; XXIII, 854, 856; XXVII, 781
- Swauk formation, XXIX, 1393
- Swayze, R. O., XXIX, 956
- Sweden, RMS, 5, 25, 26, 299, 312
- oil shales in, XXIV, 392
- Swedenborg, E. A., XXIV, 1215
- analysis of connate water from the Bradford sand in Bradford field, Pennsylvania and New York, STR II, 435
- Swedenborg, E. A., and Ross, J. S., analyses of waters of the Salt Creek field, Wyoming, STR II, 601
- Swedish electrical methods for mapping structures, XIV, 1156
- Swedish Hydrographical Expedition of 1877, RMS, 298, 311

- Sweeney, J. E., XV, 45
 Sweet, P. W. K., and Wright, Albert, Jr., Jurassic as source of oil in western Cuba, VIII, 516
 Sweet gas, GAS, 337, 344, 455 in Wayne field, GAS, 983
 Sweet gas wells, GAS, 334
 Sweet Lake, PROB, 115
 Sweet Lake dome, Louisiana, GAS, 732-734
 Sweetgrass arch, Montana, FOP, 18, 39; GAS, 7, 9, 30, 250; PROB, 61, 692, 698, 700, 702, 703; STRAT, 273, 291, 308; XI, 255; XXIII, 915; XXV, 1450, 1471; XXVI, 326; XXVII, 427, 432, 1292; XXVIII, 871
 gas fields of, GAS, 29
 geologic history of, XXIX, 1286
 geologic map of, STR II, 255
 geologic section, XIII, 786
 marine Jurassic formations of, XXIX, 1262
 oil fields and structure of, XIII, 779
 Swift formation youngest marine Jurassic of, XXIX, 1281
 time relations of Ellis group of, with standard European stages, XXIX, 1264
 Sweetgrass arch fields, PROB, 705
 Colorado group waters in, XXVI, 1333
 Ellis formation waters in, XXVI, 1356
 Kootenai waters in, XXVI, 1341
 Madison limestone waters in, XXVI, 1365
 Montana group waters in, XXVI, 1327
 Sweetgrass Hills, XXVII, 427, XXIX, 1266
 Rierson formation in, XXIX, 1280
 Sawtooth formation in, XXIX, 1274
 Swift formation in, XXIX, 1285
 Sweetgrass Hills and north-central fields, Montana group waters in, XXVI, 1327
 Sweetgrass Hills fields, Colorado group waters in, XXVI, 1336
 Ellis formation waters in, XXVI, 1357
 Sweetgrass Hills trough, XXIX, 1287
 Sweetland Creek beds, XXIV, 782
 Sweetland Creek shale, IV, 45
 Martinsville field, Illinois, STR II, 131, 135
 Sweets Ranch (Contra Costa County), CAL, 289
 Sweetwater and Carbon counties, Wyoming, gas fields of Lost Soldier district, GAS, 305
 Sweetwater basin, analyses of waters in, XXIV, 1324
 character of waters, XXIV, 1241, 1259, 1274, 1290
 Dakota group waters in, XXIV, 1258
 Embar waters in, XXIV, 1288
 Frontier waters in, XXIV, 1242, 1244
 Sundance waters in, XXIV, 1276
 Sweetwater County, Wyoming, geology of Baxter Basin gas fields, GAS, 323
 production in, XXI, 764
 Sweetwater-Fernis Mountain uplift, PROB, 343
 Sweetwater uplift, XXVII, 430
 Swelling, RMS, 543, 625
 crystalline, RMS, 460
 in water, RMS, 463
 inner crystal, RMS, 462
 (Swelling)
 of clay minerals, RMS, 475
 Swelling properties, RMS, 461
 Swenson gypsum, XXII, 927
 Swensrud, XXIII, 787, 788
 Swensrud, Sidney A., relation between crude oil and product prices, XXIII, 765
 Swick, C. H., XXIX, 83, 92, 93, 95
 gravity in southeastern Virginia, XXI, 333
 Swiderski, B., XV, 2, 12
 Swift, A. W., STRAT, 475
 Swift formation, XXIX, 1270
 along Little Belt Mountains, XXIX, 1286
 along Rocky Mountain Front, XXIX, 1283
 correlated with Divesian or Argovian, XXIX, 1286
 Cut Bank area, XXIX, 1284
 fossils and age, XXIX, 1286
 isopach map showing axes of South arch and Kevin-Sunburst dome, and oil and gas fields, XXIX, 1282
 Kevin-Sunburst dome, 1284
 lithologic character at type locality, XXIX, 1283
 productive at Bannatyne field, XXIX, 1285
 South Arch, XXIX, 1285
 Sweetgrass Hills, XXIX, 1285
 youngest marine Jurassic of Sweetgrass arch, XXIX, 1281
 Swift Oil & Sulphur Co., SD, 621, 623
 Swift reservoir section of Ellis group, type section for Swift formation, XXIX, 1293
 Swigart, T. E., VII, 352
 experiments on back pressure on oil wells, VII, 37
 Swigert, and Schwaizenbek, VIII, 591
 Swine limestone, XXIV, 271
 Swink pay in Mexia fault zone, Texas, STR I, 340
 Swinnerton, A. A., STRAT, 308
 Swinnerton, Allyn C., XVII, 517
 memorial of Arthur Keith, XXVIII, 1553
 Swinton, W. E., dinosaurs, a short history of a great group of extinct reptiles, review, XIX, 562
 Swirling motion, RMS, 13
 Switzerland, petroleum investigations in, IV, 87
 Sycamore Canyon formation, MSC, 166; XXVI, 1146
 Sycamore conglomerate, XXIV, 653, 656
 Sycamore formation, XXIV, 651
 Sycamore limestone, V, 34; VI, 6, 15; XXV, 1650; XXIX, 194
 (Cay) (Mississippian), SBP, 259, 261-280, 414
 Oklahoma, X, 138
 Sycamore member of Travis Peak formation, XXIII, 631
 Sydenie Basin in Australia, XI, 74
 Syenite, MEX, 145, 146, 148
 Sylamore sandstone, V, 122, 405, 509, XXV, 1652
 in Interior Highland region, GAS, 539
 Sylt Island, RMS, 331, 335
 Sylvan formation, VI, 15; XXIV, 1998
 Sylvan gas field, XXVI, 1103
 Sylvan shale, PROB, 293; XXI, 19; XXII, 1565; XXIII, 231; XXV, 1635, 1638; XXVI, 1065; XXIX, 13, 193
 (Sylvan)
 Bowlegs field, Oklahoma, STR II, 357
 Bowlegs field, Oklahoma, map showing thickness, STR II, 356
 Cushing field, Oklahoma, STR II, 401
 East Tuskegee pool, STRAT, 448
 John's Valley, XIX, 1694, 1847
 (Osage) (Ordovician), SBP, 260, 261-280, 284, 415
 Seminole district, Oklahoma, STR II, 331
 Sylvania Corporation, XXIX, 666
 Sylvania formation, XXII, 398; XXVIII, 763
 Sylvanite district, XXII, 533
 Sylvanite section of Little Hatchet Mountains, XXII, 529
 Sylvite, XXIII, 1690, XXV, 152
 Symbol for density, RMS, 62
 for mean density, RMS, 63
 for pressure, RMS, 62
 for properties of sea water, RMS, 69, 73
 for salinity in sea water, RMS, 62
 for specific volume, RMS, 62
 Symbols, formation names (See also Stratigraphy), SBP, 413-416
 productivity classification of samples (See also Productivity classification), SBP, 83-87
 properties (See also Properties), SBP, 412, 413
 Symbols and units, stratigraphic, used in study of source beds of petroleum, SBP, 413
 Symes, XIX, 474
 Symmetry, regional, of Five Islands, GC, 1038; XIX, 649
 Symposium, Colorado, XXVII, 351
 on continental drift, CD, III
 on geochemical exploration, XXIV, 1400
 on geophysics, XV, 1307; XVI, 1171; XVIII, 1
 on geophysics, foreword, XV, 1307
 on geophysics, introduction to, XV, 1309
 on loess, XXIX, 846
 on Mexico, XX, 385
 on Mexico, foreword, XX, 385
 on new ideas in petroleum exploration, XXIV, 1355
 on occurrence of petroleum in igneous and metamorphic rocks, XVI, 717
 on Pennsylvanian and Permian stratigraphy of southwestern United States, XIII, 883
 on petroleum discovery methods, graphic arrangement of, XXVI, 1410
 on reservoir conditions in oil and gas pools, XVI, 861
 on salt domes, review, XV, 1297
 on sediments, XXII, 1692
 on stratigraphic type oil fields, XXIII, 1434
 temperature, its measurement and control in science and industry, XXV, 1416
 van der Gracht's remarks regarding the papers offered by other contributors to, CD, 197
 Syncinal accumulation, STR II, 703, 704
 of oil at Copley pool, West Virginia, STR I, 440
 of oil in sands which carry no water, XI, 581

- Synclinal area, thickness of San Felipe in, MEX, 74
- Synclinal areas in Gaspé Peninsula, wells in, GAS, 104
- oil accumulation related to, PROB, 18, 206, 392, 468, 470, 478
- Synclinal occurrences of oil and gas, STR II, 703
- Synclinal oil in Oklahoma, STR II, 704
- Synclinal oil and gas in Appalachian fields, STR II, 703
- Synclinal oil fields in southern West Virginia, STR II, 571
- Synclinal oil occurrence and regional uplift, XII, 554
- Synclinal oil pools in eastern Ohio, STR II, 703
- in West Virginia, STR II, 703
- Synclinal oil production in West Virginia, STR II, 571
- Synclinal oil reservoirs, XXIX, 1561
- Synclinal production, PROB, 552
- at Florence field, Colorado, STR II, 709
- of gas at Scenery Hill gas field, Pennsylvania, STR II, 450
- Synclinal valley, MEX, 159
- Syncline, Aagard pool, Kansas, STR II, 157
- Alamo-El Barco, MEX, 178, 203
- Big Shanty, Bradford field, Pennsylvania and New York, STR II, 431
- bordering Browning pool, Kansas, STR II, 157
- Bradford field, Pennsylvania and New York, STR II, 420
- Cabin Creek field, West Virginia, STR I, 470
- Corcovado, MEX, 49, 172, 185
- DeMalone-Souder pool, Kansas, STR II, 157
- eastern Ohio, STR I, 128, 139, 141; XI, 949
- El Barco, Mex, 172
- Elk Basin field, Wyoming and Montana, STR II, 580
- Florence field, Colorado, STR II, 75, 82
- Grassland, in Copley pool, West Virginia, STR I, 452, 453
- Greenville borings penetrating Jackson sediment near axis of, XXIII, 1403
- Herradura-Tampuche, MEX, 172, 179
- Hosston field, Louisiana, STR II, 194
- in Mesón beds at Tepetate, MEX, 212
- Lumón-Tanchicuín, MEX, 172
- location of oil reservoir near axis of, GAS, 102
- North Louisiana, XXIII, 283
- of Permian redbeds in Hewitt field, Oklahoma, STR II, 291
- Palaché, MEX, 172
- Parkersburg, in Ohio oil fields, STR I, 141
- Pine Island field, Louisiana, STR II, 173, 175
- St. Lawrence lowlands, GAS, 96
- salt water gusher in, MEX, 179
- Tanchicuín, MEX, 49
- Tri-County field, Indiana, STR I, 32
- Ventura Avenue field, California, STR II, 30
- Waynesburg, in Scenery Hill gas field, Pennsylvania, STR II, 447
- West Texas area, STR II, 516
- Wiggins pool, Kansas, STR II, 158
- Yates field, Texas, STR II, 494
- Synclines, circulation of water in, PROB, 278
- closed, STRAT, 823
- in eastern Ohio oil fields, Berea pools in, STR I, 136
- reentrant, MEX, 172
- sands producing from, in West Virginia, STR II, 704
- thickening of Agua Nueva beds in, MEX, 172
- Syndicate and Union Sulphur Company, SD, 387
- Syngenetic residues, XX, 1093
- Syngenetic structures, XXVI, 1723
- Synthesis of water under alpha-particle bombardment, XXVIII, 935
- Synthesizing clay minerals, RMS, 485
- Synthetic fuels, XXVIII, 1505
- production by Axis powers, XXVIII, 1499
- Synthetic oil and gasoline production, XXV, 1274
- Synthetic sea water, RMS, 53
- System, XXIII, 1074
- Systemic boundaries of Mesozoic systems defined in paleontologic terms, XXIV, 289
- principles bearing on definition of, XXIV, 284
- West Texas-New Mexico region XXIV, 11
- Systematic catalogue, MSC, 182
- Syzran field, XXIII, 957
- Szādeczky-Kardoss, E. V., RMS, 40
- Szajnoch, W., XV, 36
- Szczepanowski, XV, 14
- Szechuan, China, character of oil in, XXVIII, 1437
- non-marine origin of petroleum in North Shensi, and Cretaceous of, XXV, 2058
- oil in brine wells of, XXVIII, 1436
- Red basin of, XXVIII, 1419
- stratigraphy, XXV, 2062
- Szechuan province, China, bibliography on Red basin, XXVIII, 1439
- petroleum possibilities of Red basin of, XXVIII, 1430
- salt industry in, XXVIII, 1434
- sections, XXVIII, 1435
- stratigraphy of, XXVIII, 1431
- Szechuan oil field, China, VIII, 173
- T
- Tabaquite field, Trinidad, XI, 205
- Taber, Edward C., XXIV, 1723
- Taber, Stephen, XXVII, 1516; XXVIII, 548
- Taber field, southern Alberta Plains, Canada, XXVIII, 870; XXIX, 659
- Taber sand, XXIX, 659
- Tablazo limestone and shale, XXV, 1789
- Table Mesa dome, PROB, 409
- Table Mesa field, New Mexico, XIII, 136, XXVII, 450
- Table Mesa structure, oil in, PROB, 933
- Table Mountain, XXV, 144
- Tables, lists of, CAL, xxii; MEX, xix; MSC, ix; SBP, xii; SC, xix
- Tacanales formation, XXIX, 1133
- Taconian thrusts, post-Ordovician, XXIX, 442
- Taconic revolution, GAS, 957, 966
- Taegel, E. A., XV, 867
- Taegel, E. A., and Owens, Frith C., developments in South Texas in 1942, XXVII, 739
- Taff, Joseph Alexander, PROB, 98, 145, 766; SC, 57, 65; I, 23, 27, 30, (Taff)
- 33, III, 161, V, 40, 124, 155, 284; VI, 13; VII, 54, 332, 558; IX, 1154; XI, 7, 620, 678, 969, 1068, 1313, 1314, XII, 1071, 1079, 1086; XIII, 519, 521, 572, 1328; XIV, 41, 57, 58, 62, 131, 623, 1494, 1554, XVI, 645; XVII, 1411, 1412; XVIII, 569, 573, 577, 580, 582, 585, 586, 590, 972, 981, 982, 992, 1013, 1034, 1050, 1134, 1139, 1148, 1509; XIX, 513, 614, 1096, 1124, 1231, 1232, 1521; XX, 93, 95, 301, 312, 1257, 1354, 1603, XXI, 2, 5; XXII, 535, 856, 902, 903, 908; XXIII, 626, 631, 1094, XXIV, 2146; XXV, 290, 1228, 1652, 1669, 1670; XXVIII, 472, 484, 511; XXIX, 175, 957, 958, 986, 987, 989, 991, 993, 1135
- discussion of pre-Carboniferous of Marathon uplift, XV, 1083
- geology of McKittrick oil field and vicinity, Kern County, California, XVII, 1
- memorial of, XXVIII, 1236
- physical properties of petroleum in California, PROB, 177
- theory of origin of Wichita uplift, XIV, 41
- Taff, Joseph Alexander, and Adams, G. I., XVIII, 1051
- Taff, Joseph Alexander, and Cross, C. M., XXVII, 256
- Taff, Joseph Alexander, and Gaylord, E. G., geological organization of an oil company, VIII, 651
- Taff, Joseph Alexander, and Hanna, G. D., age and correlation of Moreno shale, X, 812
- Taff, Joseph Alexander, and Reed, W. J., PROB, 778
- Taff, Joseph Alexander, Hanna, G. D., and Cross, C. M., XXVII, 279, 299
- Taft, CAL, 20, 317
- Taft, President, XXIII, 121
- Taft field, Texas, XXVII, 745
- Taft-Santa Maria road, MSC, 75
- Tagg, G. F., XVI, 1264, 1291, 1297; XIX, 37, 38
- Taggart, W. C., STRAT, 239
- Tague-Weaver field, V, 422
- Taishan system, XXVIII, 1420
- Tait-Binckley sampler, RMS, 632
- Taunt, A. H., and Lees, G. M., geological results of search for oilfields in Great Britain, review, XXIX, 1353
- Taiyuan formation, XXIV, 270
- Takahashi, J., RMS, 289, 518, 521, 522; X, 1016; XVIII, 1104
- Takahashi, Jun-ichi R., marine kerogen shales from oil fields of Japan, a contribution to the study of the origin of petroleum, review, VII, 83
- significance of micro-crystals of carbonates in bituminous shales: a preliminary note, XIII, 1377
- synopsis of glauconitization, RMS, 503
- Takla Makan Desert, RMS, 37
- Talara region of northern Peru, XXIX, 560
- Talbot, H. W. B., X, 1122, 1123, 1132
- Talbot, H. W. B., and Clarke, E. de C., XXV, 396
- Talco, a fault structure of Mexia-Powell type at, XXI, 1063
- Talco, Franklin, and Titus counties, Texas, XXII, 733
- Talco fault, XXI, 111

- Talco field, Titus and Franklin counties, Texas, XX, 978, XXI, 1063; XXIII, 894; XXIV, 1067; XXV, 1087; XXVI, 1055; XXVIII, 849 production in, XXVII, 788
- Talequah axis, PROB, 627
- Taliaferro, D. B., Jr., STR II, 14
- Taliaferro, D. B., and Heithecker, R. C., XXVII, 68
- Taliaferro, D. B., Jr., Chalmers, J., and Rawlins, E. L., GAS, 1103
- Taliaferro, D. B., Jr., Johnson, T. W., and Dewees, E. J., STRAT, 625
- Taliaferro, Nicholas L., CAL, 30, 85, 86, 89, 91, 95, 97, MSC, 23, 162; SC, ix, 11; XX, 1535, 1557; XXVI, 1610, XXVII, 256, 280, 304, 641, 1474; XXVIII, 305, 1079, 1187; XXIX, 959, 980, 1004, 1396
- Cretaceous and Paleocene of Santa Lucia Range, California, XXVIII, 449
- Franciscan-Knoxville problem, XXVII, 109
- Taliaferro, Nicholas L., and Hudson, F. S., XI, 1283, 1287; XIII, 1123 an interesting example of deep bore hole, X, 775
- calcium chloride waters from certain oil fields in Ventura County, California, IX, 1071
- Taliaferro, Nicholas L., and Schenck, Hubert G., MSC, 68, 199, 202, 204, 219, 227, 230, 242, 243, 248, 254, 256, 260, 266, 276, 277, 291, 303, 316, 321, 323, 329, 334, 344, 352, 353, Fig. 14 (in pocket); XIX, 529
- Taliaferro, Nicholas L., Hudson, F. S., and Craddock, W. N., oil fields of Ventura County, California, VIII, 789
- Talihina chert, XXV, 1638, 1651
- Talihina chert in Black Knob Ridge, XXI, 2
- discussion of origin of, by J. H. Gardner, XXI, 26
- Talihina chert, Potato Hills, type locality of, XXI, 5
- Talihina chert section at Atoka, Oklahoma, XIX, 1231
- Talisman Expedition, RMS, 417
- Tallahassee limestone, XXVIII, 1680
- Tallahassee limestone and equivalent non-fossiliferous limestone, XXVIII, 1688
- Tallahatchie River, RMS, 645
- Tallahatta beds, XXVIII, 56
- Tallahatta formation in Covington County, Mississippi, GC, 376; XIX, 1155
- Tallant, R. L., XXI, 584
- Talmage, J. E., XXII, 1343, 1355, 1359, 1408
- Taloga formation, II, 74
- Tamaha anticline, GAS, 531
- Tamarindo anticline, XII, 31
- Tamasopo limestone, in Mexico, MEX, 20, 23, 32, 60, 61, 96; PROB, 377, 378, 394; III, 359; IV, 106; V, 85, 101, 677; VI, 91; XI, 1211, 1218; XXVIII, 1103, 1138, 1145
- Tamasopo Ridge, Mexico, X, 439
- Tamasopo Ridge and eastern front of Sierra Madre Oriental, comparison of, XIV, 87
- Tamasopo series, Mexico, X, 671
- Tamatoco, Temporal beds in hacienda of, MEX, 110
- Tamaulipas, Mexico, GAS, 997
- Chapeño salt dome, SD, 772; IX, 134
- (Tamaulipas)
- geology and biology of San Carlos Mountains, XXII, 318
- oil possibilities in, IX, 123
- (well 405), SBP, 292-349, 410
- Tamaulipas or Tamabra limestone in southwestern Tamaulipas and southernmost Nuevo León, XXVIII, 1141
- Tamaulipas, San Carlos Mountains, XXVIII, 317
- section of Lower Cretaceous rocks near Miquihuana, XXVIII, 1142
- State of, MEX, 2, 7, 11, 13, 78, 104
- Tamaulipas and Coahuila, parts of, and northern Nuevo León, Cretaceous section in, XXVIII, 1177
- Tamaulipas and Nuevo León, Mexico, geologic road log in, XX, 467
- Tamaulipas arch, XV, 885
- Tamaulipas barrier fold, MEX, 160
- Tamaulipas formation, PROB, 75, 383, 386; MEX, 26, 31, 33, 35, 203
- Garrucho pool, MEX, 186
- Tamaulipas limestone, MEX, 15, 19, 21, 22, 24-26, 28, 31-35, 37, 42, 43, 68, 96, 160, 165, 168, 171, 173-175, 179, 184, 185, 187, 189, 194-197, 207, 223, 233, Figs. 9, 10, 12, 22 (in pocket); PROB, 378, 379, 382, 390, 397; XXVIII, 315, 319, 1094, 1128, 1144, 1147
- Aguada, MEX, 235
- Barcodón, MEX, 235
- bathyal facies, MEX, 96
- Cacallao, MEX, 183
- in northern oil fields, Veracruz, section, XXVIII, 1130
- La Borrega Cañon, MEX, opp 30
- Naranjo well, MEX, 235
- Pánuco River Valley, Mexico, X, 673
- Sierra Tamaulipas, MEX, 31; XXVIII, 1145
- Tanceme, MEX, 43
- Tancoco pool, MEX, 187, 189
- Tuonian age of, XXVIII, 1149
- variation in color of, XXVIII, 318
- Tamaulipas Mountains, XX, 1303
- Tamaulipas trend in Northern fields, MEX, 23, 32
- Tamazunchale, MEX, 13, 23, 32, opp. 44, 47, 53, 89, 99
- Tamboyoche, on flank of structure, MEX, 180
- production, MEX, 64, 96, 119, 164, 179, 180, 201
- temperatures of salt water at, MEX, 228
- Tames fauna, XXVIII, 1704
- Tamesí *lyschovi* overlying Méndez, MEX, 89
- Tamesí formation, MEX, 26, 33, 35, 77, 78, 80, 81, 83, 85, 88-92, 98, 107, 108, 118, 140, 183, 193, 210, 213, 220, 235, Figs. 10, 12 (in pocket); XXVIII, 1130, 1131, 1147, 1150
- argillaceous, in Northern fields, MEX, 90
- at type locality, MEX, 78
- Barcodón, MEX, 235
- between Valles and Tamazunchale, MEX, 88
- Cacallao, MEX, 83, 183
- foraminifera in, MEX, 85, 86
- Garrucho pool, MEX, 186
- Méndez inclusions at base of, MEX, 85
- Naranjo, MEX, 235
- near Tamazunchale, MEX, 89
- Southern fields, MEX, 90, 91
- (Tamesí)
- Tancamhuitz, MEX, 85
- Tamesí micro-fauna, MEX, 90, 104
- Tamesí-Midway fauna, XXVIII, 1132
- Tamesí section in Sierra San Carlos, MEX, 85
- Tamesí shales, MEX, 83, 193, 213
- in Rio Soto la Marina, MEX, 81
- Tamesí species, MEX, 101, 103
- Tamesí valley seepages, MEX, 196
- Tamahua, Laguna, MEX, 6, 136, 209, Figs. 12, 32 (in pocket)
- Tamijut or Tamijun, dyke at, MEX, 149, 153
- Tamismolón, MEX, 34, 52, 64, 65, 138, 174, Fig. 9 (in pocket)
- Tamismolón to Chocoy, correlations, MEX, Fig. 9 (in pocket)
- Tamismolón-Los Cues region, Tuxpan outliers in, MEX, 138
- Tammann, on volume of silicates under pressure, CD, 9
- Tampa and Suwannee limestones, contact between, XXVIII, 1351
- Tampa formation, XXV, 265-268
- fauna in, XXV, 265-268
- Tampa limestone, XXII, 792; XXVIII, 1359
- correlated with Aquitanian of Europe, XXVIII, 1345
- in Florida, GC, 368; XIX, 1172
- in Louisiana, GC, 404; XVII, 635
- unconformity of, on Byram marl in Florida, GC, 406; XVII, 636
- Tampalache (Maguabes Occidental), olivine-basalt at, MEX, 147, 177
- Tampalache seepage in Pánuco field, MEX, 153, 155, 177, Fig. 22 (in pocket)
- Tampico, MEX, 4, 36, 47, 109, 116, 117, 136, 139
- Tampico area, XXVIII, 1130
- Tampico district of Mexico, stratigraphy, IX, 136
- Tampico Embayment, Mexico, PROB, 378; MEX, vii, 7, 19, 71, 97, 105, 139, 140, 159, Fig. 12 (in pocket); XIV, 73; XX, 1302
- chart showing range of foraminifera in, XX, 452
- foraminifera in, X, 581; XX, 438
- micropaleontology in Mexico with special reference to, XX, 433
- petroliferous formations of, abstract, V, 101
- Tampico Embayment fields, GAS, 997-999
- Tampico field, California, XXII, 702
- Tampico oil, source of, PROB, 391
- Tampico Oil Company, SD, 274, 329
- Tampico petroleum, origin of, in Mexico, XI, 1218
- Tampico region, Mexico, MSC, 179
- geology of, MEX, iii; IX, 1495; discussion, XX, 1494; review, XX, 1134
- Tampico-Tuxpan region, MEX, 3, 144; XVI, 800
- Tampuche, MEX, 49, 164, 179
- Tan, H. C., and Lee, C. Y., XXV, 2063
- Tanasacu, I., and Porucik, T., SD, 141
- Tancanhuitz, MEX, 85, 91, 100, 103, 104, 140
- Tamesí beds at, MEX, 85
- Tancasneque, bentonite bed at, MEX, 76, Fig. 22 (in pocket)
- Tanceme, Tamaulipas limestone in well at, MEX, 43
- Tanchicuín, MEX, 46, 49
- Tanchichuín syncline, XII, 427

- Tancoco, Cacalilao, MEX, 5, 63, 70, 155, 164, 172, Fig. 32 (in pocket)
San Felipe fault breccia from, MEX, opp. 167
- Tancoco pool, MEX, 186-189
production, MEX, 235
veta-accumulation in, MEX, 191
- Taneha sand, V, 404
- Tanganyika trough, XXI, 117
- Tangential compression, PROB, 611
- Tangential faulting, associated with salt domes, PROB, 646
- Tangential forces effective in displacement of continental sial, CD, 189
not cause of elevation of mountains, CD, 196
- Tangential stress, RMS, 73, 118, 119
exerted by wind, RMS, 121
from wind as a cause of currents, RMS, 105
- Tanhuijo, MEX, 4, 134, 226
oil production in, from Oligocene sands, MEX, 226
- Tanhuijo field, temperatures of oil at, MEX, 227
- Taninul Islands, Pliocene trough in, XXII, 48
- Taninul, MEX, 40, 46, 58
- Taninul Cave, Méndez shales east of, MEX, 71, 161
- Taninul phase, PROB, 393
- Taninul rudistid limestone, MEX, 36, 38-40, 62; XXVIII, 1133
- Tanjoco, Tempoal beds at, MEX, 110
- Tank-car deliveries, increase in, during war, XXVII, 979
- Tankers, loss and diversion of, XXVII, 976
- Tanlajás, MEX, 89, 91, 100, 109, 226
- Tanlajás formation, MEX, 89, 97, 100, 104, 140
- Tannehill sand, XXIII, 855
- Tanner, F. W., PROB, 41
- Tanner, F. W., and Morrison, L. E., XXVII, 1186
- Tanner, N. S., SD, 317; X, 265
- Tanner Creek field, West Virginia, STR II, 573
- Tansill, relation of top of Yates to top of, XXV, 1724
- Tansill and Yates correlation, XXV, 1724
- Tansill formation, XXIV, 49, 61; XXV, 605, 1713; XXVI, 1637; XXVII, 489
at Vickers, XXV, 1725
correlations, XXV, 1723
in Getty pool, XXV, 1725
in Halfway pool, XXV, 1725
thickness of, XXV, 1725
type section of, XXV, 1717
West Texas and southeastern New Mexico, XXV, 1713
- Tansill outcrops in Eddy County, New Mexico, areal distribution of, XXV, 1726
- Tansill power dam, XXV, 1716
- Tansill time, XXV, 1722
- Tantoyuca, town of, MEX, 111, 114, 117, 124, 144, 156, Fig. 12 (in pocket)
- Tantoyuca facies, correlation of, with Chapapote, MEX, 118
- Tantoyuca formation, MEX, 114, 116-118
- Tantoyuquita, Tamaulipas, Tamesí shales at, MEX, 90, 91
- Tantoyuquita, type locality of Tamesí at, MEX, 78
- Taonurus siltstone, XXV, 2122, 2126, 2132
- Tapered tubing, use of, GC, 643; XIX, 1143
- Tapes senescens* shells on North Sea bottom, RMS, 333
- Tapo Canyon field, PROB, 191
- Tapp, P. F., and Plummer, F. B., technique of testing large cores of oil sands, XXVII, 64
- Tappan, Helen, XXVII, 1076
- Tar, PROB, 182, 214
in McKittrick field, PROB, 198
- Tar-base oil, PROB, 196, 228
- Tar Canyon, CAL, 240, MSC, 237, 249, 255, 262, 278, 285
Reef Ridge shale faunule from, MSC, Fig. 14 (in pocket)
- Tar Creek-Four Forks area, PROB, 193
- Tar sands, PROB, 207, 746
- Athabaska River, of northern Alberta, map showing general features in vicinity of, FOP, 22, XXV, 1454
different in genesis from commercial oil fields of United States, XXIV, 878
of northern Alberta, map showing general features in vicinity of Athabaska River, FOP, 22; XXV, 1454
- Tar springs, XXII, 1138
- Tar Springs production, XXVI, 1603
- Tar Springs sand, XXVI, 1093
- Tar Springs sandstone, XXIV, 214, 835, XXV, 875, 876, XXVI, 1089, 1603
in Kentucky, XXII, 280
in Tri-County field, Indiana, STR I, 26
- Tar zone, XXII, 1052
at Wilmington oil field, XXII, 1063
- Huntington Beach field, PROB, 220
- Taraises formation, XXVIII, 1088, 1143, 1152, 1154, 1157, 1159, 1166
- Berriasian fauna in, XXVIII, 1168
- Tarakan Island field, XXVIII, 1449
- Taranaki district, New Zealand, geology, X, 1239
- Wells, X, 1243
- Taranaki oil field, New Zealand, XVI, 833
- Tarbell, Eleanor, XXVIII, 184, 187; XXIX, 13
- Antrim-Ellsworth-Coldwater shale formations in Michigan, XXV, 724
- Tarber Oil Company, SD, 621
- Tarbet, L. A., geology of Del Valle oil field, Los Angeles County, California, XXVI, 188
- Tarbet, L. A., and Holman, W. H., XXVIII, 1781
- Tarim basin, XXVIII, 1427
- Tarkio pool, XXVIII, 772; XXIX, 706
- Tarr, Russell S., PROB, 74; III, 134; IX, 814; XI, 461, 978, 985; XII, 796, 820; XIII, 645, 915, 930; XVI, 1030; XXI, 836; XXIV, 1022
- carbon-ratio theory, discussion, XI, 463
explanation for large amounts of gas in Anderson and Leon counties, Texas, XVIII, 263
- origin of Bartlesville shoestring sands, Greenwood and Butler counties, Kansas, discussion, XVIII, 1710
- redbeds near base of Cherokee shales, IX, 350
- Tarr, William Arthur, XI, 1314; XVIII, 40, 1694
- (Tarr)
introductory economic geology, review, XIV, 1357
memorial of, XXIV, 200
- Tarr, William Arthur, and Branson, E. B., XXV, 128
introduction to geology, review, XIX, 1240
- Tarr, William Arthur, Mrs., XXIX, 221
- Tarrant, Roy C., XXI, 989
- Tarry odor produced by coal, XXIX, 1471
- Tartarian beds, XXII, 1014
- Tartarian series, XXV, 1402
- Permian and Triassic, XXIV, 263
- Tash, G. E., SBP, 6; XXIII, 702, 1853
- Tasman, Cevat Eyup, memorial of Dale Darrell Dolsun Spaks, XXII, 627
oil possibilities in southern Turkey, XXIII, 690
- Tasman, Cevat Eyub, search for oil in Murefte, Turkey, XX, 1372
- Tasman, Cevat Eyub, temperature measurements in wells in south-eastern Turkey, XXV, 1937
- Tasmanite from Latrobe, Tasmania, XIII, fol. 848
- Tate Island field, GAS, 559, 560
- Tate sand, XXIV, 707
- Tattam, C. M., XIX, 38, 51
- Tatum, E. P., XIII, 1066
Upper Cretaceous chalk in cap rock of McFaddin Beach salt dome, Jefferson County, Texas, XXIII, 339
- Tatum, J. L., XIX, 1358, 1359, 1363, 1367, 1372; XX, 405, 414; XXVIII, 1078
Cretaceous and Tertiary of southern Texas and northern Mexico, discussion, XII, 949
general geology of northeast Mexico, XV, 867, 1104
- Tatum division of Rio Grande Embayment sub-province of Gulf Coastal Plain of Mexico, XX, 1301
- Tatum salt dome, Lamar County, Mississippi, XXV, 424; XXIX, 830
- Tatums, Graham, Fox, and Shalom Alechem pools, Pennsylvanian in, GAS, 586
- Tatums pool, Carter County, Oklahoma, XIX, 401
- Tatums sand at Tatums pool, XIX, 407
- Tauson, T. A., XXVII, 1182
- Tauson, V. O., PROB, 41, 265, 266; XXVII, 1176, 1180, 1182, 1188
- Tauson, V. O., and Shapiro, S. L., XXVII, 1176, 1186
- Tauson, W. O., XXVII, 1180, 1182
- Tausz, J., PROB, 41, 263, 266; RMS, 425; XIX, 162
- Tausz, J., and Donath, P., PROB, 264, 265, 266, 920; XXVII, 1180
- Tausz, J., and Peter, M., PROB, 41; XXVII, 1176, 1179
- Taxation, oil property, application of depletion allowances to, V, 484
- Taxation problems, VII, 618
- Taylor, CD, 171; XXIII, 106
- Taylor and Prescott, XXIII, 1512, 1518, 1520, 1521, 1523
- Taylor and Robb, PROB, 9
- Taylor, and Soyster, XIX, 518
- Taylor, Alexander S., XII, 970
- Taylor, Charles Henry, I, 6, 32, 33; II, 98, 101; IV, 318; XIII, 153, 154, 157; XIV, 42; XX, 521
- granites of Kansas, I, 111

- Taylor, Charles H., and McCoy, Alex W., *PROB*, 618
- Taylor, Charles N., X, 1235; XVI, 834
- Taylor, D. E., *MSC*, 67, 113; XIX, 1203; XXV, 1343
- Taylor, E. McKenzie, *RMS*, 463, 464; XIII, 688; XV, 444, 446; XVII, 66, 67, 69, 72, 77, 78; XVIII, 361, 363, 364, 365, 366; XX, 295; XXI, 1182; XXVII, 1196
- bearing of base exchange on genesis of petroleum, review, XIII, 862
- Taylor, F. W., *PROB*, 636
- Taylor, Frank Bursley, XII, 1165; XXIX, 1641, 1642
- map of landsphere, showing radial dispersive movements of northern crust sheets, CD, 168
- map showing trend lines of Tertiary mountain regions for whole globe, CD, 165
- opinion that Asia and Australia moved eastward, contrary to direction assigned by Wegener, CD, 170
- sketch of north polar region showing rift valleys, CD, 169
- sliding continents and tidal and rotational forces, CD, 158
- theory of continental drift, CD, 34, 35
- Taylor, Frank Bursley, and Kindle, E. M., XXII, 81
- Taylor, G. H., and Leggette, R. M., XX, 718
- Taylor, G. I., *RMS*, 7, 17, 79
- Taylor, Garvin, XXIII, 1777, 1781
- Taylor, Garvin L., and Garlough, John L., Hugoton gas field, Grant, Haskell, Morton, Stevens, and Seward counties, Kansas, and Texas County, Oklahoma, *STRAT*, 78
- Taylor, H. F., and Almy, L. H., VIII, 197
- Taylor, H. S., XXVIII, 937
- Taylor, H. S., and Turkevich, F., XXIV, 1887
- Taylor, Ike W., XXIX, 1265
- Taylor, J. B., XIX, 1230
- Taylor, J. G., X, 1110, 1111
- Taylor, M., *PROB*, 651
- Taylor, McKenzie, *PROB*, 39, 374
- Taylor, R. C., II, 133
- Taylor, Ralph E., water-insoluble residues in rock salt of Louisiana salt plugs, XXI, 1268, 1496, 1594
- Taylor, Ralph E., and Russell, R. D., XXVI, 1711
- Taylor, Robert S., XXV, 317; XXVII, 20
- Taylor, Surce John, Bybee, H. P., and Haigh, Berte R., developments in West Texas and southeastern New Mexico during 1938, XXIII, 836
- Taylor, T. U., XVI, 389
- Taylor, Vernon, XXIV, 1639
- Taylor, Vernon, and Spratt, J. Grant, XXIV, 1634
- Taylor, W. H., *RMS*, 624; VII, 133
- Taylor, W. H., Company, Hellman 1 (well 96), *SBP*, 87-153, 403
- Taylor, W. R., XXII, 1307, 1332
- Taylor, upper, Pecan Gap, Wolfe City, and Annona formations, section showing relationships between, XXVIII, 530
- Taylor and Navarro formations in east-central Texas, XII, 41
- Taylor age, beds of, in Florida, Alabama, and Georgia, XXVIII, 1711
- (Taylor)
- map of Florida and parts of Georgia and Alabama showing structure on top of beds of, XXVIII, 1728
- of San Miguel formation of Maverick County, Texas, XV, 793
- Taylor area, Gray County, Texas, pre-Redbed columnar section, XXIII, 1009
- Taylor chalk at Keechi dome, SD, 247, 249; X, 39, 41
- highest, in Jacksonville Embayment, Texas, XIV, 322
- Texas, X, 39, 41
- Taylor County, Texas, XXIII, 857, XXIV, 89; XXVI, 1046
- development, XXVII, 780
- Taylor Drilling Company, XXVIII, 792
- Taylor-Eocene unconformity zone, XXII, 1432, 1433
- Taylor fauna in Meyer well, SD, 242
- Taylor formation, Coiscana district, GAS, 677, 678
- East Texas, XII, 542
- Hilbig field, Texas, XIX, 1036
- in Luling field, Texas, STR I, 273
- Lytton Springs oil field, XI, 848, 851
- Mexia fault zone, Texas, STR I, 330
- Texas, X, 45, 61
- Taylor granite ridge, XXIII, 995
- penetration in, XXIII, 986
- Taylor group, XXV, 1694; XXVIII, 522
- Lisbon field, XXIII, 293
- Taylor hypothesis, critique of—base-replacement studies of Oklahoma shales, XVII, 66
- Taylor-Link field, Texas, GAS, 457, XXV, 1052; XXVI, 1020
- Taylor marl, *SBP*, 294, 296-349, 414, 415; III, 84, 96, 300, 305; IV, 128; V, 7, 28, 382; X, 28; XXII, 1632 (Klt. Kut) (Cretaceous), *SBP*, 294, 296-349, 414, 415
- Texas, XI, 9; XII, 43
- Texas, related to Upper Santonian, San Felipe, and Velasco formations, MEX, 55, 59, 77
- Texas salt domes, SD, 215, 228, 243
- Taylor marl and Austin chalk, areal variation of organic content of, in East Texas Basin, *SBP*, 300
- Taylor marls, XXII, 1432
- base of upper, XXVIII, 527
- Taylor meta-andesite, CAL, 62
- Taylor microfauna at Keechi salt dome, SD, 247, 250
- Texas, X, 42, 50
- Taylor-Navarro in Escalera anticline, MEX, 75
- Taylor Oil Company, SD, 611
- Taylor sandstone, key stratum for geologic mapping, XXVII, 1579
- Taylor-Selma member, XXVIII, 45
- Taylor's theory on genesis of petroleum and coal as applied to Fruitvale field, California, discussion, XV, 709, 729
- Taylorville district, Paleozoic in, CAL, 62
- Taylorville formation, CAL, 62, 63
- Taylorville region, CAL, 42, 62, 63, 65, 66, 317
- Callovian formation in, CAL, 76
- Jurassic rocks of, CAL, 74
- Lias formation in, CAL, 76
- Mormon, Bicknell, Hinchman, and Thompson formations in, CAL, 72
- Paleozoic section in, CAL, 62
- (Taylorsville)
- Silurian and Devonian in, CAL, 65
- Triassic rocks of, CAL, 67, 69
- Tchihatcheff, P. de, *RMS*, 497
- Tchirkova, and Zalesky, XXIX, 133
- Teagle, John, and Ellisor, Alva C., GAS, 652, 659
- correlation of Pecan Gap chalk in Texas, XVIII, 1506
- Teague, N. P., XXIX, 210
- Teague, Texas (well 374), *SBP*, 292-335, 409
- Teapot and Salt Creek oils, analyses, STR II, 602
- Teapot dome, Salt Creek field, Wyoming, STR II, 594, 596, 708; *PROB*, 839
- faulting in, VII, 100
- oil reserve in, VIII, 101
- Teapot dome field, XXIV, 1227
- Teapot sandstone, V, 205
- Rock River field, Wyoming, STR II, 616
- Tear faults, XXIII, 1472; XXIV, 1636; XXV, 1739; XXVII, 15, 1261
- Teas, L. P., *PROB*, 619, 637, 812; IX, 1153; X, 1035; XII, 1070; XIV, 2, 832; XVII, 1294, 1364; XIX, 1358, 1536; XX, 737; XXII, 1659; XXIV, 435
- Bellevue oil field, Bossier Parish, Louisiana, STR II, 229
- Cameron Meadows and Iowa, two new coastal Louisiana fields, XVI, 255
- differential compacting cause of certain Claiborne dips, VII, 370
- discussion of Pettus area, XV, 788
- Haynesville field, Louisiana, VI, 53, 371
- Hockley salt shaft, Harris County, Texas, GC, 136; XV, 465
- Irma oil field, Nevada County, Arkansas, STR I, 1
- natural gas of Gulf Coast salt-dome area, GAS, 683
- New Hardin field, Liberty County, Texas, XIX, 1389
- new producing depths at El Dorado, Arkansas, VI, 473
- Teas, L. P., and Miller, Charis R., GAS, 718; XX, 1434
- Raccoon Bend oil field, Austin County, Texas, GC, 676; XVII, 1459
- Teche subdelta, *RMS*, 159
- Technical and non-technical methods of locating oil, comparison of, XXVI, 1204
- Technical and scientific advance in South Texas in 1940, XXV, 1042
- Technical advancements, XXIV, 1074
- Technical advice, greater success of wildcatting with, XXVII, 721
- value in wildcat drilling, XXV, 1003
- Technical basis of bleaching-clay industry, XIX, 1043
- Technical oil mission to Middle East, preliminary report of, XXVIII, 919
- Technical papers and their presentation, XII, 77
- Technique followed in oil exploration of East Indies, Venezuela, and Mexico, XXIV, 1392
- for crude oil analysis, XXVII, 1598
- new, for measurement of stratigraphic units, XXVII, 220
- of impregnating porous materials, XXI, 265
- of stratigraphic nomenclature, discussion, XXIV, 2038

(Technical)

- of testing large cores of oil sands, XXVII, 64
- Techniques for determining radioactivity, XXIV, 1535
- of examination, various, development of, XXIV, 1391
- successive, in prospecting for petroleum, XXI, 710
- Technology and development, petroleum, 1938, XXII, 1457
- Teci pool, XXIII, 1038
- Tecoloco-Calpal, Hacienda (Hidalgo), seepage of brown oil in Chicontepec beds at, MEX, 156
- Tecovas formation, IV, 271; XXIV, 50, 63; XXV, 600; XXVI, 1635
- Tecovas shale, XXVII, 488
- Tectogenesis, XXI, 1596
- Tectonic breccia, SD, 101; XXVIII, 664
- Tectonic classification of oil fields in United States, XIII, 409
- Tectonic effects of Ouachita orogeny and its age, XIV, 57
- Tectonic events, recent, XX, 873
- Tectonic features of Africa, CD, 128
- of Wind River Canyon area, significance of, XXIII, 1486
- relation of reefs to, PTNM, XXVI, 640
- Tectonic history of Chico Martinez Creek area, XXVII, 1371
- Tectonic interpretation and canyons: submarine topography off the California Coast, XXV, 1940
- Tectonic lines in East Indies, RMS, 400
- Tectonic map of Bearlooth-Bighorn region, XX, 1162
- of southern California, generalized, SC, opp. 146; XX, opp. 1692
- of United States, XXIII, 1435; XXVIII, 1767
- of Wind River Canyon area, XXIII, 1456-1457
- Tectonic maps of Guadalupe Mountains, Sierra Diablo, and vicinity, PTNM, XXVI, 615, 616
- of South America, reference to, CD, 126
- Tectonic movements, time of, PROB, 698
- Tectonic pressure, major factor in occurrence of oil, XX, 1488
- Tectonic problem of salt masses, SD, 117
- Tectonic provinces in Arbuckle Mountain area, map showing boundaries of, XXV, 4
- in Wichita Mountains area, map showing boundary of, XXV, 5
- major, of southern Oklahoma and their relation to oil and gas fields, XXV, 1
- of Southern California, XXI, 550
- of southern Oklahoma, map showing, XXV, 2
- Tectonic similarities on opposite sides of Atlantic, CD, 118
- Tectonic state, present, of the earth, XX, 849
- Tectonic structure of northern Andes in Colombia and Venezuela, XVII, 211
- Tectonics in Arbuckle and Ouachita mountains, discussion, XX, 1127
- involved in Sugarland uplift, GC, 725; XVII, 1378
- of Alagôas series, Brazil, XXI, 304
- of Carpathian Mountains, XV, 9
- of Coast Ranges, CAL, 52
- of Eurasia, CD, 39, 69

(Tectonics)

- of Guadalupe Mountains region, PTNM, 614; XXVI, 614
- of Maracaibo Basin, Venezuela, XI, 177
- of Oklahoma City anticline, XVIII, 251
- of salt dome formation, XIII, 1368
- of southeastern Caucasus and its relation to the productive oil fields, XVIII, 603
- of Tamaulipas Range and Sierra Madre Oriental, difference in, MEX, 160
- of Valle Grande of California, XIII, 199
- recent, of central Europe, XX, 855
- recent, Peri-Pacific region, XX, 858
- Tectonics and paleogeography of Basin System of Hungary, XVIII, 925
- Tectonique des terrains salifères, son rôle dans les Alpes Françaises*, review, XV, 1298
- Tecuya beds, CAL, 181, 303, 304, 317
- Tecuya formation, MSC, 153
- Teepie, John E., XXII, 1323
- Teeter and Thrall-Sallyards trends, Greenwood County, Kansas, XI, 1162
- Teeter dome, Kansas, STR II, 156
- Teeter field, IV, 259
- Teeter-Pixlee trend in Greenwood County, Kansas, STR II, 156
- Teeter pool, STR II, 156
- Teeter trend, Kansas, STR II, 154; PROB, 323; XVIII, 1331
- Tegland, Nellie M., MSC, 77; XX, 220
- Tegula funebralis*, faecal pellets of, RMS, 516
- Teguliferina* horizon, XXIV, 249
- correlated with Missouri stage, XXIV, 249
- Tehachapi, CAL, 25
- Tehachapi Pass, CAL, 24, 317
- land mammal fossils of, CAL, 211, 212
- Tehachapi Range, CAL, 39, 190
- Tehachapi Valley System, CAL, 43
- Tehama County, California, CAL, 112
- outcrop section B, SBP, 167-194, 411 (well 2), SBP, 130-153, 403
- Tehama formation, CAL, 234, 285, 303, 317
- Tehuacán-Zapotitlán-San Juan Raya area of Puebla, XXVIII, 1125
- Tehuacana and Mexia fault zones, Texas, STR I, 324, 353, 357
- summary of data on oil and gas pools of, STR I, 387
- Tehuacana fault zone, PROB, 420
- Tehuacana faults, XXIX, 1734
- Tehuacana field, XXV, 1083
- Tehuacana limestone in Mexia fault zone, Texas, STR I, 326
- Tehuantepec, Isthmus of, XX, 1304
- Neocomian in, XXVIII, 1120
- oil and gas in, GAS, 1007
- review, VI, 60
- Teichert, Curt, XXVII, 262
- upper Paleozoic of Western Australia: correlation and paleogeography, XXV, 371, 1809
- Tellesse, W., SD, 111, 141, 206; XV, 2, 13, 28, 34, 36, 37
- Tejon, MSC, 55, 104, Fig. 6 (in pocket); SC, 17; XX, 1563
- California, age of Alazán shales, MEX, 115, 120
- Tamaulipas, andesite and quartz dolerite near, MEX, 147

(Tejon)

- type, SC, 24; XX, 1570
- upper, and Temblor Formations as exposed at type locality of Zemorrian Stage, section of, MSC, 105
- uppermost, Cavernous sandstone, MSC, Fig. 14 (in pocket)
- Tejon and Temblor, lithologic change between, on Zemorra Creek, XXVII, 1369
- Tejon field, XXVIII, 743
- Tejon flora, CAL, 134
- Tejon formation, CAL, 102, 106, 121-123, 126, 127, 136, 137, 139-141, 144, 152, 168, 172, 193, 296, 303, 317; MSC, 21, 100, 101, 106, 107, 152; VI, 305; XXIV, 1731; XXVII, 3, 1365
- bentonite interbedded with, CAL, 133
- classification of, proposed by Schenck, CAL, 141
- Domengine member of, CAL, 138
- fauna characterized by Caribbean forms, CAL, 161, 302
- fossils from, CAL, 121, 122, 130, 134, 135, 287
- Martinez unconformity of, CAL, 108
- Oligocene faunas differ from, CAL, 161
- San Joaquin Valley, CAL, 123
- stages recognized by *Turriella*, CAL, 136
- type locality of, CAL, 121
- Tejon Fort (See Fort Tejon)
- Tejon-Gould shale sequence, MSC, Fig. 6 (in pocket)
- Tejon Pass, CAL, 16, 39, 317
- Tejon Quadrangle, California, MSC, 71; SC, 74, 75; XX, 1620, 1621
- geologic map of, XXI, 216
- structure of southeastern part, XXI, 212
- south edge of, SC, 100; XX, 1646
- Tejon Ranch, CAL, 20, 122, 123, 141, 317; XXI, 984
- Tejon Ranch field, California, XX, 940
- Tejon-San Emigdio contact, MSC, 101
- Tejon sandstone, MSC, 108
- Tejon-Vaqueros sequence, MSC, Fig. 6 (in pocket)
- Tektonik, Grundfragen der vergleichenden*, review, XI, 1123
- Telegraph Canyon, California, outcrop section E, SBP, 167-194, 411
- Telegraph Creek formation, STRAT, 281, 282; XXII, 1633
- Telegraph snappers, RMS, 221, 656, 659
- Tellina donacina*, faecal pellets of, RMS, 517, 520
- Tello, Manuel, XXII, 1102
- Temapache, Tuxpan outliers at, MEX, 138
- Temblador field, XXIII, 959
- Temblor, MSC, 28, 38, 104, 153, Figs. 6 and 14 (in pocket)
- foraminifera of, MSC, 55
- in Caliente Range, XXV, 224
- in California, XXV, 224
- in California, fauna of, XXV, 228
- in Cone Canyon area, XXV, 225
- in Cuyama valley, XXV, 226
- lower, MSC, Fig. 14 (in pocket)
- Santos shale, faunules from Zemorra Creek, MSC, Fig. 14 (in pocket)
- type, MSC, 38, 68
- type, faunules, MSC, Fig. 14 (in pocket)
- upper, MSC, Fig. 14 (in pocket)

- (Temblor)
 upper, Media shale faunules from Zemorra Creek, MSC, Fig. 14 (in pocket)
 upper, sandstone, XXVII, 1365
 Temblor and Monterey, relations between, in Caliente Range, XXV, 234, 237
 Temblor and Monterey stages, oscillation between, XXV, 195
 Temblor and Tejon, lithologic change between, on Zemorra Creek, XXVII, 1369
 Temblor and upper Tejon formations as exposed at type locality of Zemorrian Stage, section of, MSC, 105
 Temblor and Vaqueros, differences in aspect between, XXV, 227
 Temblor A zone, MSC, 38, Fig. 14 (in pocket)
 Temblor age of oil horizon of Kettleman Hills, XVI, 417
 Temblor anticlinorium, XIII, 214
 Temblor B zone, MSC, 27, 38, 49, Fig. 14 (in pocket)
 Temblor basin, MSC, 23
 Neocene record in, MSC, 7
 Temblor basin and Kern River, Neocene deposits of, MSC, 153
 Temblor beds, XXIX, 650
 Temblor C zone, MSC, 38
 Temblor fauna, range of, SC, 51; XX, 1597
 Temblor faunules, MSC, Fig. 14 (in pocket)
 from Zemorra Creek, MSC, Fig. 14 (in pocket)
 Temblor foraminiferal faunas on flanks of Morales syncline, XXV, 229
 Temblor formation, CAL, 55, 87, 131, 152, 156, 157, 161, 163, 164, 168, 174, 177, 189, 210, 217, 293, 317; MSC, 23, 36, 38, 39, 45, 49, 50, 55, 69, 88, 89, 91, 104-107, 111, 114, 115, 122, 123, 153-155, 161-164, 171, 175, 179, 187, 192, 198, 199, 201, 202, 204, 208-210, 214-217, 219, 221, 222, 225-227, 233, 234, 237, 251, 253, 257, 258, 260, 262, 266, 274, 275, 287, 289, 290, 294, 296, 302, 305, 310, 312, 314-316, 322, 324, 325, 329, 332-334, 337, 342, 346, 352, 353; PROB, 188, 407, 739, 790, 796; XXVI, 1147; XXVII, 1364, 1367, 1368; XXVIII, 964
 at type locality of Zemorrian stage, XXVII, 1369
 Bakersfield district, CAL, 174, 178, 179
 Capistrano district, CAL, 166, 169, 170, 176
 check list of foraminifera from type locality of, MSC, 54
 Coalinga district, CAL, 55, 152, 153, 166, 171, 172, 177, 188, 279, 303
 correlation table, CAL, 212, 214, 216, 303
 Devils Den district, CAL, 176-178
 folds and faults, CAL, 178
 fossils of, CAL, 130, 178-181, 219, 288, 289
 Kettleman Hills, CAL, 217; GAS, 129, 130; XVII, 1178
 marine fauna, CAL, 290
 Mascall flora of Oregon, Temblor in age, CAL, 299
 Monterey type, CAL, 175
 north of Coalinga, SC, 59; XX, 1605
 of middle Miocene age, reservoir rock
- (Temblor)
 of Kettleman Hills pool, XXIX, 1189
 of Monocline Ridge, checklist of megafossils from, XXVIII, 965
 Oil Canyon, formerly called "Vaqueros," CAL, 152
 phosphate rock in clay shale series of, CAL, 198
 Reef Ridge, SC, 59; XX, 1605
 Salinas Valley, CAL, 189
 San Joaquin valley, XIII, 103
 Santa Barbara district, CAL, 166, 171, 198
 stratigraphic classification of, CAL, 182
 structure of, CAL, 153, 176
 Sur region, CAL, 173
 Tejon Quadrangle, XXI, 215
 (Tim) (Miocene), SBP, 95
 type, age of, CAL, 213
 type locality along Carneros Creek, CAL, 166
 typical, MSC, 100
 volcanic rocks associated with, CAL, 175, 284
 Temblor fossils, MSC, 172
 Temblor *Merychippus* zone, MSC, 176
 Temblor mollusks on Santa Cruz Island, SC, 122; XX, 1668
 Temblor-Monterey contact, MSC, 28, 122, 238, 324, 331
 Temblor-Monterey sequence, MSC, Fig. 6 (in pocket); XXV, 232
 Temblor Range, California, CAL, 11, 12, 30, 208, 317; MSC, 101; SC, 79, opp. 80; XIII, 211; XX, 1625, opp. 1626; XXV, 1334; XXVII, 1361
 a faulted anticlinorium, XXVI, 1612
 central stratigraphic section, XXVI, 1611
 Cretaceous in, CAL, 99, 283
 Crocker Flat landslide area, XXVI, 1608
 diatoms in Miocene beds of, CAL, 208, 209
 folds and faults in, XXVII, 1370
 geologic map of Crocker Flat landslide area, XXVI, 1609
 Maricopa formation in, CAL, 190
 McKittrick seep in foothills of, CAL, 266
 Miocene in, XXV, 1329
 Oligocene in, XXV, 1329
 references on thrust faulting in, XXV, 1342
 reverse faulting in, XXV, 1338
 Santa Margarita diatomite in, CAL, 190, 192, 217
 stratigraphy in, XXV, 1329
 structural history revealed on eastern flanks of, CAL, 283
 structure, XVII, 3; XXV, 1327
 Tertiary igneous rock in, XXV, 1337
 thrust faulting and coarse clastics in, XXV, 1327
 type locality of Temblor in, CAL, 166, 183
 Temblor sands, PROB, 186, 188, 194, 195, 828
 Temblor shale, MSC, 85, 108, 184, 186-189, 191, 192, 194, 197, 199, 201, 202, 204, 205, 208, 213, 214, 219, 220, 222, 224, 226, 230, 231, 233, 239-242, 244, 246-249, 252, 254-257, 259, 262, 268, 271, 272, 276-279, 288, 290-293, 303, 304, 306, 316, 319-321, 323, 326, 331, 332, 342-345, 347, 349, 352, 354;
- (Temblor)
 PROB, 205, 206
 Kettleman Hills, XVIII, 1567
 upper, argillaceous and calcareous, of Highland School district, faunules from, MSC, Fig. 14 (in pocket)
 Temblor stage, XXV, 199
 Temblor thrust fault, XXVII, 1366, 1370, 1371
 Temblor time, diatrophism and vulcanism in XXV, 199
 Temblor-Vaqueros formation, XXVI, 1613
 in situ, XXVI, 1615
 Temblor-Vaqueros remnants of Crocker Flat landslide, XXVI, 1613
 Temblor-Vaqueros transition, MSC, 23, 39
 Temblor Vedder faunule, MSC, Fig. 14 (in pocket)
 Temescal anticline, XXVI, 189
 Temescal field, PROB, 756
 Temperanceville field, Ohio, STR I, 135; XI, 956
 Temperate facies of foraminiferal faunas, MSC, 81
 Temperate latitudes, RMS, 396
 Temperate seas, RMS, 145
 Temperate zone, RMS, 118, 357
 Temperature, RMS, 105, 115, 179, 236, 261, 291, 292, 377, 472, 543
 as a cause of dynamic equilibrium, RMS, 125
 as a means of tracing motion of sea water, RMS, 61
 as related to currents, RMS, 102, 104, 105, 118, 236
 changes of, due to upwelling, RMS, 126
 decomposition of hexane into various reaction products as function of, XXIV, 1886
 decomposition of hydrocarbons as function of, XXIV, 1887
 distribution of, in ocean, RMS, 55, 60
 effect on character of oil, PROB, 149, 150, 181, 228, 243, 244
 effect on deep circulation, RMS, 124
 effect on mechanical analysis, RMS, 544
 effect on origin of oil, PROB, 43, 98, 235
 effect on replacement process, PROB, 289
 effect on sea water, RMS, 60, 70
 effect on soils, RMS, 486
 effect on specific volume, RMS, 113
 effect on state of matter, CD, 20
 effect on turbulence, RMS, 23
 effect on water of different salinity, RMS, 364
 for production of hydrocarbons, PROB, 26
 formation of aromatics and various hydrocarbons as function of, XXIV, 1886
 high, characteristic of young sediments, PROB, 244
 in barometric surveying, corrections for, XVIII, 133
 in deep water in sea, RMS, 104
 in floods, RMS, 100, 359, 360
 in First Wall Creek sand, relation of, to depth in Salt Creek wells, PROB, 1001
 in interior of earth, CD, 30
 increase with depth, uplifting, folding, and faulting, PROB, 98
 influence on decomposition of carbohydrates, XXIV, 1878

- (Temperature)
 influence on organisms in sea, RMS, 61
 influence on resistivity of rocks, XXIII, 1297
 its measurement and control in science and industry, a symposium, XXV, 1416
 of fluids in wells, VI, 547
 of freezing point in sea, RMS, 70
 of maximum density of sea water, RMS, 68, 70, 90
 of ocean, RMS, 53
 of ocean, effect of, on air, RMS, 61
 of oil at Rock River field, Wyoming, STR II, 620
 of oils at Elk Hills field, California, STR II, 57
 of Oklahoma's deepest well, VIII, 525
 of sands, Salt Creek, Wyoming, PROB, 1000
 of water in Baltic, RMS, 317
 of water in reservoir beds, PROB, 278, 279
 potential in sea, RMS, 70
 range of, in oceans, RMS, 68
 regional variation, PROB, 147, 998
 relation to estimation of oil reserves, XXV, 1304
 relation to geologic structure, PROB, 989
 relation to heat exchange at surface of ocean, RMS, 84
 relation to ionic concentration of sea water, RMS, 144
 relatively low, of formation of oils and coals, XXIV, 1887
 rising, effect on cracking, PROB, 242
 subnormal, in Permian basin, XXI, 1193
 surface, long-term changes in, XXI, 1494
 time rate of change of, RMS, 55, 72
 variations in, influence on refractive index of petroleum oils, XXI, 1468
 vertical gradient of, RMS, 53, 93, 94
 Temperature and depth distribution of foraminifera, MSC, 81
 Temperature and pressure, changes in, during migration and after accumulation, XXII, 844
 effects on nature of oil, XV, 456
 Temperature and rainfall, Colombia, South America, graphs, XXIX, 1069
 Temperature curve for well more than 8,700 feet deep, XXI, 800
 of a well at Tepehate, Louisiana, about 50 hours after cement job was completed, XXI, 798
 of a well in Texas Gulf Coast 60 hours after cementing, XXI, 797
 relation of, to stratigraphic section at Getty pool, XXI, 1196
 Temperature data, uses, XIV, 553
 Temperature gradient, CD, 30; RMS, 56, 72
 at great depth, CD, 30
 horizontal, in sea, RMS, 54
 Temperature gradient in Pechebbrönn oil-bearing region, Lower Alsace, its determination and relation to oil reserves, XIII, 1257
 discussion, XIII, 1569; XIV, 105
 normal, of potash mines in northern Germany, XXI, 1204
 of oil at Lance Creek field, Wyoming, STR II, 611
 use of, XIX, 501
 vertical, in sea, RMS, 77
- Temperature gradients, PROB, 146, 989
 causes of variations of, PROB, 996
 in earth, causes of variations in, XIV, 555
 in earth's interior, CD, 30
 in isolated locations and flanks of structures, XIX, 80
 in oil fields, variations, XIV, 545
 old observations, XIX, 108
 subsurface, PROB, 987
 table of, PROB, 1005, 1009
 Temperature loss in earth's crust, CD, 9
 Temperature measurements, difficulties of logging formations by, XXI, 802
 in wells in southeastern Turkey, XXV, 1937
 sources of error in, XIII, 1260
 use of, for cementation control and correlations in drill holes, XXI, 789
 Temperature phenomena of granitic rocks of Sierra Nevada, XXI, 1201
 Temperature ratio for various well depths, GAS, 1051
 Temperature requirements for experiments on hydrocarbon-oxidizing bacteria, XXVII, 1186
 Temperature survey at Kettleman Hills, California, XXI, 793
 made in well after multiple-stage cementation, XXI, 795
 Temperature surveys, applications of, in solution of production problems, XXI, 792
 Temperature tests through Peirman rocks of different lithologic character, Getty pool in eastern Eddy County, New Mexico, XXI, 1193
 Temperature tolerance of bacteria, PROB, 922
 Temperature variations, causes of, XVIII, 30
 during processes of ventilation, RMS, 361
 in Oklahoma and Kansas fields, XIV, 549
 in Pechebbrönn, explanation of, XIII, 1269
 Temperatures, PROB, 245, 278
 at Oklahoma City field, XVI, 998
 effect on bacterial activity, PROB, 262
 fluid, from Woodbine at Mexia, Texas, STR I, 378
 for hydrogenation, PROB, 241
 in oil fields, PROB, 270
 in producing strata, XX, 292
 in relation to occurrence of oil and gas, PROB, 81, 283
 in shallow young rocks, PROB, 242
 of oil in Northern fields, MEX, 226, 227, 229
 of oil in Southern fields, MEX, 226, 227
 of oil deposits, PROB, 269
 of salt water, MEX, 208, 209, 226, 228, 229
 sea, of Permian in Australia, XX, 1067
 theory of variations due to circulation of ground water, PROB, 278
 variation of, over salt domes, PROB, 146, 996
 variations, causes of, PROB, 1004
 within earth, XIII, 364
 Temple, Texas (well 395), SBP, 292-335, 410
 Temple field, Clare County, Michigan, XXV, 1132
- (Temple)
 porous dolomitic zone productive in, XXIV, 980
 Temple Hill gas field, Kentucky, GAS, 825
 Templeton, Eugene C. Pittenden, GAS, 119; XXVII, 184
 memorial of, XVII, 752
 Templeton, R. R. and McCollom, C. R., Santa Fe Springs field, California, VIII, 178
 Temporal fauna, MEX, 110-114
 Temporal foraminifera, MEX, 106, 111
 Temporal formation, MEX, 97, 98, 107-110, 113, 114, 123, 210, 213, 220, Figs 10, 12 (in pocket)
 correlation with Cook Mountain, MEX, 114
 in Southern fields, MEX, 114
 Ten Eyck, Richard E., XXIV, 1723
 Ten Sections field, California, XXI, 983
 extension, XXII, 712
 Tenmile Creek formation, XXII, 864, 867
 Tenmile District, XXVI, 1375
 Tennessee, FOP, 153; XXV, 1585
 Baumé gravity of crude oil in, PROB, 104-106
 Bone Camp field, STR I, 252
 Carboniferous productive horizons in, XI, 914
 central, age of Mississippian "Ridge-top shale" of, XX, 805
 central, Chattanooga shale-Pencil Cave isopach map of, XXVII, 1053
 central, faulting in, XXVII, 1050
 central, stratigraphic section of pre-Chattanooga rocks in, XXVII, 1051
 central, structural contour maps, XXVII, 1044, 1045
 central, structure of, XXVII, 1039
 Chattanooga black shale, VIII, 455
 columnar section for northeast-middle, STR I, 246
 Tennessee, description of oil and gas areas in, and conditions affecting new areas, V, 645
 abstract, V, 99
 Tennessee, Devonian in, FOP, 154; XXV, 669; 1586
 Dickson County, GAS, 869, 870
 drilling locations favorable in, STR I, 254
 Tennessee east of Cincinnati arch, developments in 1942, XXVII, 853
 in 1944, XXIX, 684
 Tennessee, eastern, Devonian in, XXVII, 1051
 eastern, Ordovician in, XXVII, 1051
 eastern, Silurian in, XXVII, 1051
 Franklin County, GAS, 867
 geologic structure map of eastern Clay County and parts of Overton and Pickett counties, STR I, 249
 geology of oil fields, V, 100, 168, 645
 Glenmay field, STR I, 252
 Helderbergian in, XXV, 669
 Tennessee, Kentucky, and northeastern Mississippi, oil horizons of, VIII, 621
 Tennessee, Lincoln County, GAS, 858, 860, 862
 list of structure maps, STR I, 254
 Macon County, GAS, 868
 map showing oil and gas areas, STR I, 244
 middle, Lower Ordovician sandy zones ("St. Peter") in, XXIV, 1641

- (Tennessee)
middle, oil and gas in, map, XXVIII, 278
middle, pre-Tionton stratigraphy of, XXIV, 1645
Middle Devonian in, XXV, 678
Mississippian in, FOP, 154; XXV, 1586
Tennessee, Missouri, Illinois, and Arkansas, locations in, studied in making Silurian correlations, XXVI, 2
Tennessee, Morgan County, GAS, 856
north-east-middle, columnar section, STR I, 246
Tennessee oil development and prospects in, V, 168
review, V, 100
Tennessee, oil reserves, VI, 44
Onondagan in, XXV, 678
Ordovician in, FOP, 154; XI, 907, XXV, 1586
Oriskanian in, XXV, 672
production at Celina and vicinity, STR I, 248
production at Spinner-Riverton field, STR I, 250
production at Tinsleys Bottom field, STR I, 248
production east of Cincinnati arch during 1943, XXVIII, 742
production from Mississippian limestone pools in Scott and Morgan counties, XXVII, 853
production in 1941, XXVI, 1132
Putnam County, GAS, 868
references on oil prospects in, FOP, 154; XXV, 1586
review, VI, 262, 383
St. Peter sandstone in, XXIV, 1642
section showing in detail changes in thickness and character of rocks from east to west in, XXII, 424
significance of structure in the accumulation of oil in, STR I, 243; XI, 905
Silurian in, FOP, 154; XXV, 1586; XXVI, 3
Silurian and Devonian productive horizons in, XI, 913
Smithland field, GAS, 855, 858-863
southern Cincinnati Arch region, GAS, 853
Spring Creek field, STR I, 252
Spinner-Riverton field, STR I, 250
Spinner-Riverton field, structure, XI, 912
structure of oil fields of Celina, XI, 910
Sumner County field, STR I, 251
Sumner County field, structure, XI, 913
Sunnybrook horizon in Celina field, STR I, 248
Tinsleys Bottom field, STR I, 247
Tinsleys Bottom field, structure, XI, 909
Upper Paleozoic development of Nashville dome, XX, 1071
Tennessee, Virginia, and Kentucky, mechanics of low-angle over-thrust faulting as illustrated by Cumberland thrust block, XVIII, 1584
Tennessee, Warren County, GAS, 864-868
western, Niagaran and Alexandrian series in, basis of Silurian correlations, XXVI, 4
western, section of lower Devonian in XXV, 673
- (Tennessee)
western, southwestern Illinois, and southeastern Missouri, sections of lower Devonian in, XXV, 677
Tennessee and Kentucky, Mississippian in, VIII, 627
oil and gas in, PROB, 515
Tennessee Embayment area, PROB, 518
Tennessee-Kentucky line, oil developments along, during 1923, VIII, 454
Tennessee lobe of Illinois basin, XXVII, 1041, 1054
section, XXVII, 1056
Tennessee maps and sections, list of, XXII, 475
Tennessee oil and gas fields, PROB, 516
Tennessee oil fields, STR I, 245-252
Carboniferous in, STR I, 251
Devonian in, STR I, 251
Fort Payne formation in, STR I, 252
Knox dolomite in, STR I, 245
Mississippian in, STR I, 252
of Celina and vicinity, STR I, 248
Ordovician horizons in, STR I, 245
Pencil Cave formation in, STR I, 245
producing horizons in, STR I, 245
Silurian in, STR I, 251
Spring Creek formation in, STR I, 252
Tennessee Valley, PROB, 518
lower, Ripley formation unconformable on Tuscaloosa formation in, XXV, 2047
Tennessee Valley Authority, RMS, 632; XXVI, 1798
Tensas Delta B-1 sand, XXVI, 1263
Tensile strength of sial, CD, 183
Tensile stresses, XXVII, 1260
Tension and thrust faults, XII, 720; XXVII, 1258
Tension fault, Santa Flora, east of Palo Seco field, Trinidad, XXIV, 2113
Tension fissures and faults, en échelon, XIII, 627
Tension phenomena in Arctic region, CD, 166
Tensleep anticline, Tensleep water in, XXIV, 1293
Tensleep fields of Wyoming, source material from Embar formation, XXI, 1252
Tensleep formation, GAS, 288; V, 190, 257; VI, 226; XXIII, 1449; XXV, 131
Elk Basin field, Wyoming and Montana, STR II, 580
Grass Creek field, Wyoming, STR II, 631
Lost Soldier district, Wyoming, STR II, 638
Tensleep oil ring in Garland field, XXIX, 1600
Tensleep pool, Montana, XXIX, 1600
Tensleep pool, Wyoming, XXIX, 1598
Tensleep sand, PROB, 828, 830, 832, 929, 935; XXIII, 913, 922
Grass Creek field, Wyoming, STR I, 628, 633
Tensleep sandstone, SBP, 193, 198-243, 414; XXI, 991; XXII, 684; XXIII, 482, 486; XXV, 887, 889, 890, 1150, 1151, 1152, 1845; XXVII, 465, 473, 858; XXVIII, 796, 797, 798; XXIX, 1598
chief source for water in Como Bluff anticline, XXVIII, 1213
(Ct) (Pennsylvanian), SBP, 193, 198-243, 414
- (Tensleep)
gravity of oil from, XXVII, 856, 857
productive in Wyoming fields, XXI, 1252
Rocky Mountain states, PROB, 161, 163, 349, 687; XVI, 869
Wyoming, helium in, GAS, 1059
Wyoming, production from, XXI, 1247
Tensleep sandstone and equivalent units, waters of, XXIV, 1291
Tensleep sandstone samples from Big Medicine Bow field, XXV, 1846
Tensleep sandstones in Salt Creek field, XXV, 1846
Tensleep sandstones and Satanka shales, potential oil-bearing beds in Como Bluff anticline, XXVIII, 1214
Tensleep waters, characteristics, XXVI, 1363
in Big Horn basin, XXIV, 1292
in Laramie basin, XXIV, 1294
in Montana, XXVI, 1361
in Poison Spider area, XXIV, 1294
in Powder River basin, XXIV, 1300
in Wind River basin, XXIV, 1292, 1294
of secondary saline type, and noted for uniformity in chemical composition, XXIV, 1303
representative, in Wyoming fields, XXIV, 1292, 1294, 1300
Wyoming, PROB, 941, 942
analysis of, XXIV, 1296
Tent Hills, MSC, 127
Tentative correlation chart of Gulf Coast, XXV, 742
Tepee Creek formation, XXV, 1625
chemical character of, XXV, 294
geologic map of west-central Wichita Mountains, Oklahoma, showing location of, XXV, opp. 290
origin, XXV, 296
Tepee Creek sediments in Wichita Mountains, geologic significance, XXV, 290, 298
intruded by granite dikes, XXV, 298
Tepetate, Mexico, MEX, opp. 41, 41-43, 205-207, 210, 211, Fig. 32 (in pocket)
Tepetate field, Mexico, Cretaceous in, GAS, 999
Tepetate-North Chinampa area, Mexico, MEX, 210
production from, MEX, 212
Tepetate Oil Company, XXII, 287
Tepetate oil field, Acadia Parish, Louisiana, Catahoula series at, XXII, 295
closure formed by faulting, XXIII, 873
convergence maps of, XXII, 301, 302
cross section or Ortego (Fourth *Marginalia*) sand at, XXII, 304
development map of, XXII, 290
discovery and geophysical history of, XXII, 287
drilling development of, XXII, 289
Fourth *Marginalia* or Ortego sand, main producing sand of, XXII, 303
geology of, XXII, 285
Miocene fossils in, XXII, 291, 293-296, 300-304
producing sands in, XXII, 303
sections at, XXII, 292, 297-299, 304
seismograph-contour map of, XXII, 288
sketch map of southwestern Louisiana, showing relation of, to adjacent fields and prospects, XXII, 286

- (Tepetate)
 structural history of, XXII, 300
 structural maps of, XXII, 294-296
 torsion-balance map of, XXII, 288
 unconformity at base of *Marginulina* zone in, XXII, 294
 Tepetate pool, V, 506, 677
 Tepetate structure, deep-seated salt intrusion, cause of, XXII, 295
 Teplitz, A. J., XXIV, 1464
 Tequips member, CAL, 192, 317
 Tercio Park dome, Colorado, faults, X, 121
 Terek district, Russia, XI, 500
 Terek range, XXI, 1077
 Terlingua district, Brewster County, Texas, algal reefs in Cretaceous Austin chalk of, XXVIII, 123
 Termier, Pierre, XVI, 1118, 1126; XXIII, 1723
 objections to Wegener's hypothesis, CD, 140
sur l'un des problèmes tectoniques du R'Arb (Maroc), review, XII, 1172
 Terminal zone, XXI, 978; XXII, 1052, 1053
 at Wilmington oil field, XXII, 1072
 Terminology, MSC, 94
 geological, in classification of oil and gas accumulations, XXIX, 1738
 of Lower Ordovician beds, XXIV, 1645
 significance, MSC, 92
 stratigraphic, in Permian of West Texas region, PTNM, 664; XXVI, 664
 stratigraphic, of Coalinga region, XXIV, 1728
 Terpene, XVI, 399
 Terpstra, G. R. J., and Gunther, A. E., XXIII, 1243
 Terpstra, G. R. J., and Hutchison, A. G., XXIII, 1242
 Terpstra, Ir. H., XXII, 3
 Tera Loma shale, XXIX, 983
 Terrace, PROB, 17, 209, 434, 496
 at Clark-Wick pool, Kansas, STR II, 157
 at Long Beach field, California, STR II, 72
 at Madison pool, Kansas, STR II, 157
 at Stephens field, Arkansas, STR II, 8
 at Thrall pool, Kansas, STR II, 157
 at Urania field, Louisiana, STR I, 96
 at Ventura Avenue field, California, STR II, 27
 bordering Browning pool, Kansas, STR II, 157
 Terrace deposits in coastal southeast Texas, XIV, 1316
 profile from eastern Llano County, Texas, southeastward along Colorado River to Gulf of Mexico, showing, XXIX, 1698
 younger than Orcutt sand, XXVII, 1360
 Terrace drainage, insequent, in central Louisiana, XXIII, 1223
 Terrace production, PROB, 435
 Terrace productivity, limitation of, STR II, 685
 Terrace structure, effect on accumulation of oil, XVII, 715
 Terraces, RMS, 155, 220, 239
 accumulation of oil and gas related to, PROB, 17, 436, 526
 at Cromwell field, Oklahoma, STR II, 305
- (Terraces)
 attitude of, STR II, 685
 in New York oil fields, STR II, 283
 in Stephen County, Texas, STR II, 472
 in Tejon Quadrangle, XXI, 219
 in Tri-County field, Indiana, STR I, 29
 Nueces River, GC, 244, XVII, 953
 oil fields on, STR II, 684
 origin of, on east coast of U.S., RMS, 228
 Pleistocene, RMS, 157
 poor alignment of local, in Mid-Continent, PROB, 612
 possibly of Upper San Pedro (Upper Pleistocene) age in Santa Ynez region, SC, 92; XX, 1638
 valley, RMS, 156
 Terraces and noses, competence of, to trap oil, STR II, 686
 rôle of, STR II, 684
 Terracing of sea floor in Hartshorne time, GAS, 514
 Terrain, interpretation of, for military maneuvers, XXVI, 1832
 Terrane effects, tables of, XIII, 763
 Terrebonne Bay, Louisiana, RMS, 160
 Terrebonne-Teché subdelta, RMS, 160, 161
 Terrell, R. A., Survey, Texas (well 378), SBP, 292-335, 409
 Terrestrial mammal fauna, MSC, 173
 Terrestrial oil shales, chemical composition of, XIII, 1378
 Terrestrial plants, MEX, 10-12, 100
 Terrigenous débris in sediments in East Indies, RMS, 351
 in sediments of Atlantic Ocean, RMS, 373
 in sediments of Indian Ocean, RMS, 402
 in sediments supplied to sea from Australian coast, RMS, 401
 Terrigenous mud with glauconite, in East Indies, RMS, 350
 Terrigenous origin of organic matter in sediments, RMS, 436, 437
 Terrill, J. V., XXIII, 1053
 Terroine, E. F., PROB, 42
 Terry, L. F., and Davis, Ralph E., GAS, 1111
 Terry, R. A., and Olsson, A. A., XXVI, 1649
 Tertiary CAL, 10, 12-18, 20, 23-26, 31, 34, 35, 38, 40, 46, 49, 50, 52, 58, 59, 80, 93, 95, 96, 103, 108, 114, 120-254, 260, 262, 277, 278, 283, 292, 293, 296, 300; MEX, 90, 143, Fig. 12 (in pocket) MSC, 1, 25, 26, 90, 91, 99, 103, 109, 114, 175, 354; PROB, 175, 302, 737; RMS, 155, 267, 269, 272, 400, 505, 522; SC, 85; XX, 1631
 Alaska, FOP, 11; VI, 295; XXV, 1443
 Argentina, X, 855; XXVIII, 1459
 Arizona, VI, 47
 Arkansas, VI, 196, 350
 Big Sand Draw field, Wyoming, XII, 1140
 Black Mountains, XI, 1035
 Burma, XI, 559; XVIII, 315
 California, PROB, 178; CAL, 120-254; X, 131, 892
 California, helium in, GAS, 1059
 California, unconformities in, MSC, 158
 Canada, FOP, 18; IV, 250; XXV, 1450
 Carterville-Sarepta and Shongaloo fields, XXII, 1477
- (Tertiary)
 China, XXVIII, 1431
 Coalinga district, columnar sections of, SC, 56, XX, 1602
 Colombia, XXIX, 1091
 Colorado, XXII, 1029
 Cuba, XVI, 540
 Cunningham field, Kansas, XXI, 503
 Delaware basin, solution during, XXVIII, 1623
 divisions of, based on marine molluscan faunas of European section, XXVIII, 1314
 early, chiefly an epoch of erosion in Pecos Valley, XXI, 898
 East Indian, XXI, 123; XXII, 28, 29
 East Indian, letter classification of, XXII, 29
 East Texas, GAS, 654, STRAT, 605
 European, MSC, 20
 Florida, III, 359
 foraminifera from, MSC, 21
 French fields, XVI, 1137
 geologic provinces of, SC, 14; XX, 1560
 geology at beginning of, SC, 12; XX, 1558
 Grass Creek field, Wyoming, STR II, 626
 Grozny field, Russia, XIII, 814
 Gulf Coast, fossils of, XXII, 984
 Gulf embayment province, XIII, 429
 Homer field, Louisiana, STR II, 198, 209
 Hugoton field, STRAT, 81, 83, 84
 Idaho, VI, 472
 Illinois, VI, 155
 in Dakota basin, Fort Union formation an important marker-bed for correlation of, XXVII, 1569
 in German salt anticlines, SD, 155; IX, 430
 in Louisiana salt domes, SD, 279, 316
 infusoria and polythalamia in, MSC, 21
 Jackson, Mississippi, XVII, 41
 Japan, XI, 190, 193, 195
 Java, XXVIII, 1446
 Kansas, STRAT, 81, 141; II, 81; VI, 69; XIII, 599; XXIII, 1054
 Kentucky, IV, 304
 La Barge region, XXV, 1740
 late, of the Netherlands East Indies, small foraminifera from, XXV, 761
 late, rocks at Comodoro Rivadavia, Argentina, XXIX, bet. 508 and 509
 Louisiana, VI, 180, 249, 251; X, 227, 264; XXII, 1477, 1507; XXIII, 297; XXIX, 25
 Lower, Alagoas series, in Brazil, XXI, 300
 Lower, Stephens field, Arkansas, STR II, 7
 marine, SC, 2; XX, 1548
 marine Middle, chronologic-biostratigraphic classification of, MSC, 87
 Middle, MSC, 119, 180, 182
 Middle, California faunal sequence, MSC, Fig. 6 (in pocket)
 Middle, correlation between Europe and California, MSC, 173
 Middle, correlations of formations in California, MSC, Fig. 6 (in pocket)
 Middle, European, MSC, 181
 Middle, sequence, MSC, 159, 160, 168
 Middle, stages and zones of California, columnar sections at type localities, MSC, Fig. 6 (in pocket)

(Tertiary)

- Middle, stratal units in California, MSC, Fig. 14 (in pocket)
 Mississippi, XXVIII, 47
 Montana, IV, 314
 Nevada, XXVI, 1803
 New Guinea, XI, 171
 New Jersey, XXII, 803
 New Mexico, IV, 77, 95
 New Zealand, divisions of, XXV, 763
 North Dakota, XXVI, 355, 1415
 North Sea, RMS, 331, 332, 335
 O'Hern field, STRAT, 728
 oil and gas-producing horizons of, in
 Powder Wash field, XXII, 1030
 Oklahoma, STRAT, 81; I, 136; III, 225
 Oregon, XXIX, 1383
 Oregon, foraminiferal faunules from, MSC, 78, 99
 Pacific Coast, MSC, 161
 Pacific Coast, Refugian stage of, MSC, 99, XX, 215
 paleogeography and geologic history, MEX, 139
 Patia gorge, XXIX, 1134
 Peru, VII, 443; XII, 9
 Peru and Ecuador, XXIX, 536
 Pine Island field, Louisiana, STR II, 169
 post-Miocene, MSC, 135
 recurrent fault movement during, SC, 74; XX, 1620
 revision of section with special reference to oil-well geology of coast region, VIII, 424
 Richland field, XV, 942
 Rio Grande embayment, XIV, 1433
 Rocky Mountain fields, VII, 404
 Roumania, SD, 136; IX, 152
 Russia, XI, 507; XXIII, 496
 Salt Creek field, Wyoming, STR II, 593
 Sand Belt, STRAT, 750
 Schuler field, XXVI, 1473
 south Texas, XXIII, 861
 south-central Texas, GC, 531; XVII, 529
 southwestern Arkansas, XIV, 833
 sub-committee on, A.A.P.G., XXV, 2098
 Sugar Creek field, XXII, 1507
 Switzerland, IV, 88
 Texas, STRAT, 605, 728, 752; IV, 271; VI, 242, 323
 trans-Pecos Texas, XIX, 241
 Transylvania, Roumania, VIII, 203
 Turkey, XV, 646
 Upper, of Japan, nitrogen in, GAS, 1061
 Urania field, Louisiana, STR I, 93
 Utah, VI, 202, 204, 223, 244
 Venezuela, XXVIII, 26
 Ventura Basin, SC, 102; XX, 1648
 Vermilion Creek area, XIV, 1015, 1038
 Washington, XXVI, 1809
 Washington and Oregon, FOP, 27; XXV, 1459
 Wason field, Texas, XXVII, 485
 West Indies, VI, 496
 western Gulf Coastal Plain, XV, 766
 Wind River Mountains, Wyoming, XXV, 139
 Wyoming, XXV, 1731, 1734, 2039, 2044
 Zenith pool, STRAT, 141
 Tertiary and Comanche in Coke County, Texas, XXI, 472

- Tertiary and Cretaceous in Antillean-Caribbean region, stratigraphical correlation chart of, XXIV, 1578-1582
 Tertiary and Cretaceous sediments of Kentucky, Illinois, and Missouri, XIV, 845
 Tertiary and Cretaceous structure, Dakota basin, XXVII, 1582
 Tertiary and Quaternary basin deposits in trans-Pecos Texas, XIX, 255
 Tertiary and Quaternary faunas, climatic relations, MSC, 17, 81, 169
 Tertiary and Quaternary periods in northwest part of Peru, geology of, review, VII, 443
 Tertiary and Quaternary systems of Texas Gulf Coast, XXIII, 147
 Tertiary and Upper Cretaceous in New Zealand, divisions of, XXV, 1813
 Tertiary accumulation of petroleum in Cuba, XVI, 552
 Tertiary age of lava flows and tuffs, XXII, 1435
 of San Gabriel Mountains, XXIV, 669
 Tertiary basalts, Mexico, XI, 1201
 Tertiary basin, Bavaria, XVIII, 69
 Tertiary beds, igneous rocks in, MEX, 144
 in Pongo de Manseriche area, XXI, 1349
 Tertiary Bolivinas, MSC, 72
 Tertiary bryozoa, XXVI, 1196
 Tertiary Carapita formation of Venezuela, foraminifera of, MSC, 178
 Tertiary clays, RMS, 483
 Tertiary column, European, age of California Stage sequence with respect to, MSC, 168
 Tertiary columnar sections, Colombia, XXIX, 1094
 Tertiary comatulids, XXVI, 1194
 Tertiary deposits of Magdalena Valley, petroleum possibilities in, XXIX, 1092
 young, in main oil fields, southwest Trinidad, stratigraphic column of, XXIV, 2103
 Tertiary diastrophism, interpretation of principal features, CD, 164
 unity of, in space and time, CD, 174
 Tertiary-Eocene, GAS, 352
 Tertiary faulting, recurrent, SC, 84; XX, 1630
 Tertiary fauna, MSC, 89, 171; XV, 152
 of Venezuela, MSC, 177
 review, XVIII, 1206; XX, 505
 sequence of, MSC, 173, Fig. 6 (in pocket)
 Tertiary foraminifera, MSC, 84
 of Porto Rico, XXV, 1810
 Tertiary foraminiferal associations, MSC, 81
 Tertiary foraminiferal fauna from Manta, Ecuador, MSC, 177
 Tertiary foraminiferal faunas, MSC, 182
 Tertiary folding in local anticlines, XXII, 847
 Tertiary formations, coastal sections of Ecuador, block-faulting in, XIV, 269
 conditions of deposition of, XXIX, 1403
 correlation of, GC, 1043; XIII, 1351; XXIX, 1402
 in Coast Range of Oregon and Washington, XXIX, 1404

(Tertiary)

- in Gulf Coast area, correlations, XV, 535
 in Lisbon field and adjacent areas, XXIII, 298
 in Maryland, XXII, 805
 producing gas in Colorado, New Mexico, and Utah, GAS, 364
 prolific source of oil and gas, VII, 59
 thin in Cuyuma Valley, SC, 77; XX, 1623
 Tertiary fossils, in New Zealand, ranges of, XXV, 766
 North (Russian) Sakhalin, X, 1156
 northern Colombia, XXIX, 1093
 Tertiary geology of Australia, XXV, 1813
 Tertiary geology and oil and gas prospects in Dakota basin of North Dakota, XXVII, 1567
 Tertiary geosyncline in Papua, XXVIII, 1454
 Tertiary geosynclines in East Indies, XXII, 42
 Tertiary history of Central Geosynclinal area, analogies with that of Northern area, SC, 104; XX, 1650
 of East Indian and Californian sub-provinces, comparison of, XXI, 557
 of region of Sabine uplift, Louisiana, XV, 531
 Tertiary igneous intrusions in Rocky Mountains, XXVII, 433
 Tertiary igneous rock in Temblor Range, XXV, 1337
 Tertiary lake beds in South Park, Colorado, XIX, 1355
 Tertiary lavas, V, 672
 Tertiary marine rocks in Gippsland, Victoria, stratigraphy of, XXVIII, 278
 Tertiary microfossils, neglected Gulf Coast, XXVI, 1188
 references on, XXVI, 1198
 Tertiary mobile belts, possible correlation of, XXI, 559
 Tertiary mountain belt, of world-wide significance, CD, 159
 Tertiary mountain ranges, map showing trend lines of, for whole globe, CD, 165
 Tertiary mountains of continental origin, CD, 166
 Tertiary oil and gas in Rocky Mountain states, PROB, 171
 Tertiary oil-bearing formations of southern Ecuador, beekite in, XVII, 1388
 Tertiary oil-containing geosynclines in East Indies, XXII, 39
 Tertiary oil fields of East Indies, XXI, 555
 Tertiary oil possibilities of East Indies, XXVIII, 1440
 Tertiary oils, XXVII, 1316
 of Magdalena Valley, XXIX, 1136
 with heavy naphthene base, PROB, 138
 Tertiary origin of Hiawatha gas, GAS, 357, 361
 Tertiary orogenies, SC, 51; XX, 1597
 Tertiary orogeny in Colombia, XXIX, 1077
 Tertiary period, trends in geologic history during, MSC, 158
 Tertiary provinces of Southern California, XXI, 550
 Tertiary redbeds, XXIII, 1040
 China, XXVIII, 1424
 Tertiary rocks along Wyoming-Colo-

- (Tertiary)
 rado boundary, folds and faults in, XIX, 538
 Alberta, GAS, 27
 Argentina, XXIX, 507
 Los Angeles Basin, California, X, 755
 oil in, Colombia, X, 403
 Tertiary sandstones of Ecuador, petrology of, XIV, 302
 Tertiary Santa Barbara embayment, SC, 86; XX, 1632
 Tertiary section, discontinuous in Coalinga district, SC, 66; XX, 1612
 Irma field, Arkansas, STR I, 4
 Kettleman Hills, XVIII, 439
 Texas, revision of, with special reference to oil-well geology of coast region, VIII, 424
 Tertiary sedimentation in Gulf Coast region, XXIX, 1318
 Tertiary sediments. (See also individual epochs. Paleocene, Eocene, Oligocene, Miocene, Pliocene)
 California, SBP, 87-167
 California, outcrop samples, SBP, 167-194
 carbon content, SBP, 26-30
 East Texas, SBP, 292-335
 Gulf Coast, SBP, 335-349
 Japan, natural gases in oil-bearing, XI, 188
 Mississippi, XXIII, 1393
 northeast of Morgan Hill, California, XXVII, 640
 Rocky Mountain, SBP, 194-243
 undifferentiated beds, SBP, 193, 197-243, 416
 Wyoming outcrop section c, SBP, 243-255, 411
 Tertiary sequence in Papua and the Mandated Territory of New Guinea, note on present knowledge of, XXVII, 1266
 in Tampico Embayment, MEX, 97
 Tertiary series, Colombia, X, 386
 Tertiary shark's teeth, RMS, 410
 Tertiary source beds in Russia, XI, 501
 Tertiary stages, Australian and New Zealand, correlation of, XXV, 1814
 Tertiary strata in Dakota basin of North Dakota from Sentinel Butte to central Burleigh County, section, XXVII, 1572
 Tertiary stratigraphic sequence, MSC, 4
 Tertiary stratigraphy, Gulf Coast, XXV, 1012
 East Indies, diagrammatic summary of, XXII, 40
 Honda district, XXVI, 799
 Northwest Basin, Australia, XX, 1058
 Tertiary stratigraphy of Louisiana, GC, 383; MSC, 179; XVII, 613
 review of, discussion, XVII, 869
 Tertiary structures in Colorado, XXII, 689
 Tertiary system, Dakota basin, XXVI, 1559
 of folding, XXIII, 690
 Tertiary terraces not necessarily indications of unconformities, X, 908
 Tertiary tilting at Gulf of Aqaba, XXII, 1222
 Tertiary trough, Burma, XI, 565
 Tertiary tuff formation of Lesser Antilles, deformation of, due to post-Miocene-pre-Pliocene orogenesis, XXIV, 1597
 Tertiary unconformities, PROB, 782
 Tertiary unconformity in Elk Hills field, California, STR II, 48
 typical, at top of Wilcox in Louisiana, sketch of, XXIV, 2027
 Tertiary vertebrate faunas, MSC, 173
 Tertiary zones, subsurface, of correlation through Mississippi, Alabama, and Florida, XXII, 984
 Terzaghi, Charles, PROB, 813, 814, 818; X, 1045, 1049; XI, 624, 877
 principles of soil mechanics, review, X, 314
 Tesch, P., RMS, 344
 Tesla region, CAL, 134
 Tesnus formation, V, 556; XXIX, 1346
 Tesnus trough, XXIX, 144
 Tesoro pool, XXIII, 865
 Tessey limestone, PTNM, 662; XXVI, 662
 Test on Agate anticline, northwestern Nebraska, XXIII, 101
 on Cedar Creek anticline, southeastern Montana, XXVI, 861
 Test-pit exploration in coastal plain of Sumatra, XIV, 1439
 Tester, A. C., XXV, 25; XXVI, 1585, 1587
 Tester, A. C., and Twenhofel, W. H., new data on Comanchean strata of central Kansas, X, 553
 Testing large cores of oil sands, technique of, XXVII, 64
 references, XXVII, 83
 Testing methods, XXI, 712
 Testing sands for oil content, XII, 73
 Tests, important exploratory, XXIV, 1067
 of oil in Big Lake pool, Texas, STR II, 538
 Tethyan fauna, XV, 151, 156, 159
 Tethyan channel, XXV, 396
 Tethys in Paleozoic and in Mesozoic, CD, 70
 in Permian, CD, 144
 in Proterozoic, CD, 143
 in region of European-American, obsecurity of, CD, 217
 Tetjaev, XI, 493
 Teton area, GAS, 223, 238
 Tetrabromothane for heavy mineral separations, RMS, 529
 Tetrahedral layer, in clay lattices, RMS, 474, 476
 Texa Trading Company, XXII, 676
 Texan marble, XXIV, 148
 Texana anticline, GAS, 532
 Texarkana field, XXVIII, 267
 Texas, CAL, 110, 111; MEX, 19, 21, 27, 30; PROB 30, 42, 60, 72, 109, 295, 301, 324, 327, 328, 330, 340, 341, 354, 402, 413, 415, 418-420, 443, 575, 601, 612, 629, 632, 637-639, 642, 649-651, 654, 660, 661, 663, 664, 669, 675, 764, 779, 869, 891, 893, 899, 900, 903, 993, 996; RMS, 154, 283; XX, 1376
 absence of metamorphosed sedimentary rocks in Panhandle, VIII, 241
 Ace area, GAS, 727
 active faulting in Lavaca County, XXII, 104
 aerial photo-mosaic of Barbers Hill area, Chambers County, GC, xvii
 age of oil-bearing horizon at Burkburnett, V, 154, 324
 Aldine field, Harris County, XXIV, 1084
 algal reefs in Cretaceous Austin chalk of Terlingua district, Brewster County, XXVIII, 123
 (Texas)
 Alta Mesa pool in Brooks County, XXI, 1045
 Amarillo district, GAS, 385
 Amarillo district, geology, IV, 269
 Amarillo district, oil and gas in, VII, 237
 Amelia oil field, Jefferson County, XXIII, 1635
 ammonoids from upper Cherry Canyon of Delaware Mountain group in, XXVIII, 1644
 an absolute-ownership state, XXII, 1082
 analyses of oil, Laredo district, STR I, 407
 analysis of gas, Potter County, XII, 167
 Anchor area, Brazoria County, XXIV, 1086
 Andrews County, GAS, 455
 application of name "Ferguson Crossing dome," Brazos and Grimes counties, XXIII, 1092
 Archer County, geology and oil fields of, STRAT, 661; STR I, 421; X, 457
 Texas, Arkansas, Mississippi, and Alabama, sections of Upper Jurassic formations in, XXVII, 1421
 Texas, Aspermont pool discovery, Stonewall County, XXIV, 1839
 asphalt in Anacacho formation of, XII, 995
 Austin chalk, X, 49, 50, 61, 769
 Austin fauna, X, 31
 average annual oil discoveries by successive five-year periods in, XXI, 698
 Balcones, Luling, and Mexia fault zones in, XXIX, 1733
 Balcones, Luling, and Mexia fault zones in, map, XXIX, 1735
 Bammel dome, XXII, 739
 banded anhydrite in, XXIII, 1686
 Barbers Hill oil field, Chambers County, GAS, 707; SD, 530; IX, 958
 Barnhart field, Reagan County, XXVI, 387
 basement rocks in Shell-Humphreys well, Pecos County, XIV, 314
 basis of proration in, XXIII, 1314
 Batson, GAS, 708
 Batson oil field, Hardin County, SD, 524; IX, 1277
 Baylor and Haskell counties, XXIV, 1053
 bearing of cap rock on subsidence on Chestnut dome, Natchitoches Parish, Louisiana, and Clay Creek salt dome, Washington County, discussion, XV, 1105
 Ben Bolt field, Jim Wells County, XXIII, 1237
 Bend arch region of north-central, three layers of geology, XXVII, 910
 Bend group, X, 461, 462
 Bethel dome, XII, 535
 Big Creek dome, GAS, 709
 Big Hill salt dome, Jefferson County, GAS, 709; SD, 497; IX, 590
 Big Hill salt dome, Matagorda County, GAS, 708, SD, 691; IX, 711
 Big Lake field, STR II, 500; GAS, 436-448
 Big Lake field, Comanchean in, X, 368
 Big Lake field, Cretaceous in, STR II, 516

(Texas)

- Big lime helium gas at Cliffside field, GAS, 1054
 black lime, X, 462
 Blue Ridge salt dome, Fort Bend County, GAS, 710, SD, 600; IX, 304
 Boggy Creek salt dome, Anderson and Cherokee counties, XII, 528, XIII, 613; XVI, 584
 Bonita discovery, Montague County, XXIV, 1838
 Bowers field, Montague County, XXVII, 20
 Brooks salt dome, SD, 237; X, 29
 Bryan Heights salt dome, Brazoria County, GAS, 709; SD, 678; IX, 613
 Bryson oil field, Jack County, STRAT, 539; XVI, 179
 Byson pool, STRAT, 880
 Buckeye field, Matagorda County, GC, 734; XIX, 378
 Buffalo area, GAS, 668
 Buffalo field, Leon County, XXIV, 1064
 Bullard dome, XII, 540
 buried hills in northern, STR II, 694
 Burke pool, STR I, 317
 Butler salt dome, X, 55
 Buttermilk Slough, Matagorda County, XXIV, 1086
 Caddo field, Marion County, XXIV, 1064
 Cambrian in, XXVII, 764
 Cambrian in Franklin Mountains, XXIV, 160
 Cambro-Ordovician in, XXVI, 1398
 Canyon group, X, 462
 cap rock at West Columbia field, STR II, 457
 cap rock of interior domes of, X, 17
 Caplen field on Bolivar Peninsula, Galveston County, XXIV, 1087
 Carolina-Texas field, STR I, 397
 Carrizo sandstone, X, 51
 Carthage field, Panola County, XXIV, 1064
 cause of subsidence of surface in Goose Creek field, discussion, XI, 887
 Cayuga field, Anderson, Henderson, and Freestone counties, XXIV, 1065
 Cayuga field, Henderson and Cayuga counties, XXI, 1066
 Cedar Creek field, STR I, 324, 367
 Cedar Lake pool, Gaines County, XXIV, 1031, 1037
 Cedar Point field, Chambers County, XXII, 1601
 central, Bend series of, III, 217
 central, bibliography on Seguin formation of, XXVII, 621
 central, Comanche in, XXV, 1692
 central, Ellenburger structure map of, XXV, 1600
 central, evidence of recent movements along faults of Balcones system in, XX, 1357
 central, Georgetown formation of, and its northern Texas equivalents, XIII, 1291
 central, graben in deep domes, GAS, 718
 central, oil fields, new, review of development in, during 1918, III, 163
 central, rocks underlying Cretaceous in Balcones fault zone, XV, 819

(Texas)

- central, section of Cretaceous in, XXIII, 626
 central, stratigraphy and age of Seguin formation of, XXVII, 608
 central, structural map of, XXV, 1598
 central, Travis Peak formation of, XXIII, 625
 Chapel Hill field, Smith County, XXII, 1107; XXIV, 1065
 character and possible origin of producing rock in Hilbig oil field, Bastrop County, XIX, 206
 characteristics of sedimentary rocks, V, 373
 Charco-Redondo field, STR I, 406
 chart of logs in Navarro and Limestone counties, STR I, 334
 Chazy-Sylvan unconformity at Big Lake, discussion, XIV, 1227
 Chocolate Bayou area, Brazoria County, XXIV, 1086
 Church-McElroy field, GAS, 456
 Cibolo area, XI, 849
 Cisco group, X, 462
 classification of stratigraphic divisions in, XXIII, 149
 Clay Creek dome, Washington County, GAS, 706; GC, 757; XII, 1166; discussion, XV, 43, 279, 1113; XX, 68
 Clodine field, Fort Bend County, XXV, 2057
 coastal, development and production statistics on, XXVII, 734
 coastal, fields discovered in 1942, XXVII, 732
 coastal, results of wildcat drilling in, XXVII, 732
 coastal, salt domes of, XX, 729
 Coastal Plain of, between Brazos River and Rio Grande, geologic map showing late Cenozoic deposits of, XXIX, 1694
 coastal southeast, surface geology of, XIV, 1301
 coastal southeast, and south Louisiana, post-Fleming surface formations of, XIX, 651
 Cockfield sands productive in, XXII, 738, 739
 Coke County, structure and oil showings in redbeds of, III, 117; IX, 1215
 Cole field, STR I, 399
 Coleman pool discovery, Archer County, XXV, 428
 Collegeport field, Matagorda County, XXIV, 1086
 columnar section of geological formations in Yates field, STR II, 485
 Comanche in, STRAT, 781; X, 770; XXVI, 1812
 Comanche in Big Lake field, STR II, 506, 508, 516
 Comanche in Yates field, STR II, 482, 486
 Comanche Cretaceous in, GAS, 655, 662
 Comanchean Cretaceous in Luling field, STR I, 256, 273
 Concho Bluffs of Crane, Ector, and Winkler counties, XIII, 1069
 Concord salt dome, Anderson County, XXVIII, 1537
 Conroe oil field, Montgomery County, GC, 789; XX, 736; discussion, XX, 985
 Consolidated field in Wilbarger County, XXIV, 1052

(Texas)

- coral reefs in Oligocene of, X, 976
 correlation in Bend series, review, V, 99
 correlation of formations with Oklahoma, V, 544
 correlation of Pecan Gap chalk in, XVIII, 1506
 Corsicana district, GAS, 651
 Cotton Valley formation in, section, XXVII, 1461
 counties in, showing Mississippian limestone, XXV, 1656
 counties of, including western Edwards Plateau, XXVI, 380
 counties producing helium gas, GAS, 1054, 1055
 Cretaceous, Balcones zone, X, 1261
 Cretaceous in, STRAT, 605, X, 613; XXII, 1426; XXVI, 1812; XXVII, 895
 Cretaceous in Big Lake field, STR II, 517
 Cretaceous in Bowers field, XXVII, 29
 Cretaceous in Gulf Coast salt domes of, XIII, 1065
 Cretaceous in North Cowden field, XXV, 599
 Cretaceous in Wasson field, XXVII, 487
 Cretaceous in Yates area, XXIV, 141
 Cretaceous fossils in, IX, 559
 Cronin structure, XII, 535
 Cross Cut-Blake district, Brown County, STRAT, 548
 crystalline rock in deep well in Winkler County, XXIX, 222
 Currie field, Navarro County, STR I, 312; VII, 25; X, 61
 Curry pool, Stephens County, STR II, 478
 Custer formation of, XXI, 421
 discussion, XXII, 925
 daily allowable per flowing well in, XXII, 643
 Damon Mound oil field, GAS, 708; SD, 613; IX, 505
 Darst Creek fault, Guadalupe County, XIII, 1387; XVII, 16
 Davis sand lens, Hardin field, Liberty County, STRAT, 564
 deep oil zone in Big Lake field, STR II, 525
 deep sand development at Barbers Hill, Chambers County, XIV, 719
 deposition of Lissie and Beaumont formations of Gulf Coast of, XXIV, 693
 detailed study of beds commonly known as Catahoula formation, in Fayette County, with particular reference to their age, GC, 528
 development in 1936, XXI, 1068
 developments of geologic significance in Wichita and Archer counties, XXIV, 1049
 developments of upper Gulf Coast of, in 1944, XXIX, 785
 Devonian in, XXI, 1019
 Devonian in Franklin Mountains, XXIV, 164
 Devonian in Sand Hills area, XXIV, 126
 Devonian fields in Crane, Ector, and Andrews counties, XXIX, 748
 diamond drilling near Kerens, Navarro County, X, 703
 discoverer of McCamey field, discussion, XII, 99

(Texas)

- discoveries in 1944 in upper Gulf Coast district of, XXIX, 786
 discovery, Jones County, XXIV, 2180
 discovery of oil in Ellenburger formation, K. M. A. oil field, Wichita County, XXIV, 1494
 discovery of oil in Saxet gas field, Nueces County, XIV, 1351
 discovery of oil in White Point gas field, San Patricio County, and history of field, XV, 205
 discovery of oil and gas in Mercedes field, Hidalgo County, XIX, 1226
 discovery of Yates pool, Pecos County, XI, 635
 disseminated oil in Pleistocene water sands of Corpus Christi area, XVI, 385
 divisions of Triassic in, XXVI, 383
 Driscoll pool, Duval County, GC, 620; STRAT, 880; XVII, 816
 Duval County, STRAT, 725
 Eagle Ford formation, X, 41, 49, 50, 61, 770
 early structural closure in northeast, GAS, 664
 East, correlation of Claiborne of, with Claiborne of Louisiana, XIII, 1335
 East, correlation of Pecan Gap, Wolfe City, and Annona formations in, XXVIII, 522
 East, developments in 1938, XXIII, 889
 in 1939, XXIV, 1062
 in 1940, XXV, 1081
 in 1941, XXVI, 1050
 in 1942, XXVII, 782
 in 1943, XXVIII, 841
 in 1944, XXIX, 766, 768
 East, district, development and production, XX, 975
 East, fault-zone waters in, STR I, 373, 374
 East, Lower Claiborne of, with special reference to Mount Sylvan dome and salt movements, XIII, 1347
 East, Lower Cretaceous in, XXII, 728
 East, map showing major structural features of, STR I, 306
 East, oil and gas fields, XXII, 729; XXV, 1082; XXVI, 1051
 East, oil and gas fields, 1944, map, XXIX, 767
 East, oil and gas fields and important exploratory tests drilled in 1938, index map, XXIII, 890
 East, oil field, subsurface structure on top of Woodbine formation in gas area at south end of, GAS, 680
 East, oil migration up faults in, STR I, 383, 384
 East, producing formations in, XXIX, 768
 East, productive counties in, XXIX, 768
 East, recovery problem, water encroachment in Bartlesville sand pools of northeastern Oklahoma and its bearing on, XVI, 881, 1038
 East, résumé of development in, during 1937, XXII, 728
 East, salt diffusion in Woodbine sand waters, XXVIII, 1635
 East, salt domes in, XII, 527, 677

(Texas)

- East, Upper Cretaceous in, XXVIII, 522
 East Lea County high, GAS, 424
 East Premont field, Jim Wells County, XXII, 755
 East Texas oil field, Rusk, Cherokee, Smith, Gregg, and Upshur counties, STRAT, 600, 880
 East Tyler dome, XII, 537
 east-central, Upper Cretaceous, XXII, 1631
 eastern, and northern Louisiana, columnar sections of Upper Jurassic formations in, XXVII, 1425
 eastern, and northern Louisiana, structure contour map, SD, 213
 eastern Midland basin stratigraphy, XXIV, 52
 Eastland County, geology, IV, 159
 edge-water contact at Mexia, STR I, 382, 383
 Edna gas field, Jackson County, XXV, 104
 Edwards County to Electra, log section Stratigraphic base line, upper Canyon, XXIV, 68-70
 Edwards Plateau province, STR II, 503
 electrical investigations in the oil fields of, review, XI, 1125
 electrical survey of structural conditions in Salt Flat field, Caldwell County, XIV, 1177
 Embar field, Andrews County, XXVII, 538
 Eocene in, STRAT, 567, 689, 728; X, 7, 155, 769; XXII, 1432; XXVI, 261; XXVII, 732
 Eocene in Laredo district, STR I, 391
 Eocene in Luling field, STR I, 273
 Eocene in Lytton Springs field, X, 956
 Eocene in Mexia zone, X, 1261
 Eocene in Refugio field, XXII, 1194
 Eocene in West Columbia field, STR II, 459, 466
 Esperson dome, Liberty County, GAS, 728, GC, 857; XVIII, 1632
 examples of accumulation due to lenticularity of producing formation, STR II, 698
 examples of important faulting, STR II, 687
 exceptional association of oil and water in producing zone at Refugio, XV, 953
 (exclusive of East Texas), production per flowing well in, by years, 1936-1942, XXII, 642
 extension in gas area of western Moore County in 1944, XXIX, 722
 extensions of fields, 1936, XXI, 1038
 extensions to proved areas in 1940, XXV, 1010
 extensions and new sands in upper Gulf Coast of, in 1944, XXIX, 788
 Ezzell field, McMullen County, XXII, 754
 Fairbanks and Satsuma fields, Harris County, XXIII, 686
 Fairbanks field, Harris County, XXI, 1051, 1055
 fault-zone fields of east-central and south-central, PROB, 577
 faulting and petroleum accumulation at Mexia, VII, 226
 faulting contemporaneous with deposition in northeast, GAS, 664
 fields of deep dome type in Gulf Coast salt-dome area, GAS, 718

(Texas)

- Fisk, or Shields, pool, Coleman County, XIII, 1214
 Flag Lake field, Henderson and Navarro counties, XXIV, 1065
 Fluhman pool, STR I, 300
 folding contemporaneous with deposition in northeast, GAS, 664
 foraminifera (See Foraminifera)
 fossil fauna and flora of Miocene in, XXVIII, 993
 fossil footprints near Abilene, XI, 633
 fossils (See Fossils)
 fossils from limestone of Buda age in Denton County, XXVIII, 1538
 Friedricksburg-Washita (Edwards-Georgetown) contact in Edwards Plateau region, XVIII, 1698
 Friendswood field, Harris County, XXII, 1602
 Frio sand productive at Fannett field, Jefferson County, XXIV, 1089
 Fullerton pool, Andrews County, XXVIII, 1541
 galena and sphalerite in Fayette at Orchard salt dome, Fort Bend County, XIII, 384
 gas in Anderson and Leon counties, XVIII, 263
 gas in Haslam area, Shelby County, XXI, 1072
 gas near Carthage, XXI, 1072
 gas and oil near Edna, Jackson County, X, 905
 gas-producing counties, GAS, 388
 gas well in Jim Hogg County, VIII, 676
 generalized cross section, Duval County, GC, 624; XVII, 820
 geochemical log, discovery well, East Bernard field, Wharton County, XXIV, 1418
 geochemical log, discovery well, Rosenberg field, Fort Bend County, XXIV, 1419
 geochemical log, dry hole, about 3,500 feet outside present limits of production, Lovell's Lake oil field, Jefferson County, XXIV, 1424
 geochemical log, dry hole, Harris County, XXIV, 1425
 geochemical log, dry hole, Nueces County, XXIV, 1426
 geochemical log, edge producer, Friendswood oil field, Harris County, XXIV, 1423
 geochemical log, producing well, Friendswood oil field, Harris County, XXIV, 1422
 geochemical log, temporary producer, Fort Bend County, XXIV, 1420
 geologic map showing Lissie, Reynosa, and Upland Terrace deposits of Coastal Plain, XXI, 492
 geologic section from Fisher County through Andrews County, to Eddy County, New Mexico, XXIV, 37
 geologic section of Rio Grande embayment, and implied history, XIV, 1425
 geologic sketch map of area north-west of Van Horn, showing distribution of older rocks, XXIV, 144
 geologic structure and producing areas in north, petroleum fields, III, 44-70
 geological structure of Eastland and Stephens counties, IV, 159
 geology of, Volume III, XXI, 1359

(Texas)

geology of Gulf Coast salt domes, PROB, 629
 geology of Larremore area, Caldwell County, XIV, 917
 geology of San Marcos quadrangle, XI, 825
 geology of Stonewall County, XXI, 466
 geology of Wasson field, Yoakum and Gaines counties XXVII, 479
 geology, Permian, X, 144
 geology, subsurface, of oil districts of north central, III, 34-38
 geology and geophysics showing cap rock and salt overhang of High Island dome, Galveston County, GC, 909; XX, 560, 818
 geology and occurrence of natural gas in Amarillo district, GAS, 385; XVII, 877
 geophysical history of South Houston salt dome and oil field, Harris County, XXIX, 210
 geophysics in northeast, GAS, 664
 Gideon well No. 3, Luling field, Caldwell County, XVI, 206
 Glass Mountains, X, 877
 Glenrose limestone, X, 770
 Goldsmith field, Ector County, XXIII, 1525
 Goose Creek oil field, Harris County, GAS, 729; SD, 546; STRAT, 881; IX, 286
 Government Wells oil field, Duval County, GC, 631; STRAT, 881; XIX, 1131
 Grand Saline dome, SD, 225; X, 17-23
 Grapeland gas field, Houston County, XXI, 1066; XXIV, 1066
 gray lime, X, 462
 Greta oil field, Refugio County, GC, 648; STRAT, 887; XIX, 544
 Greta zone in, XXIII, 867
 ground water and relation of geology to its occurrence in Houston district, XXVII, 1081
 Gulf Coast of, correlation of surface and subsurface formations in two typical sections of, XXIII, 1603
 Gulf Coast oil fields, V, 335
 Gulf Coast salt-dome area, GAS, 683
 Hankamer dome, GAS, 729
 Hardin dome, Liberty County, XX, 1122
 Hawkins field, Wood County, XXV, 898
 Haynesville dome, XII, 540
 heavily sculptured ammonites with quadrate whorl sections most common types found in, XXIV, 1189
 helium—origin and concentration in Amarillo fold, XIII, 799
 helium-bearing natural gas in, GAS, 1053-1055, 1125
 Henderson pool, discovery, Clay County, XXIV, 1495
 Hendrick field, Winkler County, XIV, 923
 Henne-Winch-Farris field, STR I, 402
 High Island dome, Galveston County, GAS, 710; XVI, 701
 highest structural point in, XXVIII, 562
 highest Taylor chalk in Jacksonville Embayment, XIV, 322
 Hilbig oil field, Bastrop County, STRAT, 881; XIX, 1023
 Hillje area, Wharton County, XXIV, 1086

(Texas)

historical progress in geology, I, 27
 Hitchcock field, Galveston County, showing stratigraphic accumulation and structure, STRAT, 641
 Hockley salt dome, Harris County, GC, 136; SD, 570, IX, 1031; XV, 465
 Hoffman field, Duval County, STRAT, 881; XXIV, 2126
 Hoskins Mound salt dome, Brazoria County, XX, 155; GC, 833
 Hull salt-dome field, GAS, 705
 Hull-Silk oil field, Archer County, STRAT, 661
 Humble deep test, Apache Mountains, Culberson County, XXIX, 280
 Humble dome, GAS, 705
 Humble oil field, I, 60
 Hurricane lentil in Leon and Houston counties, XXIV, 1666-1667
 igneous rocks, V, 514
 important areas under exploration in 1936, XXI, 1062
 index map of pools, STR I, 431
 Insoluble Residue Study Group, Midland, XXV, 318
 interior salt domes of, SD, 29, 38, 209, 253; X, 1
 interpretation of grain of, XVI, 486
 Ivan pool, Stephens County, STR II, 478
 Jackson foraminifera, X, 154
 Jackson formation in, GC, 471; IX, 111, 521, 1050; XVII, 1294
 Jackson formation, Refugio field, XXII, 1194
 Jackson group in, MSC, 179
 Jackson group of formations in, with notes on Frio and Vicksburg, GC, 470; XVII, 1293
 Jennings gas field, STR I, 406
 Joaquin field, Shelby County, XXIV, 1066
 Judkins field, GAS, 456
 K. M. A. field, STRAT, 881
 Keechi dome, SD, 243; X, 35
 Killam-Oilton field, Webb County, XXII, 754
 Kincaid formation, name proposed for lower Midway of, XVII, 744
 Kittrell field, XXI, 1086
 La Blanca structure, Hidalgo County, XXI, 947
 La Rosa field, Refugio County, XXV, 300
 La Rue dome, XII, 537
 La Sal Vieja pool in Willacy County, XXI, 1045
 Landreth pool, STR I, 299
 Laredo district, STRAT, 881; STR I, 389
 Lissie, Reynosa, and Upland Terrace deposits of Coastal Plain of, XVII, 453
 Little Saline, SD, 256; X, 48
 Livingston field, GAS, 727
 Long Lake field, Anderson, Freestone, and Leon counties, XXIV, 1066
 Lopez oil field, Webb and Duval counties, STRAT, 680
 Lost Lake salt dome, GAS, 717; XI, 633
 Louisiana, and Arkansas, comparisons of Cretaceous crudes of, XXV, 575-577
 Louisiana, Arkansas, and Oklahoma, map showing relationship of coastal and interior salt domes to

(Texas)

Sabine and Monroe uplifts, SD, 210; X, 2
 Louisiana, Mississippi, and Alabama, correlation chart for lower Claiborne, Wilcox, and Midway groups of, XXIX, 47
 Lower Cretaceous in, SD, 215, X, 7
 Lower Cretaceous in Mexia fault zone, STR I, 332
 Lower Ordovician (Ellenburger) in Sand Hills area, XXIV, 119
 Luby field, Nueces County, XXII, 755
 Luling oil field, Caldwell and Guadalupe counties, STR I, 256; VIII, 775; IX, 632; XI, 848
 Lytton Springs field, STRAT, 882; X, 953; XI, 849
 magnetic vectors in, XVI, 1186
 magnetism and geology of Yoast field, Bastrop County, XIV, 1191
 magnetometer survey of Little Fry Pan area, Uvalde and Kinney counties, XIV, 509
 magnetometer surveys in La Salle and McMullen counties, XIV, 1187
 Magnolia City field, Jim Wells County, STRAT, 882, XXIII, 1238
 Malone formation in Malone Mountains, section, XXVII, 1492
 Mankins pool, Archer County, XXIV, 1049
 Manvel dome, GAS, 729
 map of South Houston field, Harris County, XXIX, 211
 map of subsurface geology of Driscoll Ranch, Duval County, GC, 625; XVII, 821
 map showing areas of maximum deposition during pre-Pennsylvanian and Pennsylvanian time, XXIX, 1342
 map showing datum planes for regional subsurface contours of Gulf Coast area east of Rio Grande, XXIII, 1406
 map showing location of Refugio, Fox, Greta, and O'Conner productive areas in Refugio County, XXII, 1186
 map showing outcrop of Miocene strata in Gulf Coastal Plain, XXVIII, 980
 map showing outcrop localities of Grayson-Woodbine contact in Grayson and Cooke counties, XXIX, 180
 Marble Falls limestone, X, 462
 Marble Falls production in South Bend, XII, 97
 marine Oligocene in, XXIII, 1605
 marine zone of middle Oligocene in Saxet field, XXIV, 1815
 Markham dome, GAS, 703
 Marshall Ford Dam, XXVI, 1812
 Martha field, Liberty County, XXIV, 1084
 McCulloch County, XXIV, 83
 McFaddin-O'Conner, Greta, Fox, Refugio, White Point, and Saxet fields, GC, 664
 Mengale field, Wood County, XXIX, 1779
 Mexia, faulting and petroleum accumulation at, VII, 226
 Mexia, hydraulic accumulation of oil in, VII, 219
 Mexia and Tehuacana fault zones, STR I, 304

(Texas)

- microscopic examination of well samples in, XV, 733
 microscopic study of Texon zone, Big Lake field, STR II, 524
 Middle and Lower Ordovician in, XXI, 1019
 Middle Oligocene in, XXVIII, 1355
 middle Rio Grande, Upper Cretaceous in, XXII, 1631
 Midway formation in, X, 27, 39, 45, 50, 61, 956
 Minerva oil field, Milam County, VIII, 632
 Miocene in, STRAT, 644, 728; IX, 21, 85, 97, XXII, 739, 1194, XXIII, 1640; XXVII, 732
 Miocene in Amelia field, XXIII, 1643
 Miocene in Laredo district, STR I, 391
 Miocene in West Columbia field, STR II, 458, 466
 Miocene in West Ranch field, XXVIII, 201
 Miocene, Pliocene, and Pleistocene formations in Rio Grande region, Starr and Hidalgo counties, XXI, 491
 Miocene sand productive in, XXIII, 883
 Mississippian in, STRAT, 541; XXIII, 842; XXV, 1065, 1656, XXVI, 205, 212; XXVII, 776; XXIX, 723
 Mississippian in Central Basin platform in western Andrews County, XXIV, 21
 Mississippian in Franklin Mountains, XXIV, 165
 Mississippian in Llano uplift, XXV, 1647
 Mount Selman formation in, X, 51
 Mount Sylvan dome, Smith County, GC, 1041; XII, 540
 Muralla field, Duval County, XXIII, 1237
 Mykawa field, GAS, 727
 Nacatoch zone in northeast, GAS, 666
 natural gas in Bend Arch district, GAS, 609
 natural history of Gulf Coast crude oil, PROB, 109
 Navarro Crossing field, Houston County, XXII, 1600; XXIV, 1066
 Navarro formation, X, 39, 41, 50, 53, 61, 769
 new development in Orange field, Orange County, XXIII, 602
 new formation name for uppermost beds of Permian of, XXII, 925
 new Hardin field, Liberty County, XIX, 1389
 New Hope field, Franklin County, XXIX, 836
 new pay at Rock Crossing, Wilbarger County, XXI, 525
 Nigger Creek field, STR I, 323, 367, 409
 Nigger Creek pool, Limestone County, X, 997
 nitrogen in, GAS, 1054, 1055
 Nocona field, GAS, 1054
 Noodle Creek pool, Jones County, STRAT, 698
 north, STRAT, 541, 551, 669
 north, bearing of foraminifera and ostracoda on Lower Cretaceous Fredericksburg-Washita boundary of, XXVII, 1060

(Texas)

- north, petroleum fields, geologic structures and producing areas in, III, 44
 north, references on foraminifera and ostracoda in, XXVII, 1080
 north, stratigraphic section, STR I, 428
 north, (Wichita Falls) district, oil production in, XXI, 1025
 north, and Oklahoma, comparison of convergence of Pennsylvanian of, XI, 675
 north, and Oklahoma, correlation of Pennsylvanian and top of Mississippian in, XI, 658
 north and west-central, counties productive in, XXIV, 1056-1059
 north and west-central, developments in 1939, XXIV, 1031, 1044
 in 1940, XXV, 1064
 in 1941, XXVI, 1040
 in 1942, XXVII, 771
 in 1943, XXVIII, 834
 in 1944, XXIX, 757
 north and west-central, exploration methods in, XXIV, 1047
 north and west-central, new pools, extensions, and new producing formations or zones discovered in 1943, XXVIII, 838
 north and west-central, oil production in barrels, XXV, 1079
 north and west-central, Pennsylvanian in, XXIV, 1044
 north and west-central, Permian in, XXIV, 1044; XXVIII, 837
 north and west-central, wells drilled in 1941, XXVI, 1049
 North Caddo pool, in Stephens County, STR II, 478
 North Cheek and Cheek areas, XXII, 740
 North Cowden field, Ector County, XXV, 593
 north Cowden field, Ector County, contoured on top of Rustler formation, XXV, 602
 North Cowden field, Ector County, contoured on top of Yates sand, XXV, 604
 North Cowden field, Ector County, contoured on "top lime" horizon, XXV, 606
 North Currie field, STR I, 312
 North Dayton, GAS, 709
 North Sweden field, Duval County, XXII, 754
 North Texas fields, STRAT, 882
 north-central, STRAT, 545, 786
 north-central, base of Permian drawn at Cisco-Wichita boundary in, XXIV, 305
 north-central, development in 1918, III, 163
 in 1938, map, XXIII, 846-847
 in 1940, XXV, 1074
 north-central, earth temperatures of, XVI, 413
 north-central, Fredericksburg group of Lower Cretaceous with special reference to, XIX, 1508
 north-central, geology of, XXIV, 65
 north-central, important wildcat tests, XXI, 1026
 north-central, lithologic subsurface correlation in the "Bend series" of, abstract, V, 99
 north-central, logs of key wells in, showing sequence of Lower Ordo-

(Texas)

- vician and Upper Cambrian limestones and dolomites, XXIX, Plate 2, preceding 413
 north-central, Lower Ordovician and Upper Cambrian subsurface subdivisions in, XXIX, 413
 north-central, map, XXIX, 418
 north-central, map showing Pennsylvanian-Permian contact, STR I, 423
 north-central, oil-field waters of, XVI, 409
 north-central, Pennsylvanian in, XXIV, 81
 north-central, Pennsylvanian and Permian stratigraphy in, XXIV, 74
 north-central, Pennsylvanian-Permian boundary in, XXIV, 306, 315
 north-central, Permian in, XXIV, 94
 north-central, pre-Cambrian in, XXIV, 99
 north-central, preliminary paper on stratigraphy of Pennsylvanian formations of, III, 132
 north-central, pre-Mississippian in, XXIV, 99
 north-central, pre-Ordovician in, XXIV, 99
 north-central, pre-Pennsylvanian stratigraphy in, XXIV, 67
 north-central, shallow salt-type structure in Permian of, XVI, 577
 north-central, stratigraphic classification table of Paleozoic strata of, XXIV, 66
 north-central, subsurface geology of oil districts of, III, 34
 north-central, subsurface stratigraphy of, XXIX, 417
 north central, underground position of Ellenburger formation in, IV, 283
 north-central, wells completed in, XXIV, 1060
 north-central, wells drilled in 1938, XXIII, 858
 north-central, and Panhandle, developments in, 1936-1937, XXI, 1015
 north-central, and southern Oklahoma, oil and gas fields of, XXI, 1020
 north-central, and southern Oklahoma, sections in, XXI, 1018
 north-central and west-central, developments in 1938, XXIII, 844
 north-central, and western Texas regions, Carboniferous-Permian boundary in, XXIV, 304
 north-central district, oil production in, XXIII, 859
 northeast, PROB, 331
 northeast, Balcones and Mexia faulting in, GAS, 661
 northeast, embayment, GAS, 661, 663, 665, 668
 northeast, geology, GAS, 652, 653, 661
 northeast, Glen Rose gas production in, XIV, 1477
 northeast, Long Lake and Cayuga fields extended during 1936, XXI, 1067
 northeast, Lower Cretaceous in, XXI, 1066
 northeast, Midway limestone of, VI, 323
 northeast, oil and gas fields in, XXI, 1064

(Texas)

- northeast, paleogeology of, XVII, 1129
 northeast, revision of stratigraphy of part of Cretaceous in Tyler basin, XXIX, 170
 northeast, Shelbyville and Carthage, gas-distillate discoveries in, XXI, 1066
 northeastern, discoveries and developments in, in 1928, XIII, 611
 northeastern, map showing positions of wells drilled into or through Jurassic formation, XXVII, 1412
 northeastern, salt domes of, review, VI, 58
 northeastern, southern Arkansas, and northern Louisiana, subsurface pre-Upper Cretaceous stratigraphy of, XXVIII, 578
 northeastern, and southwestern Arkansas, geologic map of, IX, opp. 1158
 northern, Kansas and Oklahoma, correlation of Permian of, X, 144
 northern, southwestern Arkansas, and southeastern Oklahoma, study of Trinity group in, XII, 1069
 notes on an occurrence of galena at Pierce Junction salt dome, Harris County, XVII, 438
 Oakwood dome, XII, 537
 occurrence of siderite in cap rock at Carlos dome, Grimes County, XVIII, 543
 occurrence of strata of Bend age in Sierra Diablo, Culberson County, XVI, 484
 occurrence of sulphur waters in Gulf Coast, and their significance in locating new domes, IX, 35
 occurrence and accumulation of oil in Laredo district, XXI, 1422
 O'Hern field, Duval and Webb counties, STRAT, 722
 oil at Luling, VII, 182
 oil and gas at Big Hill dome, IX, 725
 oil and gas at Hockley dome, IX, 1052
 oil and gas fields, of the Mexia and Tehuacana fault zones, STR I, 304
 oil-bearing formations, III, 82
 oil-field waters of Gulf Coastal Plain, PROB, 891
 oil-field waters of north-central, XVI, 409
 oil fields discovered in, by five-year periods, XXI, 699
 oil fields in, SBP, 408
 oil fields in igneous rocks, STRAT, 882
 oil fields in igneous rocks in Coastal Plain, XVI, 741
 oil fields of Woodbine sand, PROB, 329
 oil-producing horizons, III, 192
 oil reserves, V, 411; VI, 44
 Oklahoma, and Arkansas, Cretaceous in, XXV, 1692
 Oklahoma, and Kansas, bibliography of Permian of, XXI, 1573
 older rocks of Van Horn region, XXIV, 143
 Oligocene in, STRAT, 728; IX, 23, 100, 106, 527; XXI, 1086; XXVII, 732
 Oligocene in Amelia field, XXIII, 1643
 Oligocene in Laredo district, STR I, 391

(Texas)

- Oligocene in Refugio field, XXII, 1194
 Oligocene in West Columbia field, STR II, 459, 461, 466
 Oligocene in West Ranch field, XXVIII, 203
 Oligocene sediments in, thickening toward Gulf, XXI, 1087
 Oligocene stratigraphic column, East White Point field, XXV, 1975
 Oligocene stratigraphy of East White Point field, San Patricio and Nueces counties, XXV, 1967
 Opelika field, Henderson County, XXIV, 1066
 Orange oil field, GAS, 729; GC, 880, XX, 531
 Orchard, GAS, 710
 Ordovician in, STRAT, 541, 790, XXI, 1027; XXIV, 20, 1031; XXVI, 205, 212; XXVII, 763, 776
 Ordovician in Franklin Mountains, XXIV, 162
 Ordovician in Petrolia field, STR II, 546
 Ordovician in Llano uplift, XXV, 1635
 Ordovician age of producing horizon, Big Lake field, Reagan County, XIV, 616
 Ordovician development, Apco structure, Pecos County, XXIV, 478
 Ordovician development, Sand Hills structure, Crane County, XXI, 1575; XXIV, 129
 Ordovician pools in Pecos County, XXIV, 1037
 Ordovician production in Cooke County, XXIV, 1052
 origin of oil and its reservoir in Yates pool, Pecos County, XIV, 705
 overhanging cap rock and salt at Barbers Hill, Chambers County, XVI, 469
 Page field, Schleicher County, XXV, 630
 Palangana and Piedras Pintas domes, IX, 538
 Paleozoic in, GAS, 610
 Paleozoic in Franklin Mountains, XXIV, 160
 Palestine dome, X, 45
 Panhandle of, XXII, 926
 Panhandle field, STRAT, 882
 part of, and Oklahoma, sketch map showing relation of Red River arch to other major structural features, STR II, 551
 Payton pool, Pecos and Ward counties, XXVI, 1632
 Pearsall pool in Frio County, XXI, 1047
 Pecan Gap chalk, IX, 1159; X, 20, 28, 42, 44
 Pecan Gap chalk: new localities in Red River and Bowie counties, XVI, 212
 Pecos Valley field, GAS, 454
 Pennsylvanian crudes of, XXV, 570
 Pennsylvanian in, GAS, 610; STRAT, 541, 551, 665, 762, 781; X, 457, 461; XXIII, 845, 1697; XXV, 1065; XXVI, 204, 207; XXVII, 776; XXIX, 723
 Pennsylvanian in Archer County fields, STR I, 424
 Pennsylvanian in Big Lake field, STR II, 510, 511

(Texas)

- Pennsylvanian in Bowers field, XXVII, 25
 Pennsylvanian in Chinati Mountains, XXIV, 182
 Pennsylvanian in Franklin Mountains, XXIV, 165
 Pennsylvanian in Llano uplift, XXV, 1660
 Pennsylvanian in Petrolia field, STR II, 545
 Pennsylvanian in Smith-Ellis field, STR II, 559
 Pennsylvanian in Stephens County, STR II, 471
 Pennsylvanian in Wilbarger County, STR I, 299
 Pennsylvanian rocks in Wichita region, STR II, 545, 546
 Percilla field, Houston County, XXIV, 1066
 Permian in, STRAT, 665, 702, 752, 760; X, 464; XXII, 925; XXIII, 845, 1697, XXV, 1068
 Permian in Big Lake field, STR II, 506, 508, 512
 Permian in Chinati Mountains, XXIV, 182
 Permian in Franklin Mountains, XXIV, 171
 Permian in Goldsmith field, XXIII, 1527
 Permian in North Cowden field, XXV, 600
 Permian in Petrolia field, STR II, 544
 Permian in Sand Hills area, XXIV, 126, 131
 Permian in Wasson field, XXV, 1880; XXVII, 488
 Permian in Westbrook field, STR I, 282, 285
 Permian in Yates area, XXIV, 135
 Permian in Yates field, STR II, 487
 Permian ledge-makers in Concho County, XVIII, 1577
 Permian limestone and shales, sources of oil in Westbrook field, STR I, 289
 Permian Word formation: its faunal and stratigraphic correlates, XXIX, 1766
 Permo-Pennsylvanian crudes of, XXV, 569
 petroleum engineering in the Burnett field, review, VI, 260
 Pickton field, Hopkins County, XXIX, 1777
 Piedras Pintas salt dome, IX, 553
 Pierce Junction, GAS, 700
 Pittsburgh field, Camp County, XXIV, 2032
 Placedo oil field, Victoria County, XIX, 1693
 Pledger field, GAS, 726
 Pleistocene in, STRAT, 643; IX, 19; XXII, 1194
 Pleistocene in Amelia field, XXIII, 1641
 Pleistocene in Laredo district, STR I, 391
 Pleistocene in West Columbia field, STR II, 454, 458
 Pliocene in, STRAT, 643, 728; IX, 21; XXII, 1194
 Pliocene in Amelia field, XXIII, 1641
 Port Neches dome, GAS, 730
 possible Silurian and Devonian strata in Van Horn region, XV, 95
 Powell field, STR I, 317
 pre-Cambrian in Franklin Mountains, XXIV, 160

(Texas)

- pre-Cambrian schists in Luling field, STR I, 274
- pre-Cretaceous in, XV, 806
- pre-Cretaceous topography of western Edwards Plateau, XXVI, 380
- prediction of overhang at Barbers Hill, Chambers County: study in quantitative calculations from torsion-balance data, XIX, 25
- pre-Ordovician in Van Horn region, XXIV, 143
- pre-Pennsylvanian stratigraphy of Big Lake field, Reagan County, XIV, 798
- pre-Permian wildcats in, XXVII, 765
- problems of new production in, XX, 27
- producing horizons at Mexia, STR I, 307
- producing zone in Litchfield, Ragle, and Carey pools, Archer and Young counties, STR I, 433
- production in. (See Production)
- production in Pecos, Crockett, Upton, and Crane counties, 1940, XXV, 1049
- production in Rogers pool, Montague County, XXIV, 1050
- production curve for Kynard Lease, Westbrook field, STR I, 290
- production curves for Luling field, STR I, 281
- production data for oil and gas pools in the Mexia fault zone, STR I, 357
- production data for pay sands below Woodbine formation in oil and gas fields of Mexia and Teahuacana fault zones, STR I, 367
- production data for pay sands within Woodbine formation, Mexia field, STR I, 361
- production decline curve, South Vernon field, STR I, 302
- production rate for state, XXII, 639
- profile from eastern Llano County, southeastward along Colorado River to Gulf of Mexico, showing terrace deposits, XXIX, 1698
- prospective producing areas, III, 82
- Raccoon Bend oil field, Austin County, GAS, 718-724; GC, 676, XVII, 1459
- Randado field, STR I, 403
- Ranger field, STRAT, 882
- Ranger sand, Eastland County, XI, 635
- Recent in, STRAT, 752; IX, 19
- recent deep test in Moore County, XXIX, 227
- recent movements on a fault of Balcones system, McLennan County, XVII, 439
- recent shoreline process, Brazoria County, XXIV, 731
- redbeds of Collingsworth County, XXI, 450
- references on Balcones, Luling, and Mexia fault zones in, XXIX, 1737
- references on Oakville, Cuero, and Goliad formations in, XXIX, 1732
- Refugio oil and gas field, Refugio County, STRAT, 883, XXII, 1184
- regional surface geology, Duval County, Texas, map, GC, 621; XVII, 817
- Reiser gas field, STR I, 406
- relation of accumulation of oil to structure in Petrolia field, STR II, 542

(Texas)

- relation of accumulation of oil to structure in Stephens County, STR II, 470
- relation of accumulation of oil to structure in Strawn sand in Stephens County, STR II, 476
- relation of accumulation of oil to structure in West Columbia field, STR II, 466
- relation of foreign faunas to Midway fauna of, XV, 149
- relation of initial production to ultimate production of wells completed in Smithwick (Gray) limestone, Breckenridge field, Stephens County, XXV, 1589
- relation of oil accumulation to structure in fields of Archer County, STR I, 421
- relation of phenomenal rise of water levels to a defective gas well, Harris County, XXIX, 253
- relation of production to structure in Wilbarger county, STR I, 293
- relation of Reynosa escarpment to oil and gas fields of Webb and Zapata counties, VII, 532
- restriction of name "Carlos," Grimes County, XXIII, 1091
- reviews, VI, 262, 263, 385, 387
- Richland field, STR I, 319
- Rodessa oil and gas field, Cass and Marion counties, XXI, 1068, XXIV, 1067
- Rogers pool, Montague County, XXIV, 1836
- Rosenberg field, XXIV, 1084
- Salmon prospect, XII, 535
- salt domes in, IX, 536, 1230; X, 1, 14; XXVII, 1234
- Salt Flat oil field, Caldwell County, XIV, 1401
- salt structures, IX, 832
- Sand Belt area of Ward and Winkler counties, and Lea County, New Mexico, STRAT, 750
- Sand Flat field, Smith County, XXVIII, 1647
- Sand Hills area, Crane County, XXIV, 119
- sandstone production in, 1936, XXI, 1037
- Saratoga dome, GAS, 706
- Saratoga oil field, Hardin County, SD, 501; IX, 263
- Saxet oil and gas field, Nueces County, XXIV, 1805
- Schott-Aviator field, STR I, 406
- section of Middle Ordovician of Sand Hills area, XXIV, 124
- sections of lower Landrum member exposed in Leon and Houston counties, XXIV, 1672-1675
- Sejita structure, Duval County, XXIV, 482
- Seymour pool, Baylor County, STRAT, 760, XXIV, 1053
- shallow-dome fields in Gulf Coast salt-dome area, GAS, 700
- shallow pools in Corsicana-Powell district, STR I, 360
- siderite in cap rock at Carlos dome, Grimes County, GC, 133; XVIII, 543
- Sigler pool, STR I, 299
- Silsbee field, Hardin County, XXI, 1051, 1055
- Silurian in, XXI, 1019

(Texas)

- Silurian in Franklin Mountains, XXIV, 162
- Silurian in Sand Hills area, XXIV, 126
- Silurian-Devonian in, XXIV, 21
- Silurian graptolite zone in Crane County, XXVI, 857
- Silurian production, Shipley field, Ward County, XXV, 425
- Smackover formation, section, XXVII, 1443
- Smith-Ellis field, STRAT, 883, STR II, 556
- so-called Catahoula formation in, XVII, 526
- some paleontological evidence on age of oil-bearing horizon at Burkburnett, V, 154
- some recent notes on Thrall oil field, Williamson County, V, 657
- Sour Lake dome, GAS, 707
- source beds in, PROB, 59
- south, STRAT, 730
- south, activities in 1937-1938, XXII, 750
- south, counties productive in, XXIV, 1071
- south, Cretaceous in, XXIII, 860
- south, Cretaceous fault line trend in, XXVII, 743
- south, descriptions of oil fields and salt domes, GC, 620
- south, developments in 1936-1937, XXI, 1042
- in 1938-1939, XIII, 860
- in 1940, XXV, 1037
- in 1941, XXVI, 1000
- in 1942, XXVII, 739
- in 1943, XXVIII, 858
- in 1944, XXIX, 777
- south, developments and status of oil reserves in, 1939, XXIV, 1069
- south, discoveries in 1939, XXIV, 1071
- south, Eocene in, XXIII, 860
- south, exploration in 1942, XXVII, 739
- south, fields, gravity of oil in, XXIII, 865-868
- south, fields discovered in 1941, XXVI, 1001
- south, fields discovered in 1942, XXVII, 742
- south, fields, reserves in, XXVII, 745
- south, Frio clay, discussion, XVI, 101, 259
- south, Frio-Vicksburg trend in, XXVII, 744
- south, gas-recycling operations in, XXVII, 745
- south, geological distribution of reserves in, XXIV, 1077
- south, geology of, GC, 551; XVII, 489
- south, heaviest production in Jackson trend and Coastal zone in 1936, XXI, 1047
- south, important oil-producing counties in, XXIII, 860
- south, Lissie formation and Beaumont clay in, discussion, XVIII, 948
- south, Lower Eocene in, XXIII, 865
- south, map of, showing pools developed prior to 1938 and pools discovered during 1938 and part of 1939, XXIII, 862-863
- south, map of oil and gas fields of, XXIV, 1808

- (Texas)
 south, Miocene in, XXIII, 860; XXVI, 1005
 south, new sands in older fields in, XXVII, 745
 south, oil and gas fields, XXIV, 1070; XXV, 1038; XXVI, 1002; XXVII, 740
 south, oil and gas fields, map, XXIX, 778
 south, Oligocene in, XXIII, 860; XXVI, 1005
 south, Ordovician in, XXIII, 860
 south, Pennsylvanian in, XXIII, 860
 south, production in 1940, XXV, 1041
 south, production in 1941, XXVI, 1005
 south, production in 1942, XXVII, 746
 south, references on subsurface formations of, XXIX, 1468
 south, Reynosa problem of, and origin of caliche, XVII, 488, 1281, 1534; discussion, XVII, 1277
 south, rôle of diastrophism in topography of Corpus Christi area, GC, 205; XVII, 907, 1287
 south, salt domes of, SD, 718
 south, surface fracture system of, GC, 251; XVII, 1194
 south, Tertiary in, XXIII, 861
 south, upper Oligocene and lower Miocene, XXVII, 745
 south, Wilcox trend in, XXVII, 743
 south, Yegua-Jackson trend in, XXVII, 744
 south, and northeast Mexico, map showing principal structural features, XXI, 1430-1431
 South Bend field, V, 503
 South Burnell field, Bee County, XXII, 755
 South China area, Jefferson County, XXIV, 1087
 South Cotton Lake field, Chambers County, XXV, 1898
 South Dayton salt dome, Liberty County, SD, 558; IX, 655
 South Groesbeck field, Limestone County, XXIV, 1067
 South Liberty dome, GAS, 710
 South Tyler field, Smith County, XXVIII, 1646
 South Vernon field, STR I, 294, 299
 south Yeager clay, XV, 470; discussion, XV, 967
 south-central Tertiary in, GC, 531
 southeast, formations in, GC, 437; XIX, 656
 southeast, stratigraphic section, GC, 718; XVII, 1372
 southeast, surface formations in, GC, 435; XIX, 654
 southeast, and Louisiana, Gulf Coast of, review of developments in 1938, XXIII, 871
 southeast, and south Louisiana, coastal, post-Fleming surface formations of, GC, 432
 southeastern, brackish and non-marine Miocene in, XXVIII, 977
 southern, and northern Mexico, Cretaceous and Tertiary of, discussion, XII, 949
 southern, and northern Mexico, map, XXIX, 1422
 south-north cross section from Pecos County through Ector County, to Roosevelt County, New Mexico, (Texas)
 XXIV, 15
 south-north cross section from Pecos County through Winkler County, to Roosevelt County, New Mexico, XXIV, 29
 southward extension of Bonham clay, XVI, 205
 southwest, formations in, GC, 437; XIX, 656
 southwest, index map of, GC, 632; XIX, 1132
 southwest, regional structure of Cretaceous on Edwards Plateau of, XVI, 691, 944
 southwest, uplift on coastal structures, GAS, 692, 693
 southwestern, geology, VI, 475
 southwestern, and southeastern New Mexico, Permian stratigraphy and structure of parts of, XIII, 957
 Spindletop oil field, Jefferson County, XXI, 475
 Spindletop salt dome and oil field, Jefferson County, GAS, 707; SD, 478; IX, 594
 Spurger field, Tyler County, GAS, 728; XXII, 737, 738
 state geological survey progress, III, 24
 Steen dome, X, 23
 stratigraphic column showing columnar sections in Franklin Mountains, XXIV, 158
 stratigraphic column, East White Point field, XXV, 1974
 stratigraphic column, Refugio field, XXII, 1194
 stratigraphy, GAS, 653, 659; III, 168; VII, 532
 stratigraphy of Eocene between Laredo and Rio Grande City, XXVI, 256
 stratigraphy of Franklin Mountains, XXIV, 160
 stratigraphy of Oakville, Legarto, and Reynosa formations between Nueces and Guadalupe rivers, XVII, 523
 stratigraphy of outcropping Carboniferous and Permian rocks of trans-Pecos, XIII, 907
 stratigraphy of Sand Hills area, XXIV, 119
 stratigraphy and historical geology of Gulf Coastal Plain in vicinity of Harris County, XXIII, 145
 Stratton Ridge salt dome, Brazoria County, SD, 644; IX, 1
 Strawn group, X, 462
 structural conditions, importance in locating pools, STR I, 324
 structural conditions in oil fields of Bexar County, III, 299
 structural development, Yates area, XXIV, 134
 structural features of Brenham salt dome, Washington and Austin counties, GC, 780; XIX, 1330
 structural geology of border province of northeastern Mexico adjacent to Zapata and Starr counties, XX, 403
 structure, III, 176
 structure and stratigraphy of Kelsey anticline, Upshur County, XVII, 656, 1015
 subsurface Cretaceous section of southwest Bexar County, X, 768
 subsurface geology of Sewell-Eddleman area, Young County, XXVI, (Texas)
 204
 subsurface stratigraphy of Clay County, STR II, 545
 Sugarland oil field, Fort Bend County, GAS, 713, 714; GC, 709, XVII, 1362
 Sulphur Bluff field, Hopkins County, XXI, 111, 1065
 summary of faunal studies of Navarro group of, XXV, 637
 summary data, Saxet field, Nueces County, XXIV, 1835
 surface subsidence in Goose Creek oil and gas field, XI, 729
 Talco field, Titus and Franklin counties, XX, 978; XXI, 1063; XXIV, 1067
 Taylor age of San Miguel formation of Maverick County, XV, 793
 Taylor and Navarro formations in east-central, XII, 41
 Taylor formation, X, 28, 39, 41, 45, 61
 Taylor-Link field, GAS, 457
 Tehuacana zone of faulting, STR I, 357
 Tertiary in, STRAT, 605, 728, 752
 Tertiary in Wasson field, XXVII, 485
 tests of oil in Big Lake pool, STR II, 538
 Thompsons field, GAS, 726
 Thrall oil field, STRAT, 883
 to Nebraska, subsurface cross section of Permian from, XXIII, 1694, 1702
 to Oklahoma, subsurface cross section of Permian from, XXIII, 1704
 Todd Ranch discovery, Crockett County, XXIV, 1126
 Tomball field, GAS, 725
 torsion-balance survey of Esperson salt dome, Liberty County, XIV, 1129
 trans-Pecos, date of major diastrophism and other problems of Marathon basin, discussion, XII, 1111
 trans-Pecos, notes on Upper Mississippian rocks in, XVIII, 1537
 trans-Pecos, outline of structural development of, XIX, 221
 Triassic in Goldsmith field, XXIII, 1527
 Triassic in North Cowden field, XXV, 600
 Triassic in Wasson field, XXVII, 487
 Triassic in Westbrook field, STR I, 285
 Triassic and upper Permian redbeds in Yates area, XXIV, 140
 Trinity of, discussion, XIII, 519
 Trinity group in, XXIII, 626
 Trinity sand, X, 771
 Troup dome, XII, 540
 two more Ordovician well-core graptolites, Crane County, XXVI, 1771
 two new salt domes in, X, 1171
 unconformities, VI, 323; VIII, 432, 638; IX, 556; X, 11, 369, 371, 372, 375, 380, 381, 463, 877, 878, 881, 984
 unconformities in Upper Cretaceous series of, XIII, 1323
 unconformity at base of Reynosa formation in Laredo district, STR I, 391
 University of, GAS, 618
 upper, and Louisiana, developments

(Texas)

- in Gulf Coast of, 1943, XXVIII, 853
 Texas, upper, and Louisiana, Gulf Coast of, review of developments in 1939, XXIV, 1079
 in 1940, XXV, 1004
 in 1942, XXVII, 730
 upper coastal, developments in 1941, XXVI, 985
 upper coastal, exploration, XXVII, 732
 Upper Cretaceous in, X, 7; XXV, 637
 Upper Cretaceous in Luling field, STR I, 273
 Upper Cretaceous in Mexia fault zone, STR I, 325
 Upper Cretaceous in San Marcos quadrangle, XI, 831
 Upper Cretaceous chalk in cap rock of McFaddin Beach salt dome, Jefferson County, XXIII, 339
 Upper Ordovician of Sand Hills area, XXIV, 125
 Upper Paleozoic Chinati series, Presidio County, XXII, 924
 upper Paleozoic section of Chinati Mountains, Presidio County, XXIV, 180
 upper Triassic in, XXVII, 622
 Uvalde to Mills counties, log section, XXIV, 102
 Van oil field, Van Zandt County, XIII, 1557, XXI, 810
 variation in Cretaceous crudes, Powell district, XXV, 579
 variation and migration of crude oil at Spindletop, Jefferson County, GC, 309; XIX, 618
 vertical variation of properties of sediments in Big Lake oil field, SBP, 291
 vertical variation of properties of sediments in well in Cherokee County, SBP, 332
 vertical variation of properties of sediments in well in Upshur County, SBP, 333
 Vicksburg sands productive at Thompsons field, Fort Bend County, XXIV, 1089
 Voith field, XXIV, 1052
 Walnut Bend pool, Cooke County, STRAT, 776
 Washburn field, La Salle County, XXVI, 276
 Washita group, X, 49
 Waskom field, Harrison County, XXIV, 1067
 Webb County, STRAT, 725
 well spacing and production interference in West Columbia field, Brazoria County, XXVI, 1441
 wells in, SBP, 408
 West, buried ridges in, XI, 1109
 West, Cretaceous in, V, 5
 West, Cretaceous of, and its oil possibilities, V, 5
 West, developments in Permian of, 1940, XXV, 1047
 West, formations, correlation chart of, XXIV, 1041; XXV, 1060
 West, geologic structure of portion of Glass Mountains, X, 877
 West, high-pressure Yates sand gas problem, east Wason field, Yoakum County, XXV, 1880, 2070
 West, limestone production in, 1936, XXI, 1035
 West, lower Permian in, XXVIII,

(Texas)

- 815
 West, McKee and Waddell sands, Simpson group, XXVI, 279
 West, Mesozoic in, PTNM, 615, XXVI, 615
 West, Mississippian in, PTNM, 616, XXVI, 616
 West, Ordovician in, XXV, 1055
 West, paleogeography of parts of border province of Mexico adjacent to, XX, 417
 west, Paleozoic in, FOP, 98, XXV, 1530
 West, Pennsylvanian in, PTNM, 616, XXV, 1055, XXVI, 616
 west, Pennsylvanian movements creating anticlines in, FOP, 97; XXV, 1529
 west, Permian in, FOP, 95; PTNM, 616, XXV, 1527, XXVI, 616
 West, Permian basin, dolomite porosity in Devonian of, XXVIII, 1043
 West, Permian crudes of, XXV, 568
 West, Permian outcrops of, XIII, 945
 West, pre-Carboniferous stratigraphy of Marathon uplift, XV, 1059
 West, pre-Permian exploration in, XXVIII, 817
 West, producing fields in, XXVIII, 807, XXIX, 728
 West, region, correlation chart of Permian in, insert, PTNM, prec. 535; XXVI, prec. 535
 West, relation of water analyses to structure and porosity, PROB, 869
 West, Sand Belt pools of, XXVII, 898
 West, Silurian in, XXVIII, 817
 West, Silurian production in, XXV, 1055
 West, Simpson production in, XXV, 1056
 West, stratigraphic position of the Big Lime of, XI, 721
 West, subsurface correlation methods in Permian basin, XIII, 171
 West, subsurface study of Ellenburger formation, XXVI, 1398
 West, and eastern New Mexico, regional structure of, map, XXV, 76
 West, and New Mexico, Permian in, XXV, 73
 West, and north-central, major subdivisions of Pennsylvanian and Permian in, XXIV, 80
 West, and southeast New Mexico, correlation chart, Permian and post-Permian rocks, XXVI, 1013
 West, and southeast New Mexico, gasoline plants in, GAS, 419
 West, and southeast New Mexico, map showing areal geology, structure, and oil and gas fields, insert, PTNM, prec. 535; XXVI, prec. 535
 West, and southeast New Mexico, map, showing fields and wildcats, XXV, 1058
 West, and southeast New Mexico, natural gas in, GAS, 417
 West, and southeast New Mexico, transverse section of Permian basin, XIV, 969
 Texas, West, and southeastern New Mexico, developments in 1936, XXI, 1034
 in 1938, XXIII, 836
 in 1939, XXIV, 1033

(Texas)

- in 1940, XXV, 1044
 in 1941, XXVI, 1007
 in 1942, XXVII, 747
 in 1943, XXVIII, 806
 in 1944, XXIX, 725
 Texas, West, and southeastern New Mexico, Permian of, PTNM, 535; XXVI, 535
 West, and southeastern New Mexico, Tansill formation, XXV, 1713
 West, and southeastern New Mexico, Upper Permian Ochoa series of Delaware basin, XXVIII, 1596
 West Columbia field, Brazoria County, V, 212
 West Columbia salt dome and oil field, GAS, 709, STR II, 451
 West Navarro Crossing oil and gas field, Leon County, XXIV, 1064
 West Ranch oil field, Jackson County, XXVIII, 197
 Westbrook field, Mitchell County, STRAT, 883, STR I, 282, XI, 467
 west-central, (Cisco) district, oil production in, XXI, 1025
 west-central, wells completed in, XXIV, 1060
 west-central, wells drilled in 1938, XXIII, 858
 west-central district, oil production in, XXIII, 859
 western, Colorado Plateau, and southern Nevada, correlation of stratigraphic sections in, XX, 1200
 western, Cretaceous in, V, 5
 western, Permian ammonite zones of, XXII, 1016
 western, Permian stratigraphy of southeastern New Mexico and adjacent parts of, XIII, 927
 western, and northern Mexico, Upper Jurassic in, XXVII, 1415
 western, and northern Mexico, Upper Jurassic redbeds in, XXVII, 1475
 western counties, developments in 1940, XXV, 1077
 Wheat pool, STRAT, 883; XX, 780
 Whitehouse dome, XII, 537
 Wilbarger County, XXIV, 1052
 Wilcox Eocene production at Segno field, Polk County, and Cleveland field, Liberty County, XXII, 1274
 Wilcox formation, X, 20, 26, 41, 45, 50, 53, 56, 956
 Wilcox sand productive at Ace field, Polk County, XXIV, 1082, 1089
 Willow Slough, XXII, 740
 Winkler (Hendrick) field, GAS, 451
 Witherspoon-McKie pool, STR I, 318
 Woodbine formation, map showing outcrop in northeast, GAS, 662
 Woodbine formation prolific in northeast, GAS, 667
 Woodbine sand, X, 41, 49
 Woodbine sand, interpreted as a regressive phenomenon, X, 613
 Word formation of, XXII, 1018
 Wortham pool, STR I, 319
 Yates oil pool, Pecos County, GAS, 449; STR II, 480; XIII, 1509
 Yegua sand productive at Esperson field, Liberty County, XXIV, 1089
 Texas and adjoining states, geologic sections in, XXI, 1083
 Texas and Arkansas, chalk of, IX, 1152
 Cretaceous chalks, XV, 965
 stratigraphy of Upper Cretaceous formations of, XI, 1; discussion, XI, 308

- (Texas)
westward and southwestward increase in slope of pre-Trinity deposits on basement and dip on beds, XXVII, 1237
- Texas and Louisiana, areal geology of Midway and Wilcox sediments of Sabine uplift, XXIX, 48
- coastal, downwind Wilcox (Eocene) of, XXIV, 1891
- coastal, map showing location of Wilcox wells, subsea depths to top of Wilcox and 1,000-foot contour intervals based on this datum, XXIV, 1896
- comparison of interior domes of, SD, 221; X, 13
- deep coastal zone of Oligocene-Miocene production in, XXI, 1056
- distribution of Jurassic fossils of Cotton Valley formation, XXVII, 1470
- extensions to proved fields found in 1937, XXII, 747
- interior salt domes of, SD, 209; X, 1
- mechanics of formation of salt domes with special reference to Gulf Coast salt domes of, GC, 20, XVII, 1025
- Midway-Wilcox surface stratigraphy of Sabine uplift, XXIX, 45
- occurrence of sulphur waters in Gulf Coast of, and their significance in locating new domes, SD, 774; IX, 35
- oil-producing horizons of Gulf Coast in, GC, 1; XVIII, 500
- overhanging salt on domes of, GC, 141; XVII, 1492
- petroleum potentialities of Gulf Coast petroleum province of, XIV, 1379
- producing geologic ages on Gulf Coastal domes, GAS, 694
- productive areas of 1936 in, largely due to geophysical prospecting, XXI, 1056
- Recent littoral foraminifera from, MSC, 13
- résumé of facts and opinions on sedimentation in Gulf Coast region of, XXIX, 1304
- salt-dome cap-rock minerals, XVIII, 212
- salt structures, SD, 40; IX, 831
- secondary salt-dome material of Coastal Plain of, XIV, 1469
- Sparta-Wilcox trend, XXIV, 701
- structural axes indicated by Midway and Wilcox surface sediments, Sabine uplift, XXIX, 49
- subsurface stratigraphy of Coastal Plain of, IX, 79
- tentative foraminiferal zonation of subsurface Claiborne of, GC, 425; XIX, 689
- Texas and Louisiana coast northeast of Colorado River, map, GC, 434
- Texas and Louisiana Gulf Coast, map of, X, 74; XXIV, 2072
- recent developments in, XVII, 558
- Texas and Louisiana Gulf Coast salt-dome structures, relation of geophysics to, GC, 170; XIX, 356
- Texas and Louisiana Gulf Coast sediments, heavy-mineral zones of, XXIV, 2069
- Texas and Louisiana salt-dome cap-rock minerals, GC, 119
- Texas and Louisiana salt-dome cap rocks, aragonite in, XXII, 217
- Texas and New Mexico, Cambro-Ordovician in, XXVII, 911
- Capitan limestone and associated formations of, XIII, 645
- East Lea County high, GAS, 426
- Pennsylvanian in, XXVII, 911
- Permian in, XXIV, 22; XXV, 78; XXVII, 911
- Permian formations of Pecos Valley, XXI, 833
- Permian stratigraphy in, XXI, 859
- Silurian in, XXVII, 911
- Triassic in, XXVII, 911
- upper Permian formation of Delaware basin of, XIX, 262, 561
- Texas and New Mexico Permian, correlation of, XIII, 997
- Texas and Oklahoma, correlation of back-reef formations of Pecos Valley with those of, XXI, 879
- correlation of Pennsylvanian formations of, XIII, 883
- Texas and Pacific Coal and Oil Company, Rahe 1 (well 285), SBP, 255-285, 408
- Texas and Pacific Coal Company, GAS, 678
- Texas and Pacific pay sand in Westbrook field, Texas, STR I, 288
- Texas area, paleontological factors controlling distribution and mode of life of Cretaceous ammonoids in, XXIV, 1164
- Texas Bureau of Economic Geology, GAS, 609; XXIV, 306
- Texas coast, RMS, 450
- Texas Coastal Plain between Brazos River and Rio Grande, Oakville, Cuero, and Goliad formations of, XXIX, 1721
- correlation of Quaternary deposits of, with glacial scale, XXIX, 1716
- fields and wells having heaving shale in, XXIII, 216
- geologic aspects of heaving shale in, XXIII, 212, 607
- heaving shale trends of, XXIII, 214-215
- Miocene in, XXIX, 1721
- Quaternary deposits of, between Brazos River and Rio Grande, XXIX, 1693
- references on Quaternary deposits of, XXIX, 1720
- Texas coastal region, Eocene in, VIII, 441
- Miocene in, VIII, 437
- oil and gas fields of, GC, 666; XVIII, 521
- Oligocene in, VIII, 4440
- Pliocene in, VIII, 437
- Texas Company, The, GAS, 344, 612, 703, 710, 729, 732; GC, 781, 834; SD, 437, 498, 502, 529, 606, 611, 612, 624, 646, 676; SC, x, 120; XIX, 20, 1331; XX, 156, 1536, 1666; XXI, 1061; XXII, 651, 680, 710, 712, 743; XXIII, 884, 892, 906, 1353; XXIV, 1087, 1088, 1113; XXV, 1141, 1344, 1842; XXVI, 989, 1066, 1443; XXVIII, 784, 792, 841; XXIX, 748, 797, 1124, 1597
- studies of surface and subsurface geology in Illinois basin, XXI, 784
- Texas Company pipe line, XXVI, 216
- Texas Company refinery, XXVII, 1083
- Texas core data, XXV, 869
- Texas County, Oklahoma, and Grant, Haskell, Morton, Stevens, and
- (Texas)
Seward counties, Kansas, Hugoton gas field, STRAT, 78; XXIII, 1061
- Texas Cretaceous ammonoids, chart suggesting necto-benthonic habitat and bathymetric distribution of principal types of, XXIV, 1194
- mostly in necto-benthonic habitat, XXIV, 1199
- Texas discoveries in 1940, XXV, 1007
- Texas district, north-central and west-central, oil production in, XXIV, 1061
- northeast, developments in 1936, XXI, 1063
- oil production in north-central and west-central, XXIV, 1061
- Texas embayment, gas fields in northeast, GAS, 651
- Texas Exploration Company, SD, 498, 572, 583, 585, 588, 589, 591, 592, 594, 595, 597, 616, 617, 621, 622, 624, 625, 630
- well log, SD, 633
- Texas fault-line fields, spacing-recovery relationships, XXVIII, 245
- Texas faults, X, 1261
- Texas fields discovered in 1943, XXVIII, 853
- Texas Gas Company, XXII, 1191
- Texas Gulf Coast, Anahuac formation of, XXVIII, 1362
- correlation table for, XXIII, 1631
- geologic section of, from La Grange, Fayette County, to point on coast east of Matagorda, Matagorda County, XXIII, 1610-1614
- geologic section of, from vicinity of Tilden, McMullen County, to Flour Bluff, Nueces County, XXIII, 1622-1626
- geophysical exploration along Eocene belt and in Oligocene trend in, XXVII, 732
- map showing types of normal ground waters, PROB, 892
- Oligocene in, XXIII, 1616
- Tertiary and Quaternary systems of, XXIII, 147
- upper, reserves for, XXVII, 734
- Texas-Gulf Producing Company, GAS, 707
- Texas Gulf Sulphur Company, GAS, 703; SD, 705, 720, 721, 727, 731, 732
- Texas-Louisiana, salt-dome area, SD, 3, 14, 421
- Texas-Louisiana coastal area, developments in 1942, XXVII, 730
- Texas-Louisiana domes, Gulf Coast, maps of, SD, 400, 481; IX, 597; X, 74; XX, 1414
- Texas-Louisiana Gulf Coast geologic section, GC, 889; XX, 540
- Texas-New Mexico Permian basin, stratigraphy, XXIV, 40
- Texas-New Mexico salt basin, subsurface sections, XIII, 1013
- Texas oil and gas since 1543, XXIII, 1860
- Texas Oil and Gas Association, XXII, 1189
- Texas Oil Company, Anaheim 13-1 (well 197), Anderson Springs 1 (well 30), Eureka 2 (well 1), Johnson 2-1 (well 41), Mattern 2-7, 3-1, 3-2A, 3-3 wells (107, 161-163), Patterson 3, 4, 5, 10 (wells 172-175), Stearns 1, 6 (wells 167, 168), Wickman 1 (well 178), SBP,

(Texas)

- 87-167, 403-405
 Pruntt 1 (well 383), SBP, 292-335, 409
 Texas Oil Company wells, outcrop section A, SBP, 167-194, 410
 Texas Pacific Coal and Oil Company, GAS, 636
 Texas Panhandle, GAS, 385-412; XXV, 1687, 1690
 anticline, faulting, X, 741
 developments in 1944, XXIX, 721
 drilling in, 1939, XXIV, 1030
 gas a big factor in, XII, 165
 helium-bearing natural gas in, GAS, 1053
 important dry holes in, XXIX, 722
 oil and gas in, VII, 237
 oil and gas fields of, X, 733; XXI, 1032
 Ordovician in, XXIII, 997
 Pennsylvanian in, XXIII, 997, 998, 1002
 Permian in, XXIII, 997, 1002
 Pre-Cambrian in, XXIII, 997
 producing district, PROB, 240, 339, 372, 574, 777, 778
 production in 1944, XXIX, 721
 production and drilling statistics, XXI, 1031
 productive section, XXI, 1027
 section showing effect of unconformity on oil accumulation in, XXIV, 2028
 shallow oil prospect map of, XXIII, 1042
 Triassic in, XXIII, 1002
 wildcat tests in, XXI, 1031
 Texas Panhandle and Hugoton fields, present limits of gas production of, XXIII, 1055
 Texas Panhandle field, bibliography on geology of, XXIII, 1053
 lithologic character of B, C, D, and E zones of pie-Redbed series in, XXIII, 997
 Texas Panhandle gas fields, correlations of, with Hugoton gas field, Kansas, XXIII, 1065
 Texas Panhandle oil and gas field, geology of, XIX, 1089; XXIII, 983
 subsurface structural map, XXIII, 994
 Texas Permian, STR II, 545
 notes on, I, 93
 structural development and oil accumulation in, XIII, 1033
 Texas Permian basin, PROB, 338
 Texas Permian geosyncline, XXVIII, 307
 Texas Pipe Line Company, GC, 663; XIX, 559; XX, 778
 Texas profiles, PROB, 600
 Texas redbeds vertebrates, early history of, review, XX, 832
 Texas salt dome, discovery of potash salts and fossil algae in, SD, 781, IX, 348
 Texas salt domes, GC, 112, SD, 209, 718; XX, 729
 probable Jurassic age of, XXVII, 1234
 typical one described (Columbia), V, 212
 Texas Seaboard Oil Company, GAS, 669
 Texas sedimentary rocks as seen in well samples, characteristics of, V, 373
 Texas sodium sulphate produced from brines of Soda Lake in Ward County, XXV, 160

- Texas Tertiary section, revision of, with special reference to oil-well geology of coast region, VIII, 424
 Texas Triassic, correlations of, XXV, 1690
Texas und Mexico, neue Cephalopoden aus der oberen Kreide vom Rio Grande del Norte, review, XX, 987
 Texas wells (wells 303-304), SBP, 285-349, 408, 409 (See also East Texas, West Texas, Gulf Coast)
 (wells 303-304), relation to oil zones, SBP, 381-392
 Texas wildcat drilling, XXV, 1003
 Texas Wolcamp-Admiral beds, *Aritinskia*, *Paragastroceras*, *Prothalassoceras*, *Agathiceras*, *Marathonites*, and *Vidrioceras* in Russian Sakmarian and in, XXII, 1017
 Texel, RMS, 344
 Texhoma-Gose sand in Archer County fields, Texas, STR I, 426; X, 465
 Texon oil zone in Big Lake field, Texas, STR II, 504, 507, 512, 514, 520-522, 524, 531
 Texon sand in Big Lake field, Texas, STR II, 519
 Texon zone, PROB, 413, 415
 Big Lake pool, Texas, microscopic study of, STR II, 524
 Textbook of geomorphology, XXIII, 1577
 Textbooks on oceanography, RMS, 51
Textularia dibollensis zone, GC, 473, 477; XVII, 1297, 1301, XIX, 691; XXIII, 162, 1394, 1409
 at Clay Creek dome, GC, 772; XX, 83
 contour map of top of, at Clay Creek, dome, GC, 771, XX, 82
 in Edna gas field, XXV, 112
Textularia hockleyensis zone, GC, 473, 480, XVII, 1297, 1304; XXIII, 162, 1394, 1409; XXIV, 482
 of McElroy formation, XXV, 112
Textularia smithvillensis zone, GC, 427; XIX, 691, 695
Textularia warreni beds (Vicksburg in part), Texas Gulf Coast, XXIII, 165
Textularia warreni shale zone of Vicksburg formation at Refugio field, XXII, 1194
Textularia warreni zone, XXII, 1191; XXIII, 1409, XXV, 1920
 in Edna gas field, XXV, 111, 117
 Textulariidae, MSC, 22, 189
 Textulariidae, MSC, 189
 Textural standard for sample log work, XXIX, 1195
 Texture, change in, seaward, on continental shelf, RMS, 223
 characteristic, of sand grains, RMS, 44
 controls of, RMS, 242
 effect on color of ancient sediments, SBP, 76
 effect on relation of nitrogen-reduction ratio to oil shows in Dominguez field, California, SBP, 160
 graph for facilitating calculation of organic content by means of, SBP, 72
 median reduction number related to measured reflectivity with respect to, XXV, 1930
 of basin deposits, RMS, 278, 279
 of beach sands, RMS, 208, 209, 216
 of Bethel sandstone, XXVIII, 92
 of bottom load in streams, RMS, 273

(Texture)

- of California outcrop samples, SBP, 170
 central California samples, SBP, 131
 of grain surfaces, XXVI, 1714
 of oil sands of reservoir strata, PROB, 181
 of oil sands with relation to production of oil, VIII, 716, XII, 1066
 of oil sands, value in correlation, XIII, 732
 of Rocky Mountain outcrop samples, SBP, 244
 of Rocky Mountain samples, SBP, 204
 of samples from Los Angeles Basin, SBP, 101
 Texture of sediments, RMS, 256; SBP, 70-73, 76, 101-110, 131, 132, 156-165, 169-173, 203-205, 212-217, 244, 245, 262, 381-384, 397-402, 412, 413, XXV, 1929
 in Arctic areas, RMS, 227
 in Los Angeles Basin, relation of properties to, SBP, 158
 influence of, on organic content of sediments, SBP, 106-110
 method of determination, SBP, 70-73
 on continental shelf, RMS, 223, 232, 249
 on saddles, RMS, 257
 relation to nitrogen, RMS, 263; SBP, 156-165
 relation to organic content, RMS, 4, 192, 433, 434; SBP, 70-73, 158
 use of, in regional studies, SBP, 80
 Texture, organic content of California samples as corrected for, SBP, 107
 relation to bottom topography of Lake Pontchartrain, XXIII, 15
 relation to depth of water, RMS, 251
 relation to shore line, RMS, 242, 388
 relation to tides, RMS, 136
 relation to waves and currents in Lake Pontchartrain, XXIII, 16
 variation of properties with respect to, in Dominguez field, SBP, 159
 Texture variations seaward on continental shelves, RMS, 227, 253
 Texture units, definition of, SBP, 71
 size relations of, SBP, 71
 Thalassological Institute, Helsingfors, Finland, RMS, 298, 532
 Thalia pool, XXV, 1078
 Thallous formate for heavy mineral separations, RMS, 596, 602
 Thalmann, Hans E., MEX, 90; MSC, 277; XXVII, 940, XXVIII, 1132
 Thames River, RMS, 334
 Thanatocoenosis, XXVI, 1728
 Thanatocoenotic types, diagram illustrating three, XXVI, 1729
 Tharp, B. C., XV, 67
 Thayer, Lewis A., PROB, 39, 450, 451, 452; RMS, 422; SBP, 2; XVII, 1254; XIX, 607; XXVII, 1189
 bacterial genesis of hydrocarbons from fatty acids, XV, 441
 Thayne basin, XXI, 1258
 Thaysen, A. C., XXVII, 1176, 1182, 1187, 1190
 Theis, C. V., XXIV, 1644
 Theis, C. V., and Hudnall, J. S., GAS, 933
 Theis non-equilibrium formula, XXIX, 279
 Theoretical basis for different methods of mechanical analysis, RMS, 541-544

- Theorie paléogéographique des gisements pétroliers, l'application, pratique*, review, XIV, 953
- Theories, American, of salt-dome origin, SD, 5; IX, 835
- of continental drift, CD, 33
- of dome formation, STR II, 680; SD, 782
- of movement in Appalachian foreland, XXV, 419
- of origin of carbon dioxide in natural gases, XXI, 1256
- relative to oil and gas deposits, VIII, 94
- Theory of Great Basin structure, XVI, 2
- of ground-water motion, XXV, 1418
- of origin of Great Salt Lake oolites, XXII, 1384
- of origin and accumulation of petroleum, XXVIII, 1510
- that Nile Valley and Gulf of Suez are erosional features, XXII, 1218
- Therapeutic muds in North Sea, RMS, 199
- Thermal analysis chart of fossils of Tejon formation, XXVII, 1376
- Thermal anomaly produced by cementation, magnitude of, XXI, 799
- Thermal condition of Great Salt Lake waters, XXII, 1318
- Thermal conductivity, coefficient of, RMS, 68, 71, 73, 77
- of samples, XXI, 789
- Thermal currents as factor in oil accumulation, VII, 429
- Thermal cycles favorable to continental movement, CD, 89
- Thermal expansion of water, RMS, 67, 68, 70
- Thermal stratification of lake water, XXV, 835
- Thermal zones of Etchegoin sand, XVIII, 489
- of San Joaquin clay, XVIII, 490
- of Tulare formation, XVIII, 491
- Thermobalance for determining water of hydration, RMS, 505
- Thermodynamic theory of flow in stressed solids, applications to salt-dome mechanics, XXVII, 57
- Thermodynamics in connection with petroleum genesis, XXVIII, 930
- Thermohaline characteristics of water, RMS, 85
- Thermometer, reversing, for determining temperature in sea, RMS, 60
- Thermometers, electrical resistance, XXI, 790
- maximum mercury, XXI, 790
- Thermometric method, use of, in location and study of cemented zones, XXI, 792
- Thermopolis, Cody, and Kane sections of Sundance formation, correlation of, XXI, 739, 741
- Thermopolis, geothermal variations at, PROB, 992
- Thermopolis, Mowry, Frontier, and Wall Creek formations, stratigraphic sections, XXVIII, 1205
- Thermopolis, Wyoming, outcrop section e, SBP, 243-255, 411
- Thermopolis area, Embar water in, XXIV, 1287
- Thermopolis formation, V, 191, 197; XXVIII, 1198
- Thermopolis shale, PROB, 344; XXII, 1633, XXIII, 486; XXV, 887, 2035; XXVIII, 1204
- areal variation of properties of sediments in, in Rocky Mountain area, SBP, 217
- in Ferris dome, Wyoming, STR II, 658 (Ki) (Cretaceous), SBP, 193, 198-255, 415
- Thermostat for pycnometers, VIII, 733
- Thiaden, A. A., XXVII, 1516
- Thickening, abrupt, of Cretaceous formations, XXV, 2052
- of Devonian shales, PROB, 496
- of incompetent members over anticlinal crests, GAS, 588
- Thickness, great, of Cenozoic in Gulf Coastal Plain, XXIII, 149
- great variation of, in Eocene in California, XXIV, 1943
- of a folded bed, calculating the true, XXVII, 874
- of Atoka formation south of Backbone anticline, increase in, XXI, 1409
- of beds, section showing that it indicates correlation of surface Catahoula with pyroclastic beds above marine wedge, XXIII, 174
- of Cretaceous formations in key wells, XXVI, 1521
- of formations. (See Correlation of samples)
- of formations in east-central United States, XXII, 1525
- of formations, maps of, for Rocky Mountain sediments, SBP, 202
- of formations of Chester series in Illinois basin, changes in, XXV, 880
- of layers, XXVI, 1726
- of Lissie and Willis formations in vicinity of Harris County, Texas, XXIII, 189
- of productive sands in Schuler field, XXVI, 1508
- of sand, relation to adequate volume, XXV, 1303, 1310
- of sand, relation to reserves, XXV, 1310
- of sial, CD, 13
- of Vicksburg in Catahoula Parish, Louisiana, GC, 403; XVII, 633
- of Wilcox deposits caused by gradually subsiding area, XXIV, 1894
- stratigraphic, in parallel folds, calculation of, XXVIII, 1376
- stratigraphic, of folded beds, methods of measuring, XXVIII, 1377
- true, of a folded bed, calculating, XXVI, 1827
- variations in, in Ellsworth formation, XXIV, 2153
- Thickness and character of rocks, section showing in detail changes in, from east to west in Tennessee, XXII, 424
- Thickness and depth of strata, discussion, XVIII, 817
- Thickness and radioactivity of Chattanooga shale in four wells in Oklahoma, relation between, XXIX, 1489
- Thickness and structural study of major divisions of Cretaceous system in Nebraska, XXVI, 1517
- Thicknesses of Lower Jurassic in Mexico and Central America, XXVII, 1497
- Thicknesses and discontinuities, variable, Miocene sections in Santa Maria Valley oil field to show, XXIII, 73
- Thicknesses and elevations used on isopach and structural maps of Cretaceous in Nebraska, XXVI, 1520
- Thiel, George A., PROB, 915; RMS, 423
- Thiel, George A., and Crowley, A. J., pre-Cambrian and Cambrian relations in east-central Minnesota, XXIV, 744
- Thiel, George A., and Poirier, O. A., deposition of free oil by sediments settling in sea water, XXV, 2170
- Thiele, F. C., XVI, 1100
- Thiem, Gunter, XX, 711, 712
- originator of field method for determining permeability, XX, 711
- Thiessen, Reinhardt, VI, 334; X, 869, 871; XIII, 343, 360, 826, 841, 843; XV, 623; XVII, 1253; XX, 289; XXV, 840
- Thiessen, Reinhardt, and Jeffrey, VI, 340
- Thiessen, Reinhardt and White, David, XIV, 468; XXVII, 1195, 1197
- Thiessen, Reinhardt, *et al.*, GAS, 936
- Thin sections, preparation of, RMS, 530, 600
- Thin sections and insoluble-residue material of Grand Tower limestone, photomicrographs of, XXVI, bet. 1704 and 1705
- Thinning against salt-cap-rock, PROB, 646
- in Woodbine, Eagle Ford, and Austin formations, PROB, 302
- of beds, PROB, 363
- on crest of structure, PROB, 416, 582, 583, 598, 616, 617, 625
- over anticlines in northern Midcontinent region, GAS, 588
- Thionin for bacterial studies, RMS, 419
- Thionville, M. C., XXIV, 1550
- Third oil zone in Big Lake field, Texas, STR II, 525
- Third Salt sand, XXV, 798
- Third sand field, PROB, 465
- Third sand in Big Lake field, Texas, STR II, 510
- Third sand pools, Venango district, STRAT, 523
- Third Venango sand, PROB, 846
- Third Wall Creek sand in Salt Creek field, Wyoming, STR II, 596
- Thirlart, Léon, XIX, 834
- Thirty-Five anticline, PROB, 200
- Thirty-Foot sand, PROB, 490; VI, 449; XXV, 805
- Thirty-year oil fields: editorial, XXII, 1698
- This matter of estimating oil reserves, XXV, 164
- Thoenes, XXII, 52
- Thom, William Taylor, Jr., PROB, 76, 99, 339, 430, 1003; SBP, 196; STRAT 281, 826; VI, 43; IX, 887; X, 106; XI, 515; XIII, 640, 1247; XIV, 503, 555; XVIII, 1075; XIX, 503, 504, 517, 592, 609, 827, 1467; XX, 281, 284, 312, 1163, 1182, 1183, 1184; XXIII, 462, 1446, 1488; XXVII, 428, 1200, 1216
- Big Horn Basin-Yellowstone Valley structural field conference, 1937, XXII, 306
- direct synthesis of higher from lower hydrocarbons, VIII, 830
- discussion of earth temperatures in Oklahoma wells, XIV, 555

- (Thom)
discussion of *en echelon* fault systems, XIII, 640
discussion of regional metamorphism of coal in West Virginia, XXVII, 1225
map of Greater Seminole oil fields, Oklahoma, STR II, 337
oil possibilities of South Dakota, VI, 551
petroleum and coal—keys to future, review, XIII, 395
present status of carbon-ratio theory, PROB, 69
relation of deep-seated faults to surface structural features of central Montana, VII, 1
review, XIV, 953
stratigraphy and oil prospects of Alberta, Canada, discussion, XI, 515
synclinal oil occurrence and regional uplift, XII, 554
- Thom, William Taylor, Jr., and Dobbin, Carroll Edward, PROB, 697; XXVII, 1569
oil and gas prospects in Garfield County, Montana, VI, 144
- Thom, William Taylor, Jr., Bucher, W. H., and Chamberlin, R. T., GAS, 248; XXII, 307, XXIII, 1445
results of structural research work in Beartooth-Bighorn region, Montana and Wyoming, XVII, 680
- Thomas, and Cushman, XIX, 690
- Thomas, A. O., XII, 201, XIV, 712; XV, 188
- Thomas, B. W., and Johnson, H. A., GAS, 937
- Thomas, C. R., PROB, 317, 319, 320, 369, 770; VI, 426; XII, 191, 194, XIII, 29; XXV, 1708
discussion on Salina basin, XII, 191
flank production of the Nemaha Mountains (Granite Ridge), Kansas, STR I, 60; XI, 919
Permian fossils found below Welch chert in Dickinson County, Kansas XI, 1118
- Thomas, Dighton, XXIV, 1563
- Thomas, E. Paul, and Murray, Grover E., Jr., Midway-Wilcox surface stratigraphy of Sabine uplift, Louisiana and Texas, XXIX, 45
- Thomas, E. S., XXIX, 1170
- Thomas, E. T., aid to study of foraminifera, IX, 667
effect of pressure on migration of oil, VIII, 527
- Thomas, G. D., XXII, 1681; XXVII, 1410
Carterville-Sarepta and Shongaloo fields, Bossier and Webster parishes, Louisiana, XXII, 1473
- Thomas, G. F., XXIX, 1417
- Thomas, Horace D., XVII, 565, XX, 1197; XXI, 716; XXIII, 1449; XXIV, 312; XXV, 134; XXVII, 1317; XXVIII, 1198, 1201, 1205, 1214; XXIX, 125, 126
character of producing sandstones and limestones of Wyoming and Montana, discussion, XVII, 268
discussion of spelling of red beds, XXIII, 1249
- Frontier-Niobrara contact in Laramie Basin, Wyoming, XX, 1189
"Park City" beds on southwest flank of Uinta Mountains, Utah, discussion, XXIII, 1249
- (Thomas)
Phosphoria and Dinwoody tongues in lower Chugwater of central and southeastern Wyoming, XVIII, 1655
- Thomas, H. H., MEX, 145, 148, 200
- Thomas, Harold S., XI, 867; XVI, 1024, XX, 1087
proration at Oklahoma City, Oklahoma, XVI, 1021
- Thomas, J. Elmer, I, 6, XIII, 153, 154, 157, XVIII, 69; XX, 389, 521
memorial of Robert Brooks Whitehead, XX, 1270
memorial of Roy A. Reynolds, XXVII, 1169
proved oil reserves in United States of America, XXI, 1088
seventeenth International Geological Congress, Moscow, July-August, 1937, XXII, 119, 1365
- Thomas, Kirby, SD, 684, IX, 619, 852
- Thomas, Moyer D., RMS, 536, 537, 547, 548
- Thomas, Norman L., XII, 535; XVII, 656; XXV, 1234; XXIX, 957
memorial of Frank Carney, XIX, 761
review, XXI, 1213
- Thomas, Norman L., and Rice, Elmer M., GAS, 654
Cretaceous chalks, Texas and Arkansas, XV, 965
- Thomas, Norman L., and Rice, Oliver W., XVIII, 1508
- Thomas, Ralph N., source of Coniferous oil in eastern Kentucky, XXII, 1452
- Thomas, S. B., STRAT, 435
- Thomas, W. A., GAS, 787, PROB, 550, 551, XVI, 146, XXII, 131, 136, 149, 160
- Thomas, W. A. and Fitzgerald, P. E., PROB, 553, XXI, 617
occurrence of fluorite in Monroe formation of Vernon Township pool near Mount Pleasant, Michigan, XVI, 91
- Thomas, W. F. A., XIII, 1125
- Thomas field, Kay County, Oklahoma, PROB, 592, 594, 623, 624, 770; X, 643
faulting in, discussion, XII, 769
- Thomas Kelly Oil Company, Del Amo 1 (well 45), SBP, 87-153, 403
- Thomas pool, Texas, STR I, 430
- Thomas sand, XXVII, 780
- Thomassey, M. R., SD, 7, 395; IX, 837, 862; XXI, 1270
- Thomonde formation of Haiti, XXIV, 1597
- Thompson, PROB, 115; XXIX, 1607
- Thompson, Arthur Beeby, PROB, 74, 435; VII, 612, 621; VIII, 718; XI, 405, 494, 736; XIII, 1116; XX, 281, 286; XXI, 296; XXII, 1140, 1149; XXIV, 860
- Thompson, Arthur Beeby, and Daly, Marcel, PROB, 44
- Thompson, Benedict E., American Association of Petroleum Geologists, mid-year meeting, Pittsburgh, resolutions, XXI, 1611
memorial of Harry Aid, XI, 439
- Thompson, Benedict E., and Fuqua, H. B., XIII, 425
relation of production to structure in central Wilbarger County, Texas, STR I, 293
- Thompson, C. Beeby, XIII, 1096; XV, 612; XVIII, 751; XXIV, 1552
- Thompson, David G., CAL, 26, 258; XXII, 1133, XXIX, 891
- Thompson, E. G., XXI, 133, 1065
Sulphur Bluff field, Hopkins County, Texas, XXI, 111
- Thompson, E. O., XXIII, 1315
- Thompson, Edwin I., Hull-Silk oil field, Archer County, Texas, STRAT, 661
- Thompson, Frederick O., XXII, 1014
- Thompson, J., XX, 1047, 1059
- Thompson, J. D., J., GAS, 385, XVII, 877
- Thompson, J. D., Jr., and Warren, J. E., GAS, 1107
- Thompson, J. H., XXIV, 1215, XXVI, 1318
- Thompson, Jean Cleveland, memorial of, XIII, 296
- Thompson, M. L., XXIV, 312, 627, XXV, 25, 411, 2158; XXVI, 1585, XXVIII, 1643, XXIX, 161, 162, 165
Pennsylvanian system in New Mexico, review, XXVII, 1158
- Thompson, M. L., and Scott, H. W., XXVII, 1293; XXIX, 1153
- Thompson, R. R., GAS, 609, VII, 625
- Thompson, Sheridan A., XII, 901; XIX, 1537; XXIV, 1537; XXV, 1693, XXVIII, 522; XXIX, 51
- Fredericksburg group of Lower Cretaceous with special reference to North-Central Texas, XIX, 1508
memorial of Clyde M. Bennett, XIX, 1715
- Thompson, Sheridan A., and Eichelbeiger, O. H., XVII, 1507
- Vinton salt dome, Calcasieu Parish, Louisiana, XII, 385
- Thompson, Wallace Cammack, PTNM, 695, SD, 216; XIII, 954; XVIII, 1079, XXIV, 18, XXVI, 695
factors governing estimation of recoverable oil reserves in sand fields, discussion, XVIII, 1079
geologic sections in Texas and adjoining states, XXI, 1083
Midway limestone of northeast Texas, VI, 323
relation of accumulation to structure in the oil fields of Archer County, Texas, STR I, 421
- Thompson, Wallace Cammack, and Bailey, J. R., PROB, 921
- Thompson, Wallace Cammack, and Hubbard, W. E., GAS, 589; STRAT, 663, 665
geology and oil fields of Archer County, Texas, X, 457
- Thompson, Wallace Cammack, and Lloyd, A. M., XIV, 166, 972; XVI, 200
correlation of Permian outcrops on eastern side of West Texas basin, XIII, 945
- Thompson, Warren O., RMS, 208, 209, 215; XVII, 408
- Thompson, Warren O., and Osborne, Harry, XXI, 133
- Thompson, Texas, PROB, 115
- Thompson formation, CAL, 72
- Thompsons field, Fort Bend County, Texas, XXIV, 1411, XXV, 1010; GAS, 696, 726
Vicksburg sands productive at, XXIV, 1089
- Thoms, C. C., GAS, 148
- Thomsen, Harry L., and Foreman, *Fred, STRAT, 821

- Thomson, F. A., GAS, 221
 Thomson, J. Allan, X, 1233
 Thomson, J. J., XXI, 1199
 Thomson, R. B., XXII, 1140
 Thomson, William, XXIX, 1631
 Thorium, XXIX, 4
 Thorium content, determination of, XXIX, 8
 Thorium-uranium, ratio in black shales, XXIX, 16
 Thornberg, D. H., review, IX, 916
 Thornberry pool, XXIII, 852
 Thornberry sand, XXVI, 1043
 Thornburg, Iles, and Moffat region, Colorado, section, STR II, 107
 Thornburg dome, Colorado, GAS, 371, 373; PROB, 343; STR II, 96, 103, 104, 676
 Thornburg field, Colorado (well 234), SBP, 194-243, 407
 Thornburg structure in Moffat County, Colorado, XXI, 989
 Thornburgh, Dwight H., XXIV, 1706
 Thornburgh, II. R., wave-front diagrams in seismic interpretation, XIV, 185
 Thornthwaite, C. W., XVII, 506, 513, 928; XIX, 330
 Thornton, H., PROB, 41
 Thoinston, H. G., and Gray, P. H. H., XXVII, 1176, 1180
 Thorold gas field, XXVIII, 743
 Thorold sandstone, GAS, 79; XIX, 702; discussion, 1390; XXII, 81
 Thorp, E. M., MSC, 13, RMS, 285, 286, 519; XXVII, 1075
 Florida and Bahama marine calcareous deposits, RMS, 283
 Thorpe pool, XXIX, 1597
 gravity of oil at, XXIX, 1597
 Thoulet, XVIII, 1246
 Thoulet's solution, XII, 1149
 Thousand Creek formation, CAL, 221
 Thrall field, Texas, III, 84, 90, 125; V, 25, 398, 657; XVI, 746 (well 396), SBP, 292-335, 410
 Thrall oil field, Williamson County, Texas, some recent notes on, V, 657
 Thrall pool, Kansas, STR II, 157
 Three Creek bottom, XXVI, 1473
 Three Forks formation in Alberta, ALTA, 20, XV, 1148
 Three Forks limestone, XXVI, 331
 Three Twins member of Chalk Bluff formation, XXI, 860; XXV, 1713
 Threefork shale, PROB, 698
 Thrifty formation, Pennsylvanian-Permian boundary at base of, in north-central Texas, XXIV, 315
 Thrifty group, XXIV, 91
 Cross Cut-Blake district, STRAT, 549
 Throckmorton County, XXVI, 1046
 Thrust, base of, in Sunlight Basin area, XXV, 2026
 Thrust and tear faults cutting folds, XXV, 2184
 Thrust fault, Caliente Mountain, XXV, 218
 Thrust fault on Barranquilla-Cartagena highway, Colombia, XXVIII, 1219 and classification of faults, discussion, XXVIII, 1649
 Thrust-faulted structures in Rocky Mountains, XXVII, 433
 Thrust faulting, XV, 398
 in Arbuckle Mountains, Oklahoma, XXIX, 187
 (Thrust)
 in Arbuckle Mountains, Oklahoma, bibliography on, XXIX, 207
 in Caliente Range, XXV, 243
 in Rocky Mountain region, X, 105
 in Temblor Range between Miocene and Quaternary, age of, XXV, 1342
 in Temblor Range, references on, XXV, 1342
 in western Canada, FOP, 21; XXV, 1453
 post-Miocene, in St. George district, Utah, XXIII, 131
 Thrust faulting and coarse clastics in Temblor Range, California, XXV, 1327
 Thrust faults, PROB, 572; XXVII, 1252
 at Tupungato field, XXVIII, 1466
 in San Benito County, MSC, 114
 origin of, SC, 145; XX, 1691
 relation of isocarbs to, PROB, 89
 symmetrical arrangement of, in Ventura Basin, SC, 104, XX, 1650
 Thrust plane, PROB, 747
 Thrust planes, estimation of horizontal displacement along, XXIX, 439
 Thrust sheet of Recruit Pass fault, XXV, 1338
 Thrusting in Pánuco area, MEX, 162
 Thrusts, Appalachian, XXIX, 444
 Thucolite, XXIX, 1491
 Thucolite in association with oil in a pegmatite dyke in Ontario, XXIX, 15
 Thunder Bay, map of bottom contours, XXVII, 592
 Thunder Bay limestone, fossils of, XXVII, 593
 section, XXVII, 593
 Thunder Bay region, Michigan, columnar section of Traverse rocks of, XXVII, 579
 general geology of, XXVII, 574
 Traverse rocks of, XXVII, 571
 Thurber coal, XXV, 1663
 Thurman formation, Dora pool, STRAT, 414
 Thurman sandstone, III, 264; V, 34, 283, 287, 403, 549, 562 VI, 12
 Thurmond limestone, XXIII, 851
 Thwaites, F. G., XI, 1293
 Thwaites, F. T., PROB, 540; VII, 653; XX, 827, 828; XXIII, 1563
 field photography for geologists, XX, 186
 photography for geologists, discussion, XX, 827
 Thwaites, R. E., XI, 85
 Ti Valley and Choctaw faults, rocks exposed between, XXI, 14
 Ti Valley-Choctaw belt, Carboniferous sequence in, XVIII, 975
 Ti Valley fault, XXI, 20
 formations exposed east of, at Black Knob Ridge, XXI, 5
 Ti Valley shear, XV, 1020
 Tia Juana field, XXIII, 958
 Tibet, XXVIII, 1419
 Tibú anticline, XXIX, 1128
 Tibú field, Sagoc pipe line from, XXIX, 1128
 Tiburon Peninsula, cross sections of northern part of, showing relation of schist bodies to serpentine, XXVII, 164
 geologic map of northern part of, showing relation of schist bodies to serpentine, XXVII, 163
 Tice, MSC, 92, Fig. 14 (in pocket)
 Tice shale, MSC, 65, 129, 165, 234, 237, 263-266, 284, 287, 328, 329; XXV, 250
 Tice shale faunules, MSC, Fig. 14 (in pocket)
 Tice shale foraminifera, MSC, 66
 Tickell, Frederick G., IX, 933, X, 483; XXI, 1470; XXV, 1227
 correlative value of heavy minerals, VIII, 158
 examination of fragmental rocks, review, XXIII, 612
 permeability of unconsolidated rocks, XIX, 1233
 Tickell, Frederick G., and Hiatt, William N., effect of angularity of grain on porosity and permeability of unconsolidated sands, XXII, 1272
 Tidal and rotational forces, a possible cause of sliding continents, CD, 158
 Tidal action, RMS, 170, 171
 Tidal amplitude, RMS, 132
 Tidal bedding, RMS, 197
 Tidal channels, RMS, 583
 on deltas, RMS, 165
 Tidal currents, RMS, 77, 81, 106-108, 128-136, 188, 214, 236-238, 277, 293
 direction of, in sea, RMS, 133
 effect of friction on, RMS, 132
 of North Sea, RMS, 326
 relation of, to beaches, RMS, 213
 relation of, to tidal waves, RMS, 130
 variations of, with depth and time, RMS, 130-135
 Tidal deformation, elastic nature of, CD, 147
 Tidal delta bars possible origin of
 Bartlesville sand deposits in shoe-string pools of Greenwood County, Kansas, STR II, 159
 Tidal deposits, fossil, RMS, 203
 Tidal effects on circulation in sima, CD, 48
 Tidal-flat deposits, chemical composition of, RMS, 200
 economic use of, RMS, 203
 in areas of carbonate deposition, RMS, 291
 mechanical composition of, RMS, 199
 references on, RMS, 205
 significance of, RMS, 203 (Wattenschlick), RMS, 195
 Tidal forces affecting continental masses, CD, 49, 171, 173, 180
 favorable to continental drift, CD, 88, 171, 215
 Tidal lagoon sediments on Mississippi delta, RMS, 178
 references on, RMS, 194
 Tidal marshes, RMS, 207
 Tidal mud, RMS, 195-205
 Tidal period, RMS, 129
 Tidal problem, difficulties of, CD, 171
 Tidal range, RMS, 361
 in Jade Bay, RMS, 202
 in North Sea, RMS, 326
 Tidal scour, RMS, 170, 239, 241
 Tidal sediments of North Sea, RMS, 335
 Tidal streams, RMS, 164
 Tidal stresses, response of lithosphere to, XXIX, 1631
 Tidal waves, RMS, 128, 129, 133
 Tide-producing forces in sea, RMS, 58
 Tide Water, Seaboard, and Humble companies, XXII, 730; XXIII, 894
 Tide Water Associated Oil Company,

- (Tide)
 XXIII, 939; XXIV, 1118
 Tide Water Oil Company, XXI, 1066
 Tide Water Oil Corporation, GAS, 669
 Tide Water-Seaboard Company, XXVIII, 844; XXIX, 773
 Tides, RMS, 128, 197, 289, 325
 effect on sediments, RMS, 237, 337, 344, 347
Tiefbohrtechnik, Leitfaden der, review, XVI, 616
 Tiejie, Arthur Jerrold, CAL, 188; XII, 112, 113, 125; XIII, 514, 515, 517; XIV, 406; XIX, 1005; XXVI, 1396, 1721
 memorial of, XXVIII, 686
 Pliocene and Pleistocene history of Baldwin Hills, Los Angeles County, California, X, 502
 Tierra Amarilla field, MEX, 224, 227, 228
 Tierra Blanca field, MEX, 164, 219, 220, 229, Fig. 32 (in pocket); V, 506
 Cretaceous in, GAS, 999
 Tierra Blanca pool, pipe-line gas from, GAS, 1010
 Tierra Colorado, Canton Tantoyuca, Veracruz, MEX, 113, 114
 Tierras Blancas pool, MEX, 173, 190
 production from, MEX, 173
 Tiffany-Ellis trend, XXII, 827
 Tiger Flats field, PROB, 435
 Tiger Flats pool, III, 273
 Tigre limestone, III, 364
 Tikhvinskaya, E. I., XXII, 774
 Tikhvinskaya, XXIV, 297
 Tilbury field, GAS, 69, 72, 73, 76, 82, 83
 Tilden, Josephine E., SD, 218; X, 10, XXI, 1272, 1276
 Tillman County, Oklahoma, Frederick area, XXIV, 1023
 Tillotson, Allen W., STRAT, 459, 463, 466
 gas fields of Lost Soldier district, Carbon and Sweetwater counties, Wyoming, GAS, 305
 memorial of Allan Eugene Reiff, XVII, 1156
 Olympic pool, Hughes and Okfuskee counties, Oklahoma, XXII, 1579
 Tillyard, R. J., XXV, 396
 Tillyard, R. J. and Wade, A., XXV, 396, 410
 Tilson, P. S., IX, 506
 Tilting, RMS, 156; XXV, 2012
 in Bahama area, RMS, 286
 in Oklahoma, influence on accumulation and migration of oil and gas, XVII, 1119
 in Oklahoma, regional, GAS, vi
 of mesa beds, indicating movements in Tertiary and possibly Quaternary of south-central Venezuela, XXII, 1230
 of oil-water contact surface, effect of, in Texas Panhandle field, XXIII, 1016
 of vicinity of Ridge Basin, California, in clock-wise direction, XXIII, 526
 Paleozoic periods of, in Dakota basin, XXVI, 1570
 seaward on east coast of U.S., RMS, 243
 Tilting and uplift in Dakota basin, XXVI, 1577
 Tilts, problem of two, and the stereographic projection, XXII, 1261
 Timan Plateau and Ufa Plateau, comparison of sections in, XXIV, 252
 Timan region, XXIV, 251
 Timbalier Bay, RMS, 160
 Timbalier Bay field, XXIII, 885
 Timber Canyon field, PROB, 193, 756
 Timber Ridge field, XIX, 520
 Time, a controlling factor in continental drift, CD, 40
 an important factor in geological processes, XXVI, 769
 bearing on effect of stresses, CD, 28
 effect on accumulation, PROB, 247, 301, 484, 689
 effect on character of crude oil, PROB, 98, 111, 141, 302
 effect on metamorphism, PROB, 25
 of accumulation, criteria for determining, under special circumstances, XXII, 834
 of accumulation in oil pools, problem of, XXIX, 1194
 of accumulation of oil and gas at Oklahoma City pool, problem of, XXIX, 1192
 of oil and gas accumulation, XXIX, 1189
 of petroleum formation, an appeal for cooperative study of, XXI, 268
 relation to generation of oil, PROB, 36, 43, 269, 680
 relation to oil migration, PROB, 426, 431
 versus temperature in petroleum generation, discussion, XV, 83
 Time classification and correlation of rocks, XXIII, 1086
 Time data in coring operations, XXIII, 1823
 Time-depth curves, construction of, XXVIII, 625
 use of, in correction of velocities, XXVIII, 622
 Time-distance graph, Arbuckle limestone, XVIII, 118
 Time element in continental drift hypothesis, difficulties, CD, 108
 Time-equivalent versus lithologic extension of formations, discussion, XVI, 1039
 Time factor in accumulation of oil and gas, V, 475
 Time interval during or after sedimentation necessary for conversion of organic material to oil, XXIX, 876
 Time intervals represented by unconformities, XXIII, 1088
 Time rate of change of concentration in sea, RMS, 72
 of change of temperature in sea, RMS, 55, 72
 of change of velocity, RMS, 72
 Time relations of deformation, importance of, GAS, 1079
 of Ellis group of Sweetgrass arch with standard European stages, XXIX, 1264
 Time-stratigraphic and rock-stratigraphic units, difference between, XXIV, 1723
 Time-stratigraphic vs. biostratigraphic units, XXIV, 2042
 Timmerman, E. H., Plummer, F. B., and Hunter, J. C., XXIV, 2164
 Tumms Point, CAL, 256, 261, 317
 Timms Point formation, CAL, 260, 261, 267, 268, 303
 Timor, XXVIII, 1451
 central, Tertiary deposits in, XXII, 47
 cephalopod limestones in, XXII, 11
 different types of facies in Triassic of, XXII, 12
 Jurassic strata in geosyncline of, (Timor)¹
 XXII, 15
 Timor-East Celebes geosyncline of the East Indies, XXII, 11, XXV, 410
 Timor fauna, XXV, 405
 Timoriles, zone of, XXII, 1016
 Timpas limestone, IV, 76, 98
 Tin in organic constituents of sediments, RMS, 435
 Tina limestone, XXV, 29, 38, 71
 Tinajitas member, XXVIII, 15
 Tinaquic sandstone member, XXVII, 1339, 1347, 1349
 Ting, V. K., XXIV, 1132
 Ting, V. K. and Grabau, A. W., XXIX, 132
 Tinguate, MEX, 144, 145
 Tinoporidae, MSC, 12
 Tinsley oil field, Vazoo County, Mississippi, XXIV, 1027; FOP, 152; XXV, 1584; XXVII, 905, 994, XXVIII, 43, 801
 development of, XXV, 1019, 1020, 1022
 dry holes in, XXV, 1021
 east-west geologic section through central Sharkey County, to, XXVIII, 52
 producing wells in, XXV, 1021
 production of oil, 1940, XXV, 1019
 Tinsleys Bottom field, Tennessee, STR I, 247
 structure, STR II, 677; XI, 909
 Tioga County, Pennsylvania, XXII, 243
 deep sand development in, XV, 925 (well 413), SBP, 349-379, 410
 Tioga County gas field, XV, 925
 Tioga East End storage pool, typical structure-type pool, XXVIII, 1585
 Tioga gas field, Tioga County, Pennsylvania, XXII, 241, 253; XXV, 1144; XXVII, 846
 structure map of, XXII, 254
 Tioga pool, XXVIII, 732
 Tiona horizon, PROB, 478
 Tippah sandstone, XXVIII, 47
 Tipper, G. H., XVIII, 313
 Tippie, Frank E., Rosclaire-Fredonia contact in and adjacent to Hardin and Pope counties, Illinois, XXIX, 1654
 Tipton field, XXI, 1011
 Tipton shale tongue (lower Green River formation), GAS, 353; XXII, 1030, 1032
 (lower Green River formation), interfingering between two Wasatch members, XXII, 1024
 Tirlan sandstones, XXI, 1454
 Tisdale field, Wyoming, V, 51, 203 (well 207), SBP, 194-243, 406
 Tisdale structure, Sundance and Tensleep waters in, XXIV, 1281
 Tensleep water in, XXIV, 1299
 Tishomingo anticline, fault on flank of, XXIV, 2146
 Tishomingo granite, VI, 6; XXIV, 2146, XXV, 1624
 Titanite, RMS, 498; XVIII, 1575; XXIV, 642
 Titanium, RMS, 392
 in clay minerals, RMS, 471
 in shale, RMS, 509
 Titanium content of Atlantic sediments, RMS, 384
 Titanium minerals, XXIV, 643; XXVIII, 86
 Titanium oxide, use of, in bitumen determinations, SBP, 66, 68

- Titanium oxides, XXVIII, 86
Titanolhere, from Sespe formation, MSC, 152
 Tithonian deposits of Mexico and Argentina, XXI, 1346
 Tithonian formation, CAL, 77, 90, 91
 Tithonian ichthyosaurs, XXVII, 194
 Tithonian stage, XXVII, 1420
 Titration of muds for determining state of reduction, RMS, 419
 using diphenylamine, SBP, 46
 Titration method of determination of calcium carbonate, SBP, 78
 of determining solubility, XXV, 856
 Titration solutions for nitrogen determinations, SBP, 39, 40
 Titration tables for salinity, RMS, 62
 Titusville, PROB, 2, STRAT, 507, 538
 Titusville-Oil City area, secondary-recovery operations, XXVII, 842
 Titusvillidae; Paleozoic and Recent branching Hexactinellida, XXV, 2082
 Tiurni, I. C., SBP, 46
 Tizard, H. T., XXII, 777
 Tlacolula, MEX, 6, 151, 153, 157, Fig 12 (in pocket)
 Tlahuac, analyses of gas of, GAS, 1003
 Tobin, Edgar, XIII, 1347
 Tobler, A., XI, 994; XXI, 237, XXII, 30; XXIV, 1593
 Tobolsk land of Suess, XXI, 1455
 Tocito dome, PROB, 409, 410
 Tocito sand, PROB, 933
 Tocito structure, PROB, 691; XIII, 138
 Todas Santos claystone member, XXVII, 1347
 Todd, John D., and Roper, Frank C., Sparta-Wilcox trend, Texas and Louisiana, XXIV, 701
 Todd, J. E., XI, 823
 Todd, Ruth, XXVIII, 1677
 Todd Deep field, XXIX, 750
 Todd field, FOP, 99; XXV, 1055, 1531; XXVI, 1033
 Todd Ranch discovery, Crockett County, Texas, XXIV, 1126
 Todd Ranch structure in Crockett County, XXV, 1051
 Todilto formation, VI, 205, 218
 Todilto limestone, correlations, XXV, 1761
 Todilto sandstone in Florence field, Colorado, STR II, 79
 Todos Santos, Cañon de, Niobrara exposed near, MEX, 56
 Todos Santos beds, XXVII, 1500
 Toeck, on North Sea, RMS, 331
 Tofeme formation, XXIX, 1093
 Toilliel, XIX, 834
 Tokio and Nacatoch formations near Troy, Arkansas, XXI, 1072
 Tokio beds, Irma field, Arkansas, STR I, 6
 Tokio formation, XXII, 1480; XXIII, 295; XXIV, 1027
 Bellevue field, Louisiana, STR II, 240
 Caddo field, Louisiana, STR II, 193
 Dixie pool, XIV, 752
 Homer field, Louisiana, STR II, 208
 Richland field, GAS, 778, 779, 784; XV, 942, 944
 south Arkansas, XXII, 974
 Stephens field, Arkansas, STR II, 5
 Tokio formation and Brownstown marl of Gulf series in Homer field, Louisiana, section, STR II, 205
 Tokio gas sand, XXII, 1492
 (Tokio)
 reservoir pressure of, XXII, 1497
 Tokio oil sand, deepest commercially producing sand in Carterville-Saiepta, XXII, 1497
 reservoir pressure of, XXII, 1497
 Tokio sand, XXIII, 896
 Caddo field, Louisiana, STR II, 195
 Tokio sands productive at Carterville, XXII, 1486
 Toler, Henry N., GAS, 881, 892, 893, XXII, 927
 review, XXV, 1601
 Tolei, Henry N., and Monroe, Watson H., abstract, XXII, 1286
 Jackson gas field and the State deep test well, abstract, XXII, 1286
 Tollefson, E. H., STRAT, 827
 Tolloczko, A., XXI, 1274
 Tolmachoff, I. P., oil prospecting on Sakhalin Island by Japan in 1919-1925, X, 1163
 ozocerite and naphtha on Lake Baikal, Siberia, IX, 811
 Tolman, C. F., CAL, 197; X, 134; XII, 555, 976; XIV, 417; XV, 442, 443; XVI, 136; XXII, 492; XXIII, 52; XXIV, 1771; XXV, 1311
 ground water, review, XXII, 490
 Tolman, C. F., and Becking, L. B., PROB, 450
 Tolman, C. F., Jr., XXVII, 118, 184
 Tolman, Frank, MSC, 102; SC, 15, 17; XIV, 1325; XX, 1561, 1563; XXII, 216
 Tolstikhina, M. M., XXII, 772, 773; XXIV, 246, 251, 252, 262, 276, 277, 280, 297; XXVI, 404, 407; XXV, 1398
 Toluene concentration in southern part of Bernstein field, XXVII, 1603
 Toluene distribution map, Bernstein field, XXVII, 1609
 Toluene oil, graph, XXVII, 1605
 in Bernstein field, XXVII, 1603
 in Forest sands, XXVII, 1614; 1616
 Toluene oils, connection of, with Bernstein strike fault, XXVII, 1614
 Toluvejo series, XXIX, 1093
 Tolwinski, VI, 532; XVII, 1087
 Tolwinski, K., XV, 2; XVI, 1088, 1089
 editor, oil and gas fields in Poland, review, XIV, 331
 natural gas in Poland, XVIII, 892, 1218
 petroleum and natural gas in Poland, review, XVIII, 1713
 Tom Green County, Texas, XXI, 474
 Tomales Bay, CAL, 31, 246, 317
 foraminifera of, MSC, 11
 Tomalin, W. G. C., XXII, 1103
 Tomball field, GAS, 725; GC, 179, 187, 188; XIX, 365
 Tomball surface structure in coastal Texas and Louisiana, GC, 462; XIX, 679
 Tombigbee sand, XXII, 1644, 1645, 1648
 Tombigbee sand member of Eutaw formation correlated with *Gryphaea wratheri* zone in Austin chalk, XXIX, 1009
 Tomlinson, XXI, 1490
 Tomlinson, Charles W., PROB, 309, 431, 776; STRAT, 785, 802; IX, 984; XI, 1068, 1071; XII, 906, 910, 927, 930; XIII, 574, 594, 884, 886, 893, 898; XIV, 782, 1552, 1554; XV, 994, 1015, 1024; XVI, 654; XVIII, 568, 574, 577, 586, 589, 590, 591, 991, 992, 1008, 1021, 1049; XIX, 410; XXII, 306, 900; XXIII, 479, 1673, XXIV, 83, 281, 324, 328, 337, XXV, 9, 651, 1229, 1624, 1665, 1667, 1668, 1669; XXVII, 1265, XXIX, 125, 126
 buried hills near Mannsville, Oklahoma, X, 138
 correction to stratigraphy of Hoxbar formation, Oklahoma, discussion, XVIII, 1083
 discussion of crude oil and product prices, XXIII, 787
 discussion of Tatum's pool, XIX, 410
 natural gas pools of southern Oklahoma, GAS, 575
 relation of oil and gas accumulation to geologic structure in Mid-Continent region, PROB, 571
 report of committee on Code of Ethics, XXIX, 117
 review, XXV, 2075
 stratigraphic nomenclature, discussion, XXV, 2206, 2210
 technique of stratigraphic nomenclature, discussion, XXIV, 2038
 Tomlinson, Charles W., and Storm, Willis, Graham field, Oklahoma, VIII, 593
 Tomlinson, Charles W., Clark, Stuart K., and Royds, J. S., well spacing —its effect on recoveries and profits, XXVIII, 231
 Tomlinson, Harold W., SD, 698; IX, 718
 Tomlinson, J. A., XVII, 1364
 Tomlinson, W. Harold, RMS, 486; IV, 186; XVI, 763; XVIII, 545
 petrographic analysis of core at Carlos dome, GC, 915
 Tomon series in Venezuela, XXIV, 1614
 Tompkins, William, XXII, 1092
 Tompkins Hill gas field, California, XXII, 710
 Tonalá field, GAS, 1008
 Toney sands, XXVIII, 203, 204
 Tongrian, MSC, Fig. 14 (in pocket) of Europe, MSC, 174
 Tongrian stage, MSC, 175
 Tongue, XXIII, 1074, 1081
 Tongue River member, XXVII, 1574
 Tonkawa anticline, PROB, 821
 geothermal variations at, PROB, 991
 Tonkawa gas sand, Morrison field, Oklahoma, STR I, 150, 152, 156; XI, 1094
 Tonkawa oil and gas field, Oklahoma, PROB, 270, 294, 770; VIII, 269, 284
 preliminary report on, review, VII, 197
 Wilcox sand production, X, 885
 Tonkawa sand, XXVIII, 780
 Garber field, Oklahoma, STR I, 178
 Oklahoma, analyses of water from, PROB, 866
 Ponca City field, Oklahoma, STR I, 164
 Toole County, Montana, and Alberta, Canada, Border-Red Coulee oil field, STRAT, 267
 Top of Permian, XXIV, 354
 Top anhydrite, XXV, 602
 Top anhydrite marker in West Texas Permian basin, XXV, 601
 Topanga, lower Modelo, upper Modelo formations, and Quaternary alluvium, contacts of, MSC, 126
 Topanga area, CAL, 214, 317; MSC, 68

- Topanga Canyon, MSC, 127
 Topanga faunule of Laurel Canyon, MSC, Fig. 14 (in pocket)
 Topanga formation, CAL, 177, 178, 212, 214; MSC, 126, 127, 163, 164, 195, 230, 261, 268, 269, 273, 310, 312 (Tmm) (Miocene), California outcrop section P, SBP, 95, 167-194, 410
 typical, MSC, 164
 Topatopa anticline, PROB, 194
 Topatopa Mountain, SC, 104; XX, 1650
 Topaz, RMS, 602; XXVIII, 87
 Topeka limestone, GAS, 467, 477; XXI, 1002
 in Virgil pool, Kansas, STR II, 144
 Topila, MEX, 34, 46, 49, 50, 52, 63, 75, 76, 106, 114, 133, 136, 138, 164, 169, 179, 180, 201, Fig. 22 (in pocket)
 carbon dioxide gases in, GAS, 1004
 Topila field, MEX, 4, 34, 51, 227, 228; PROB, 384, 385; V, 505
 pressures at, GAS, 1005
 Topila pool, MEX, 164, 180
 Topila-Tamboyoche area, production from, MEX, 181
 Topographic and geologic maps, interpretation of, review, X, 906
 Topographic criteria of oil field structure, VI, 37
 Topographic expression of salt structures, PROB, 647
 Topographic map of High Island dome, GC, 915; XX, 566
 Topographic relief map of California, PROB, fol. 735
 Topographic subdivisions of Louisiana, RMS, 157
 Topography. (See Bottom configuration)
 at Natchitoches, Louisiana, map, XXIX, 36
 difference in, between Anadarko-Ardmore and Amarillo-Wichita-Red River provinces, XXV, 17
 effect on water table, XVI, 341
 North Cowden field, Ector County, Texas, XXV, 596
 of Arbuckle Mountains, XXIX, 187
 of Freezeout Mountain-Bald Mountain area, XXV, 884
 of interior domes of Texas and Louisiana, SD, 221, 232, 233, 238, 244, 255, 263, 291, 298, 305, 309, 314, 318, 324, 329, 336, 340; X, 13
 submarine, in Santa Monica Bay, XXII, 202
 Topography and drainage of Tampico Embayment region, MEX, 5
 Topography and general surface conditions of Amelia field, XXIII, 1640
 Top-set beds, RMS, 173
 Torbanite, FOP, 121; XXV, 1553
 Torcer formation, XXVII, 1492
 correlation with Neocomian-Aptian, MEX, 17
 Torchlight field, Wyoming, Greybull water in, XXIV, 1255
 Madison and Greybull waters in, XXIV, 1307
 Tordo Bay (Barra Tordo), (Tamaulipas), MEX, 68, 139, 250
 Torgasheff, Boris P., mineral industry of Far East, review, XIV, 1358
 Tornillo field, V, 27
 Toro formation, III, 365; XXIX, 1097, 1137
 Torpedo sandstone, XXIV, 727
 Torrance in southern California, Miocene fishes in well cores from, XXIV, 2182; XXV, 319
 Torrance oil field, California, GAS, 195-198, MSC, 239; PROB, 222, 753, 977, 978, 991; SC, 115; XII, 630; XX, 1661, XXII, 216; XXIII, 940
 ground-water contours, XVI, 342 (wells 44-49), SBP, 87-153, 403
 Torrey, Paul D., PROB, 67, 430, 841, 851; SBP, 357, STRAT, 538, 826; XV, 732, 749, XVI, 377; XIX, 798, 842, 866, 915, 1546; XXII, 180; XXIV, 487, 1428, 1458; XXIX, 1258
 composition of oil-field waters of Appalachian region, PROB, 841
 demise of "Bradfordian series," discussion, XIX, 912, 1546-1548
 discussion of Venezuelan oil-field waters, XV, 908
 natural gas from Oriskany formation in central New York and northern Pennsylvania, XV, 671
 origin, migration, and accumulation of petroleum and natural gas in Pennsylvania, PROB, 447
 review, XXIV, 1842
 summary of geology of natural gas fields of New York and Pennsylvania, GAS, 949
 Torrey, Paul D. and Fralich, Charles E., XIV, 503; XVIII, 1176
 Torrey, Paul D., Newby, Jerry B., Fetteke, Charles R., and Panyity, L. S., PROB, 316, 844
 Bradford oil field, McKean County, Pennsylvania, and Cattaraugus County, New York, STR II, 407
 Torrey Canyon, CAL, 288
 Torrey Canyon field, PROB, 191, 755
 Torson balance, XXIII, 872
 accuracy of determination of relative gravity by, XVI, 1235
 adjustment or gradient of, and application of undulation method to gravity measurements, discussion, XIV, 1221
 graphical methods of calculation in interpretation in work with, discussion, XIII, 388
 gravity minimum proper objective for, XXIV, 1406
 or magnetometer, control and adjustment of surveys with, XIII, 1163
 1570
 Schweydar-Bamberg type of Eotvos, X, 1201
 South Houston field discovered by, XXIX, 210
 study of structure of Suwa Basin near Kyoto, Japan, by, XIX, 58, 305
 Torson-balance and magnetic survey of Munich Tertiary basin, Bavaria, XVIII, 69
 Torson-balance and reflection seismic work, Satsuma and Fairbanks fields the result of, XXIII, 878
 Torson-balance and reflection seismograph surveys, Gillis-English Bayou field discovered by, XXVIII, 1292
 Torson balance and refraction seismograph, XXI, 200
 Torson-balance anomalies at Sugarland, Sour Lake, and Fannette, typical illustrations of gravity minima due to relatively shallow salt plug, XXIV, 1411
 Torsion-balance data, study in quantitative calculations from: prediction of overhang at Barbers Hill, Chambers County, Texas, XIX, 25
 Torsion-balance discovery of Sugaland salt dome, GC, 710, XVII, 1363
 Torsion-balance exploration in Louisiana, XXIX, 795
 Torsion Balance Exploration Company, XIX, 20
 Torsion-balance field work, XIX, 21
 Torsion balance gradient map of South Houston area, XXIX, 212
 Torsion-balance map of Esperson dome, GC, 866; XVIII, 1641
 of Tepetate field, XXII, 288
 Torsion-balance method of prospecting for oil, XIV, 203
 Torsion-balance observations across Eastern Cacalilao anticline, MEX, 183
 Torsion-balance principles as applied by original Eotvos torsion balance, X, 1210
 Torsion-balance results in California, analysis of some, XV, 1419
 Torsion-balance survey, Belle Isle, St. Mary Parish, Louisiana, XV, 1335
 of Esperson lands, GC, 859; XVIII, 1634
 of Esperson salt dome, Liberty County, Texas, XIV, 1129
 over large section of Chambers County, Texas, XXV, 1898
 Roanoke field discovered by, XXVIII, 1289
 Torsion-balance surveys, GAS, 587, 713, 796; XIII, 763
 Torsion-balance-topographic corrections and interpretations, new graphical method for, XIII, 39, 245
 Torsion-balance work in Refugio field, XXII, 1213
 Torsion balances, use of, in locating salt domes, STR II, 683
 Torsional stress, PROB, 614
 Tortillas, brackish deposits represented near, MEX, 85
 Tortonian, MSC, Fig. 14 (in pocket)
 Europe, VI, 526
 Tortugas, RMS, 285, 286, 290
 Tortugas region, shallow-water foraminifera of, MSC, 12
 Total load in streams, computation of, RMS, 26
 Toteco field, MEX, 5, 105, 204, 216, Fig. 32 (in pocket); VI, 111
 Totten, R. B., XXVIII, 579
 Toucasia and rudistids, XXII, 540
 Tough, Frederick Bevan, memorial of, XI, 109
 Tough, Frederick Bevan, Willison, S. H., and Savage, T. E., VII, 351; XXIX, 1256
 Toumansky, O. G., XXII, 1019; XXIV, 296, 297
 Toumansky, O. G., and Borneman, B. A., XXII, 1018
 Tourmaline, RMS, 382, 392, 498, 499, 602, 604, 609; XXII, 556; XXIV, 642; XXVIII, 87
 Tow Creek and Rangely fields, production from Mancos shale at, XXI, 1246
 Tow Creek anticline, Colorado, STR II, 107-109
 Tow Creek field, PROB, 171
 Tow Creek structure, PROB, 946

- Towanda field, IV, 255
 Tower sandstone, IV, 198
 Town-land drilling in Bloomingdale field, XXIV, 980
 in Illinois, XXIII, 821
 Townend, RMS, 7
 Tovell member of Mannville formation, XXIX, 1614
 Toyah field, III, 121, 245, 250
 Quaternary sands productive in, FOP, 102, XXV, 1534
 Trabeit, W., CD, 22
 Triabing Brothers Sping, Sundance formation near, in Freezeout Hills, XXI, 741
 Trabuco-andesite contact, XXVI, 167
 Trabuco conglomerate, CAL, 100, 103, 317
 Trabuco formation, XXVI, 166
 Trace-slip faults, XXV, 2181, 2182
 Trachydolentites, MEX, 145
 Tiatician stage, XXIX, 987, 1005
 Tractive force in streams, RMS, 27
 Tracy district, XXIX, 991
 Tracy gas field, California, XX, 940; XXI, 984, XXVII, 302
 discovered by use of seismograph, XXIV, 1941
 (well 5), SBP, 130-153, 403
 Trade journals, publication of Association papers in, X, 1004
 Trade winds, RMS, 52, 124, 125, 497
 Trager and McCoy, IX, 158, 163
 Trager, Earl Adam, MEX, ix, 32, 49, 82, 83, 165; PROB, 386, 392, 393, 397; IV, 173; V, 468, 548, IX, 180; X, 582, 1019; XII, 432, 1147, 1150; XIII, 308; XIV, 87, XV, 733, 750, XXV, 1229; XXVIII, 1079
 geologic history of Pánuco River Valley and its relation to origin and accumulation of oil in Mexico, X, 667
 kerogen and its relation to origin of oil, VII, 301; discussion, IX, 180
 résumé of oil-shale industry, with outline of methods of distillation, IV, 59
 Trager, Earl Adam, Awin, F. L., and Clark, Glenn Cecil, XI, 1316; XII, 179; XIV, 1536; XIX, 1416; XX, 91
 subsurface pre-Pennsylvanian stratigraphy of northern Mid-Continent oil fields, V, 117, 324
 Tiager, H. Harold, Dorcheat pool, Columbia County, deepest in Arkansas, XXIV, 738
 Trail Ridge, a barrier beach, XXII, 797
 Trainer, D. W., XV, 166
 Trainer, D. W., Jr., XIII, 3
 Tranquillity, relative, and present epoch, XXII, 848
 Transcaspian Basin, Russia, XI, 510
 Transcaucasia, Kura and Kutais basins of, XI, 494
 Transcendent value of graptolites for correlation demonstrated, XXII, 221
 Transcontinental Oil Company, Davis 2 (well 231), SBP, 194-243, 407
 Richardson 1 (well 391), SBP, 292-335, 410
 Transfer of chemical properties in sea, RMS, 73
 of heat in sea, RMS, 72, 73, 75
 of momentum in sea, RMS, 73
 Transformation of chemical elements in glauconitization, RMS, 510-511
 of oil, factors effecting, PROB, 141
 of organic matter into bitumens, con-
- (Transportation)
 ditions required for, XXIX, 1743
 Transgressing sea, diagram of zones of erosion and deposition, showing change in position of zones of, XXV, 2019
 Transgression, general progressive, in California through Oligocene and Miocene, XXV, 195
 of sea during Upper Jurassic, MEX, 92, 94, 96
 Transgression and regression of region of Caliente Range, XXV, 257
 Transgressions not necessarily result of continental drift, CD, 190
 of sea, RMS, 214
 of sea in Baltic, RMS, 300
 of sea in North Sea area, RMS, 343
 of sea, relation of, to glauconitization, RMS, 512
 Transgressions and regressions of sea in Starr and Zapata counties, Texas, sediments associated with, XXVI, 272
 of sea throughout period of Jackson sedimentation, XXI, 1436
 Transgressive movement in Upper Aptian (Trinity of Texas), MEX, 17, 95
 Transition, abrupt, between Cretaceous and Mississippian formations, XXV, 2053
 between Niobrara and overlying Méndez, MEX, 56
 between Tamasopo limestone and Méndez, MEX, 73
 from lenticular sands in non-marine facies of a formation to blanket sands in marine facies, characteristic of Cenozoic deposits of Gulf Coastal Plain, XXIII, 153
 from Miocene to Pliocene, MSC, 181
 Transition beds between Albian and Aptian, MEX, 25
 between Turonian and overlying San Felipe, MEX, 59
 Cretaceous-Eocene, MEX, 76
 San Felipe as, between El Abra limestone and overlying Méndez shales, MEX, 58
 Transition zone between San Felipe and overlying Méndez, MEX, 65, 66, 70, 75, 182, 186, 188, Fig. 10 (in pocket)
 Transjordan and Palestine, geology and bitumens of the Dead Sea area, XX, 881
 Transmission of natural gas favorably affected by storage, XXVIII, 1583
 Transmission division of natural gas industry, GAS, 1108-1110
 Transmission lines, long-distance, development of, XXV, 1292
 Transmission systems, GAS, 1032, 1089, 1110
 Transmissive exponent, RMS, 82, 83
 Transparency of water, RMS, 67, 81
 Trans-Pecos province, west Texas and southeast New Mexico, FOP, 101; XXV, 1533
 Trans-Pecos region, V, 5, 379, 545, 558
 map, FOP, 103; XXV, 1535
 paleontology of Permian of, XXV, 97
 structure section, FOP, 103; XXV, 1535
 Trans-Pecos Texas, Cretaceous and Eocene stratigraphy of Barrilla and eastern Davis mountains of, XXII, 1423
 date of major diastrophism and other
- (Trans-Pecos)
 problems of Marathon basin, discussion, XII, 1111
 Delaware Mountain formation in, XXI, 873
 Lower Cretaceous stratigraphy in, XXII, 1426
 lower Permian boundary in, XXIV, 308
 notes on Upper Mississippian rocks in, XVIII, 1537
 outline of structural development of, XIX, 221
 paleontology of, XXIV, 307
 Permian of, XIII, 957
 Permian redbeds in, XXI, 856
 references on oil prospects in, FOP, 105; XXV, 1537
 stratigraphy of outcropping Carboniferous and Permian rocks of, XIII, 907
 study of rocks and fossils of Permian succession of, XXIV, 307
 unconformities at base and within Pennsylvanian in, FOP, 102; XXV, 1534
 unconformity beneath *Pseudoschwagerina* zone in, XXIV, 320
 Upper Cretaceous in, XXII, 1431
 Trans-Pecos Texas basin, XIII, 1015
 Transport, chemical realm of, XXVI, 1760
 mechanical, XXVI, 1759
 relationship between size and mode of, XXVI, 1759
 selective, of particles during traction, a function of low velocities, XXIX, 1244
 suspension, XXVI, 1759
 traction, XXVI, 1759
 Transportation, RMS, 5, 6, 126, 285, 525, 531, 582, 583; XXVI, 1757
 dislocation of, XXVII, 970
 distance of, effect on rounding, RMS, 45
 effects of, XXVI, 1761
 effects of, on sedimentary particles, RMS, 32; references on, RMS, 45
 loss of minerals during, RMS, 610
 mechanism of, in sea, RMS, 81
 of crude oil, XXI, 172; XXV, 1270
 of detritus, RMS, 12, 18, 28, 283, 593
 of detritus along beaches, RMS, 213
 of detritus as influenced by turbulence, RMS, 79
 of detritus by currents in ocean, RMS, 117, 497
 of detritus by floods, RMS, 270
 of detritus by moving water, RMS, 5
 of detritus by moving water, references on, RMS, 29
 of detritus by rivers, RMS, 5, 231
 of detritus by tides, RMS, 136
 of detritus by wind, RMS, 270, 496-502
 of detritus in sea, RMS, 3, 382
 of detritus, mechanics of, RMS, 19, 20, 22
 of detritus near sea bottom, RMS, 19, 136, 274, 276
 of detritus on continental shelf, RMS, 239, 241
 of organic content of sediments, PROB, 29
 of sand in Baltic, RMS, 312
 of suspended material, RMS, 19, 37
 of water by tides, RMS, 129, 136
 selective, RMS, 36, 41
 variations in, RMS, 18
 velocities of, in rivers, RMS, 10

- Transportation and locomotion, modes of, XXVI, 1758
- Transportation facilities to east coast, XXV, 1270
- Transportation problems during war, XXVII, 976
- Transportational analysis of crinoidal sediment, XXVI, 1761
- Transportational analysis and history of components of crinoidal sediments, XXVI, 1762
- Transporting agencies, RMS, 249
- effect of, on velocity of particles, RMS, 43
- Transporting capacity of water in Baltic, RMS, 310
- Transporting power of tidal currents, RMS, 239
- Transverse current ripples, RMS, 17
- Transverse fault, XXVII, 1261
- Transverse helical circulation in streams, RMS, 8
- Transverse Ranges, CAL, 1, 5, 8, 9, 11, 24, 25, 30, 41, 42, 64, 65, 94, 95, 99, 109, 113, 200, 203, 273; SC, 1, 104, XX, 1547, 1650
- limestones of, CAL, 64
- vulcanism in, CAL, 284
- Transverse wind transport near the surface, RMS, 125
- Transylvain, Nouvelles données sur la structure du Bassin*, review, XIX, 1695
- Transylvanian, Roumania, notes on natural gas fields of, VIII, 202
- Transylvanian salt domes, SD, 98, 101, 103, 114, 186, 203; IX, 1165, 1176, 1192, 1246
- their bearing on American salt-dome problems, SD, 168, 186
- Trap, capacity of, to contain gas, a function of pressure, XXIX, 1190
- controlling, in California fields, PROB, 759
- in potential reservoir rock, date of formation of, XXIX, 1189
- Trap indicators of reservoirs, XXIX, 1543
- Trapesium* beds, XXI, 736
- Trapp field, Russell County, Kansas, XXI, 1005, XXII, 675; XXIV, 1002
- Traps in Oriskany sands, influence of faults as possible, XXI, 1585
- of Serra Geral, XIX, 1755
- oil and gas, XXI, 206
- sediment, RMS, 274
- Traquair, XIX, 1261
- Trask, XXVII, 925
- Trask, John B., SC, vii
- Trask, Parker D., CAL, 5, 38, 41, 44, 173, 184, 198, 225, 277, 291; MSC, 38, 66, Fig. 6 (in pocket); PROB, 26, 32, 262, 271, 272, 291, 309, 311, 312, 313, 322, 361, 374, 461, 462, 566, 567, 819; RMS, 1, 178, 227, 246, 249, 255, 258, 261, 263, 281, 377, 381, 419, 421, 442, 443, 445, 551, 564, 565, 569, 587, 641, 642, 645, 649, 650, 655; SBP, 6; SC, vii; STRAT, 562; XII, 752, 970; XIII, 516, 1223; XIV, 714; XVI, 261, 400, 406, 727; XVII, 836, 839, 841, 1214, 1226, 1232; XVIII, 1104, 1347; XIX, 12, 174, 177, 600, 603, 607, 610, 611; XX, 258, 260, 263, 281, 296, 493, 869, 1067, 1479, 1533; XXI, 270, 766, 767, 1103, 1104, 1107, 1110, 1114; XXII, 213, 1182, 1378; XXIII, 592;
- (Trask)
- XXIV, 859, 1359, 1476; XXV, 245, 856, 1708, 1709, 1933, 2066; XXVII, 250, 1189, XXVIII, 925, 926, 1517, XXIX, 6, 20, 1136, 1234, 1489, 1743
- American Petroleum Institute research investigation on origin and environment of source sediments, XIV, 311
- bibliography of, on source beds, SBP, 8
- compaction of sediments, XV, 271
- deposition of organic matter in recent sediments, PROB, 27
- discussion of origin of petroleum, XV, 627
- inferences about origin of oil as indicated by composition of organic constituents of sediments, review, XXIV, 506
- limestones as a source of oil, XII, 556
- organic content of recent marine sediments, RMS, 428
- potential value of several recent American coastal and inland deposits as future source beds of petroleum, XII, 1057
- preface to symposium on recent marine sediments, RMS, 1
- proportion of organic matter converted into oil in Santa Fe Springs field, California, XX, 245
- remarks on vertical distribution of bacteria in marine sediments, XX, 258
- report of committee on sedimentation, 1936-1937, review, XXII, 223
- report of committee on sedimentation, 1938-1939, review, XXIV, 386
- results of distillation and other studies of organic nature of some modern sediments, XI, 1221
- reviews, XVI, 104; XVII, 98; XIX, 128, 302, 1551; XXII, 1692; XXIII, 256; XXIV, 505
- studies of source beds in Oklahoma and Kansas, XXI, 1377
- summary of recent foreign literature on problem of petroleum generation, XX, 1237
- time versus temperature in petroleum generation, discussion, XV, 83
- Trask, Parker D., and Hammar, Harald E., XX, 289; XXVII, 256
- preliminary study of source beds in late Mesozoic rocks on west side of Sacramento Valley, California, XVIII, 1346
- Trask, Parker D., and Wu, C. C., PROB, 42, 338, 374, 451
- does petroleum form in sediments at time of deposition? XIV, 1451
- Trask, Parker D., Hammar, Harald E., and Wu, C. C., PROB, 450
- origin and environment of source sediments of petroleum, review, XVII, 199
- Trask bottom sampler, RMS, 649, 650
- Trask centrifuge method of mechanical analyses, RMS, 551
- Trask modification of Davis peat sampler, RMS, 641, 642
- Trask suction sampler, RMS, 655
- Traverse of upper Des Moines and lower Missouri series from Jackson County, Missouri, to Appanoose County, Iowa, XXV, 23
- Traverse beds, basins in, XXVII, 575
- (Traverse)
- Thunder Bay region, correlation of, with type Traverse and with Devonian of New York, XXVII, 574
- Traverse fields of southwestern Michigan, XXIV, 975
- Traverse formation, XXII, 664; XXV, 1131; XXVI, 1097; XXVII, 828; XXVIII, 763
- a possible source of oil in Michigan, STR I, 111
- erratic oil production in, PROB, 553
- Michigan fields, GAS, 795, 796
- Muskegon field, XVI, 159
- productive in Bloomingdale field, XXIV, 980
- Saginaw field, XI, 960
- synclinal production in, PROB, 552
- Traverse group, XXII, 397, 405; XXIV, 1955
- in Thunder Bay region, stratigraphy of, XXVII, 578
- limits of, XXVII, 573
- of Buckeye field, XXIV, 1964
- stratigraphic nomenclature of, XXVII, 572
- subdivisions of, XXVII, 573
- Traverse limestone, XXV, 713; XXVI, 1105, 1109, XXIX, 16, 698
- Traverse limestone and shale, XXVIII, 181
- Traverse limestone interval, isopach map of southwestern Michigan showing Coldwater Red Rock to, and type log for southwestern Michigan, XXIV, 2152
- Traverse outcrop belt, localities of, XXVII, 577
- Traverse pay zones in Michigan fields, XXIV, 981
- Traverse rocks of Thunder Bay region, Michigan, XXVII, 571
- columnar section, XXVII, 579
- Travertine, determinations of radium content in, by means of electroscope, XXIV, 1531
- Travis, A., XVI, 959
- Travis, M. M., X, 514
- Travis Peak correlated with European upper Aptian, XXIII, 627
- correlation of surface sections of, XXIII, 629
- fossils in, XXIII, 636
- paleontology of, XXIII, 636
- thickness of members of, XXIII, 630
- Travis Peak beds, XXII, 1666; XXIX, 766
- Travis Peak formation, III, 302; V, 7; XXII, 721, 1481, 1510; XXVI, 1265, 1813; XXVIII, 841; XXIX, 771, 1427
- at Rodessa and in Richland gas field, XXII, 725
- bibliography on, XXIII, 640
- Cotton Valley field, XXI, 1069
- Lisbon field, XXIII, 287
- of central Texas, XXIII, 625
- south Arkansas, XXII, 968
- stratigraphy of, XXIII, 628
- topography of, two types, XXIII, 627
- Walnut Bend pool, STRAT, 781
- Travis Peak formation and Cuchillo formation, correlation of Sligo formation with, XXVII, 1230
- Travis Peak-Glen Rose contact, XXIII, 635
- Travis Peak redbeds, XXII, 723

- Travis Peak sand, XXII, 722; XXIX, 771, 773
 Travis Peak zone, XXIV, 1067
 Treadwell, F. P., SBP, 21
 Trechmann, C. T., XX, 1441, XXIV, 1550, 1554, 1555, 1558, 1562, 1563, 1571, 1572, 1585, 1591, 1597, 1599
 Treibs, A., XX, 282, 287, 288, 294, 297, XXI, 1182; XXVIII, 927, 929, XXIX, 1136
 porphyrin content of petroleum samples, XXVIII, 929
 Treibs, A., and Fischer, H., XXVIII, 928
 Trembembé oil shale, analysis of, XXI, 122
 Tremolite, RMS, 602
 Tremont field, Louisiana, XXIX, 807
 Tremont sand, XXVI, 1271
 Trempealeau formation, XXV, 1632
 Trenchard, John, and Whisenant, J. Barney, Government Wells oil field, Duval County, Texas, GC, 631; XIX, 1131
 Trend in exploration, leasing, and drilling in south Arkansas and north Louisiana in 1944, XXIX, 814
 in exploration and development in north and west-central Texas, XXIX, 765
 Trends, future, in drilling of exploratory and development wells in California, XXIX, 653
 stratigraphic, in South Texas area, XXVIII, 858
 Trener, G. B., RMS, 639, 654
 Trent formation, XXIX, 915
 Trent pool, XXVII, 780
 Trenton, upper, XXIX, 683
 Trenton and Black River groups in Ohio, XXIV, 683
 Trenton and Black River rocks of Michigan, XXI, 1600
 Trenton and Medina of western New York, XXII, 79
 Trenton beds productive of oil and gas in Indiana, Ohio, Illinois, Kentucky, Tennessee, and Michigan, XXII, 1535
 Trenton field, Indiana, XXVI, 1093
 new, in Illinois, IV, 43
 Ohio, GAS, 909
 Trenton fields, PROB, 17
 drilling practice in, XXII, 99
 Trenton formation, XXV, 818
 Baldwinsville field, Onondaga County, New York, GAS, 986
 Illinois, IV, 43; V, 88
 Indiana, GAS, 850; VI, 374
 Kentucky, II, 48; IV, 305; VI, 25
 New York and Ontario, orientation of large ripples in, XXIX, 430
 Ohio, GAS, 845, 850, 909; V, 611
 productive in Illinois, GAS, 825
 Tennessee, V, 654
 type section, XXII, 88
 Trenton gas fields, distribution of, by counties, in New York, XXII, 89
 Indiana, GAS, 844
 Trenton group, GAS, 75
 Ontario, GAS, 63, 65
 Trenton group (Ot) (Ordovician), SBP, 351, 356-379, 415
 Trenton limestone, GAS, 71, 101, 108; PROB, 18, 59, 103, 106, 494, 506, 519, 525; XXIV, 1955; XXV, 1142; XXIX, 691
 a possible source of oil in Michigan, STR I, 111
 Findlay, GAS, 897
 (Trenton)
 Huntsville field, GAS, 873
 in east-central United States, XXII, 1535
 Trenton limestone (Kimmswick-Plattin) oldest producing formation in Illinois, XXIII, 816
 Lima-Indiana field, structure of top of, PROB, 522
 Martinsville field, Illinois, STR II, 130
 Oswego, Oneida, and Onondaga counties, New York, GAS, 986
 productive at Westfield dome, XXIII, 816
 productive of gas in central Ontario, FOP, 114; XXV, 1546
 productive on high parts of structural closure in Illinois, XXI, 787
 well data for subsurface map of, XXII, 91, 92
 western Ohio, GAS, 899
 Trenton oil areas in western Ohio, map, STR I, 126
 Trenton production in Illinois, XXIII, 822
 Trenton reservoirs, PROB, 373
 Trenton sand in Ohio, XI, 946
 Trenton sandstone, FOP, 134; XXV, 1566
 Trenton shale in Kansas, XI, 51
 Trenton test, XXVI, 1092
 Trenton tests, wildcat, XXVII, 817
 Trepostira zone, XXV, 32; XXVI, 1592
 Exline limestone equivalent of, XXV, 65
 Tres Bocas area of Barco Concession, production in, XXIX, 1140
 Tret-O-Lite, V, 250
Tretomphalus bullicides, RMS, 288
 Triangle diagrams for presenting size-distributions, RMS, 562
 Triangle Drilling Company, XXII, 1505
 Triangular domes in Emba salt-dome region, XXIII, 505
 Triangulation in Texas, first order (1927 datum), review, XIX, 1551
 Triangulation targets, some notes on, VIII, 512
 Trias-Flysch facies of radiolarites, XXVI, 778
 Triassic, CAL, 7, 8, 15, 16, 21, 24, 30, 62, 65-71, 75, 76, 86, 91, 92, 94, 95, 276, 281, 294, 301, 302; MEX, 8, 92, 93; SD, 155; SBP, 194-255, 285-292; SC, 5, 105, 115; XX, 1551, 1651, 1661
 Alberta, XI, 240
 Argentina, XXIX, 557
 Australia, XXI, 1124
 Belgian Congo, V, 669
 Big Lake field, Texas, STR II, 508; X, 370
 British Columbia, VI, 115
 China, III, 102; XXVIII, 1423, 1431
 Coal Measures and arid regions during, CD, 23
 Colorado, VI, 215
 Como Bluff anticline, Wyoming, XXVIII, 1203
 Connecticut, VI, 240
 Dakota basin, XXVI, 1563
 East Indies, XXII, 8
 Florida, XXIX, 929
 Freezeout Mountain-Bald Mountain area, XXV, 886, 891
 French fields, XVI, 1137
 Goldsmith field, Texas, XXIII, 1527
 (Triassic)
 Grass Creek field, Wyoming, STR II, 627
 Hugoton field, STRAT, 85
 Idaho, VI, 472
 in German salt anticlines, IX, 430
 Kansas, VI, 551
 Lost Soldier district, Wyoming, STR II, 638, 641
 Lower, in Rocky Mountain region, paleogeography of, XXI, 1257
 Lower, Mendoza, Argentina, XXVIII, 1465
 Mexico, map, XXVIII, 306
 Mid-Continent, XXV, 1688
 Moose Mountain area, XXVII, 41
 Nevada, VI, 215
 New Mexico, IV, 75, 95; V, 164, 167; XXVI, 63
 North Cowden field, Texas, XXV, 600
 North Dakota, XXVI, 349, 1418
 North Sea, RMS, 332
 northwestern Colorado, STR II, 107
 Payton pool, XXVI, 1635
 Pennsylvania, V, 370
 Rocky Mountains, III, 357; VII, 406; XXIII, 1143; XXVII, 423
 Salt Creek field, Wyoming, STR II, 593
 Sand Belt, STRAT, 752
 South Carolina, XXIX, 918
 Sumatra, XXII, 8
 Texas, IV, 271; V, 23, 379
 Texas, divisions of, XXVI, 383
 Texas and New Mexico, XXVII, 911
 Texas Panhandle, XXIII, 1002
 Timor, different types of facies in, XXII, 12
 Upper, Mendoza, Argentina, XXVIII, 1462
 Upper, Texas, XXVII, 622
 Utah, VI, 89, 205, 211, 244; XXIII, 89, 124, 126
 Wasson field, Texas, XXVII, 487
 West Texas, XIII, 1045; XIV, 926
 West Texas Permian basin, XXIV, 50
 Westbrook field, Texas, STR I, 285
 Wind River Canyon area, XXIII, 1449
 Wind River Mountains, Wyoming, XXV, 133
 Wyoming, V, 192, 408; VIII, 515; XXIII, 481, 483, 1447; XXIV, 1220; XXV, 2027; XXVII, 470
 Yates field, Texas, STR II, 487
 Triassic and Jurassic, Mid-Continent, XXV, 1690
 Triassic and Jurassic formations in Utah and Wyoming, nomenclature of, XXI, 722
 Triassic and Permian in Hunter River area, New South Wales, XXIV, 637
 Triassic and upper Permian redbeds in Yates area, Texas, XXIV, 140
 Triassic Chugwater formation (Tr), SBP, 194-255, 285-292
 Triassic coral reefs, CAL, 70
 Triassic diapir formation in Rharr region, Morocco, XVI, 452
 Triassic fossils in Wind River Mountains, XXV, 135
 Triassic gas in Colorado, New Mexico, and Utah fields, GAS, 369
 Triassic igneous activity in Mendoza, XXVIII, 1476
 Triassic-Jurassic-Cretaceous, cross section of, southeastern Idaho to western South Dakota, XXIII,

- (Triassic)
1144
Triassic-Jurassic oil in Wyoming, low gravity due to effect of sulphur, PROB, 144
Triassic lava flows, XXVIII, 1466
Triassic marine limestone source of oil in Red basin, Szechnan, XXVIII, 1438
Triassic oil in Rocky Mountain region, XIII, 1249
Triassic-Permian-Pennsylvanian section, east-central New Mexico, XIII, 652
Triassic phyllite contemporaneous with Franciscan, SC, 8; XX, 1554
Triassic red shales, Lower Cretaceous basement sands unconformable on, in Goldsmith field, Texas, XXIII, 1527
Triassic redbeds, XXIII, 86, 1040; XXVIII, 1615
of Dockum group, XXVI, 383
Triassic sediments, southeastern Virginia, XXIX, 79
Triassic stegoccephalians, XXIV, 263
Triassic system in West Texas, XXIV, 63
Triassic zones in Rocky Mountain fields, XXVII, 472
Triceratops-bearing beds Cretaceous in age, XX, 1328
Trichodesmium, RMS, 145
Trickham bed, III, 143
Tri-Cities field, XXVI, 1052, XXVIII, 849
Trico Oil and Gas Company, XXVI, 1143
Tri-County Gas Company, XXIII, 1056
Tri-County oil field of southwestern Indiana, STR I, 23; PROB, 562; XI, 601
miniature anticlines, STR II, 680
surface and subsurface structure of, XIV, 423
Trigonarca californica faunal division, XXVI, 182
Trigona beds, XXI, 736
Trihydrol form of water, RMS, 66
Trilobites, XXV, 1075
Trilobites, RMS, 366, 507, XXII, 94, XXIII, 690; XXIV, 154, XXV, 125, 127, 128; XXVI, 16
Cambrian, XXVII, 46
of Bigfork chert, XXI, 8
Trinidad, CAL, 111; MSC, 20, 337, 354; XXIV, 1564; XXVIII, 1503
Trinidad, Barbados, and northern South America, stratigraphy of, XXVII, 92
British West Indies, asphalt, IX, 1008
exploration methods in, XXIII, 963
geological sketch map of main oil field region of, showing Los Bajos fault, XXIV, 2104
geology of, XX, 1439; XXI, 630
geology of, review, XI, 201
geology and oil resources of, VI, 474; IX, 1000
hydrogen sulphide in, GAS, 1072
Miocene in, XXIV, 2103; XXVII, 1602
Miocene oil in, XI, 204
Miocene-Phocene folding movement in, XXIV, 2107
northern range of, XXIV, 1562
north-south section of formations in, XX, 1448
- (Trinidad)
Oligocene in, XXIV, 2103
Palo Seco field, STRAT, 884
Phocene in, XXIV, 2103
production in 1938, XXIII, 963
reviews, VI, 384, 390
sandstone, IV, 77, 99
study of crude oils of Forest sands of Bernstein field, XXVII, 1595
Trinidad, south, B. W. I., Los Bajos fault of, XXIV, 2102
southwest, map showing Fyzabad anticline, outcrop of upper Forest clay, and location of Bernstein field, XXVII, 1600
southwest, stratigraphic column of young Tertiary deposits in main oil fields of, XXIV, 2103
stratigraphical correlation table for, XX, 1451
structural map of, XX, 1446
summary digest of geology of, XX, 1439
Tabaquite field in, XI, 205
Timid asphalt, PROB, 832
distillate and cracked distillate from, XXIV, 1874
hydrogenation products from, XXIV, 1873-1875
Trinidad crude oils, XXVII, 1599
Trinidad Geological Conference, April, 1939—abstracts, XXIII, 1238
Trinidad sandstone in Florence field, Colorado, STR II, 80
Trinity in Sugar Creek field, XXII, 1509
in Texas, SD, 219
in Texas, discussion, XIII, 519
lower, marine production at Cotton Valley, Louisiana, XXI, 1069
lower, redbed series (Travis Peak) at Rodessa, Louisiana, XXII, 765
lower, redbeds at Richland field, GAS, 781
Polk, San Jacinto, and Liberty counties, Texas, section, XXIV, 1905
Trinity and older deposits of East Texas, Louisiana, and Arkansas, age and nomenclature of, XXVII, 1231
Trinity age, newly discovered section of, in southwestern New Mexico, XXII, 524
Trinity ammonites, XXII, 535
Trinity black shale, XXII, 1517
Trinity division, base of, XXVII, 1243
in Chittim field, thickness of, XXVII, 1242
Trinity formation, PROB, 419, 421
Irma field, Arkansas, STR I, 7
Trinity formations, New Mexico, XXII, 527
Trinity group, XXII, 725; XXV, 1692, 1693; XXVI, 383; XXVII, 29; XXVIII, 35, 39
comparison of thicknesses of formations of, XXIII, 286
Cotton Valley field, Louisiana, XIV, 987
East Texas, XII, 545
geologic history of, XXIII, 637
Homer field, Louisiana, STR II, 202
in southwestern Arkansas, southeastern Oklahoma, and northern Texas, study of, XII, 1609
Lisbon field, XXIII, 287
lower part (Klt) (Cretaceous), SBP, 295, 296-335, 415
of Comanche series in Homer field, Louisiana, section, STR II, 205
- (Trinity)
south Arkansas, XXII, 968
Texas, XXIII, 626
Walnut Bend pool, STRAT, 781
Trinity production in Arkansas, Texas, and Louisiana, XXI, 1068
Trinity red shales and sands in Monroe field, GAS, 754
Trinity River, CAL, 317
Trinity sand, XXI, 12
Arkansas, VI, 350, 477
Louisiana, II, 62, IV, 125, VI, 181
Luling field, Texas, STR I, 274
oil production in, review, VI, 386
Oklahoma, III, 268, VI, 6, 21
Texas, III, 132, 168, 359; V, 9, 16, 310, 380; X, 771
Trinity sandstone, depth of base of, and present attitude of the Jurassic peneplain in southern Oklahoma and southwestern Arkansas, XII, 1005
Trinity transgression (Upper Aptian), MEX, 17, 95
Triple basalt series, XXV, bet. 224 and 225
Triplett pool, XXV, 1080
Tri-State mining district, chat in, XXII, 1591
Tri-State zinc and lead mining district, geophysical investigations in, XXVII, 86
Tristram, H. B., XX, 890, 892
Triticites cf. *nebraskensis* limestone, XXIV, 89
Triticites zone, XXIV, 269, XXVI, 222 at Samara Bend of Volga, XXIV, 245 at Sim Works, XXIV, 247
hiatus between base of, and base of Triassic, at base of Kungurain, XXIV, 277
in America, XXIV, 279
in Wells formation, XXIX, 1153
Trivalent cations, RMS, 536
Trivol limestone, XXVI, 1593
Trochammina leae zone, XXIII, 163
Trochamminidae, MSC, 195
Trochamminidae, MSC, 195
Trochus nitidus, faecal pellets of, RMS, 518
Troglkofel limestone of Alps, XXIV, 274 of Leonard age, XXIV, 275
Tromp, S. W., XXI, 813
Troost, XXVI, 13
Tropical America, oil resources in, XXVI, 1212
Tropical conditions, stagnation in, RMS, 365
Tropical facies of foraminiferal faunas, MSC, 81
Tropical lagoons, RMS, 362
Tropical Oil Company, XI, 153; XXV, 1794
Tropical Oil Company's De Mares Concession in middle Magdalena Valley, Colombia, XXIX, 1107
Tropical seas, RMS, 145-149, 287
Tropsch, Hans, XXII, 1264
Trostel, Everett G., Dodge, John F., and Pyle, Howard C., estimation by volumetric methods of recoverable oil and gas from sands, XXV, 1302
Trough of sedimentation along margin of Australian shield from early Sarmatian time into Kungurian time, XXV, 410
Trough-fault feature, theory on Red Sea as, XXII, 1218
Troughs, RMS, 246, 254, 367

- (Troughs)
organic content of sediments of, RMS, 263
sediments of, RMS, 245, 336
Troup dome, Texas, XII, 540
Troupe, Texas (wells 355, 356), SBP, 292-335, 409
Trout, L. E., I, 32; VII, 563, XVI, 959
Trout, L. R., XVI, 959
Trout Creek fault in Salt Creek area, XIX, 996
Trout Creek oil field, XXVI, 1274
porosity of sands in, XXVI, 1274
Trout Lake, XXV, 834
Trowbridge, IX, 537, 588, XIV, 1436
Trowbridge, and Dumble, XIX, 656
Trowbridge, Arthur C., GC, 458, 552, 554; PROB, 666; RMS, 3, 169, 174; SD, 216, 719, 740, 771; X, 483; XV, 758, 868, 878, 880, XVI, 259; XVII, 465, 468, 470, 480, 490, 492, 496, 928, 959, XVIII, 1134, 1622; XIX, 1148, 1227, 1357, 1358, 1361, 1362, 1370, 1373, 1374; XXIII, 155, XXIV, 411; XXV, 25, 1639, XXVI, 256
building of Mississippi delta, XIV, 867
memorial of Eugene Wesley Shaw, XX, 239
Trowbridge, Arthur C., and Atwater, Gordon I., XVIII, 1631; XIX, 1118
Trowbridge, Arthur C., and Gardner, Julia, XXV, 2005
Yeager clay, south Texas, XV, 470
Trowbridge, R. M., XXIX, 1417
Trowbridge, R. M., and Bunnett, T. J., developments in East Texas in 1942, XXVII, 282
Trowbridge, R. M., and Denton, F. R., developments in East Texas in 1940, XXV, 1081
developments in East Texas in 1941, XXVI, 1050
Troy field, Nevada County, Arkansas, XXI, 1072
Trudel well, GAS, 101
Tushman, A. E., XXVI, 1225
introduction to geology, review, XXII, 1288
Tuex, A. F., review, XI, 999
Trujillo formation, IV, 271
Trumpy, D., GAS, 997; MEX, x; XXVIII, 1643; XXIX, 1073, 1074, 1075, 1078, 1079, 1131
Trumpy, Eduardo, XXVIII, 1456, 1459, 1462
Truncated pinch-out reservoirs, XXIX, 1563
Truncation, PROB, 295, 298, 783
of formation, GAS, 1079, 1080
of Maricopa sandstone members, Maricopa Flat, Kern County, California, XV, 689
on crest of folds, PROB, 294
or subsidence of marginal uplands, XXII, 844
pre-Gulf, northeastward thinning of Comanche beds result of, XXII, 981
Tsaidam basin, XXVIII, 1427
Tschernyshev, Th. N., XXII, 773; XXIV, 250, 251, 252, 253, 274, 275, 277, 294, 296, 299, 322, 1129; XXVI, 403
significance of errors discovered in works of, XXIV, 298
Tsin Ling zone, XXVIII, 1428
Tubarão series in Southern Brazil, XIX, 1739
Tubarra, Ali Beg, XX, 909
Tubb pay, XXVI, 1028
porosity at Tubb pool, XXIV, 128
productive at Tubb pool, XXIV, 127
Tubb pay zone, XXV, 1054; XXVII, 760, 762
Tubb pool, XXIV, 127; XXV, 1054
Tubb zone production, XXVII, 750
Tuberá group, XXIX, 1096
Tubes, cardboard, use of, in bottom samplers, RMS, 650
Tubing, theory of production through, XXII, 1243
Tucker, R. C., SBP, 357; STRAT, 809, 825; XXIV, 493; XXVII, 1194, 1204, 1223
Tucker, R. C., and Sisler, James D., natural gas in West Virginia, GAS, 989
Tucker pool, XXV, 1075
Tucker sand, III, 216; V, 132, 149, 324, 421
Cushing field, Oklahoma, STR II, 399, 405
Tuff beds of Barbados, XXIV, 1586
of North Sea, RMS, 332
Tuffaceous sand in Richland gas field, Louisiana, XV, 945
Tuffs, MEX, 9, 52, 67
Tug Hill Plateau, XXII, 92
Tulare, SC, 68; XX, 1614
Tulare deposits, SC, 48; XX, 1594
Tulare formation, CAL, 46, 234-236, 242, 249, 254, 285; VI, 58; XXVI, 1620
Buena Vista Hills, GAS, 148
Buttonwillow field, GAS, 143
Elk Hills, GAS, 144, 146
Kettleman Hills, GAS, 129, XVIII, 481
nonmarine, SC, 64; XX, 1610
Tulare Lake, CAL, 19, 20, 317
Tularosa basin, FOP, 105, XXI, 845; XXIV, 159; XXV, 1537
Tularosa Canyon near Tularosa, New Mexico, view showing San Andres limestone overlying Yesso formation, XXI, 851
Tulillo, Hacienda (State of San Luis Potosí), MEX, 75
Tulillo beds, XXVIII, 1105
Tulillo brackish-water beds related to Olmos coal beds, XXVIII, 1180
Tulillo facies, Lampazos region (Nuevo León), MEX, 84
Tulip Creek, XXV, 1638
Tulip Creek formation, XXV, 655, 658, 660, 664, 665, 667
Tulip Creek sand, XXVII, 803
Tullock formation, XXII, 1634
Tullos-Urania district, Urania field, Louisiana, STR I, 91
Tully limestone, XXV, 808; XXIX, 666 (Dt) (Devonian), SBP, 351, 354-379, 414
in Allegany County, New York, STR II, 289
New York, insoluble residue content of, isopleth map of, RMS, 611
Tulsa, Pawnee, and Creek counties, northeastern Oklahoma, Red Fork shoestring sand pool, STRAT, 473
Tulsa, southeastern, western Rogers, and Wagoner counties, Oklahoma, Broken Arrow coal and associated strata, XXVIII, 1036
Tulsa Geological Society, possible future oil provinces in northern Mid-Continent states, FOP, 76; XXV, 1508
Tulsa Geological Society research committee, XXVII, 1305
Tulsa University, School of Engineering, SBP, 7
Tulsita pool, XXIII, 865
Tumbadero, MEX, 120, 126, 224, Fig. 32 (in pocket)
Tumbadero Landing, list of micro-fauna downstream from, MEX, 128
Tumey or upper Kreyenhagen fossils, checklist of, XXVIII, 964
Tumey or upper Kreyenhagen shale, XXVIII, 962
Tumey formation, MSC, 160, Fig. 14 (in pocket), SC, 66; XX, 1612; XXIV, 1734
correlations of, XIX, 1203
Oligocene, of California, MSC, 101; XIX, 1192
Tumey Gulch, MSC, 119; XXVIII, 956
Tumey-Kreyenhagen contact, MSC, 101
Tumey sandstone, age of, XXVIII, 970
analyses of, XXVIII, 958
checklist of heavy minerals of, XXVIII, 959
checklist of megafossils from, XXVIII, 963
conformable contacts above and below, XXVIII, 960
correlated with San Emigdio formation, XXVIII, 971
deposited in marine waters of neritic zone, XXVIII, 989
distribution of, XXVIII, 961
Fresno County, California, bibliography on, XXVIII, 974
origin of, XXVIII, 966
Sierra Nevada source of, XXVIII, 968
similar to Wheatland formation, XXVIII, 957
Tertiary, Fresno County, California, XXVIII, 953
Tumey sandstone lentic, XXVIII, 956
Tumey sandstone megafossil localities in Fresno County, California, XXVIII, 972
Tumey shale, XXVIII, 955
oyster biostome in, XXVIII, 966
Tung, C., IX, 1298
Tungsten electrode, SBP, 52, 54
Tungwu disturbance, XXVIII, 1423
Tunisia, research in, XVI, 462
Tunitas Valley, PROB, 185
Tunnel Point formation, MSC, 161
Tuolumne group, CAL, 30, 85, 86, 91, 95, 96, 113
Tuolumne River, CAL, 16, 193, 318
Tupungato area, diastrophism of Hercynian age in, XXVIII, 1476
Tupungato dome, XXIX, bet. 508 and 509
Tupungato oil field, Mendoza, Argentina, XXVIII, 1455; XXIX, 501
Dark Victor oil-producing formation of, XXVIII, 1463
drilling and production at, XXVIII, 1481
geologic history of, XXVIII, 1476
great angular unconformity at base of Quaternary in, XXVIII, 1459
map showing areal geology and surface structure of, XXVIII, 1468
occurrence and character of oil at, XXVIII, 1478
production at, XXVIII, 1455
section, XXVIII, 1474
shallow zone in, XXVIII, 1478

- (Tupungato)
stratigraphy of, XXVIII, 1459
structure of, XXVIII, 1465, 1467
structure of Lower Gray tuffs in, XXVIII, 1470
thrust faults at, XXVIII, 1466
ultimate recovery from Dark Victor in, XXVIII, 1483
Victor oil zone in, XXVIII, 1478
water production at, XXVIII, 1483
wedges of lower part of Manifo formation in, XXVIII, 1476
well data, XXVIII, 1469
Tupungato structure, XXVIII, 1457
Turbaco area, XXIX, 1131
Turbulence, RMS, 7, 8, 11, 15, 18, 23, 24, 75, 77, 80, 81, 96, 102, 117, 146, 167, 259, 274, 277
as a cause of winnowing, RMS, 82
as related to depth, RMS, 76
as related to transportation of debris, RMS, 79
distribution of, in a moving fluid, RMS, 79
effect on sorting, RMS, 33
effect on transport, RMS, 23
in sea, mechanism of, RMS, 77
intensity of, RMS, 28
intensity of, in sea, RMS, 78
maximum, in streams, RMS, 18
near surface and near bottom of sea, RMS, 79
relation to growth of organisms in sea, RMS, 147
vertical, RMS, 79
Turbulent eddies, RMS, 23, 24, 77, 79, 102
Turbulent flow, RMS, 23, 24, 162
in ocean, RMS, 59
pulsations in, in streams, RMS, 28
relation to sediments in sea, RMS, 79
Turbulent friction, RMS, 103, 117, 119
Turbulent mixing, RMS, 104, 105, 121
depth of, RMS, 121
of basin waters, RMS, 98
Turbulent motion, RMS, 6, 12, 15, 19, 21, 77
Turbulent processes in sea, RMS, 74
Turbulent transport, RMS, 258
Turgai geosyncline, XXI, 1455
Turk, Lon B., XXIII, 229
Turk anticline, XXIV, 1943, 1949
Turkevich, F., and Taylor, H. S., XXIV, 1887
Turkey, MSC, 173
geology of prospective oil territory in Republic of, XIV, 687
Mardin area, XXIII, 691
petroleum possibilities of, XV, 629
prospective oil territory in, discussion, XIV, 1088
Republic of, geology of prospective oil territory in, XIV, 687
search for oil in Murefte, XX, 1372
southeastern, temperature measurements in wells in, XXV, 1937
southern, oil possibilities in, XXIII, 690
Turkey Creek pool, XXVIII, 770
Turkey Knob gas field, GAS, 944
Turkey Mountain lime in Bruner pool, Oklahoma, STR I, 214; XI, 936
in Incho pool, Oklahoma, STR I, 218
Turkey Mountain lime pools, Oklahoma, STR I, 211; XI, 933
Turkey Mountain limestone fields, Oklahoma, typical domes, STR II, 677
Turkey Mountain pool, PROB, 763
Turkey Mountain sand, PROB, 762
Turkey Track field, XXIX, 751
Turkoye Petrol Madenleri, review, XVII, 1016
Turkmen district, Russia, XXII, 759, XXIII, 951
Turmasian sands, XXIII, 957
Turnbow Petroleum Co., SD, 612
Turnbull Canyon field, gravity of oil in, XXVI, 1145
production in, XXVI, 1145
Turnbull conglomerate, XXIV, 653, 655
Turner, XII, 132
Turner and Jones, XVIII, 40
Turner, Charles F., XXVIII, 1573
Turner, F. E., and Beckman, M. W., stratigraphy and age of Seguin formation of central Texas, XXVII, 608
Turner, F. E., and Merriam, C. W., XXIV, 1743
Turner, F. E., Stenzel, H. B., and Hesse, J., brackish and non-marine Miocene in southeastern Texas, XXVIII, 977
Turner, H. W., CAL, 18, 59, 83, 95, 101, 103, 203, 208, XIII, 201; XXVII, 204, 254
Turner, H. W., and Lindgren, W., CAL, vi, 20, 35
Turner, H. W., and Stanton, T. W., XXIV, 1729
Turner, H. W., et al CAL, 95
Turner, Harold, VI, 339
Turner, Homer G., XXVII, 1195
Turner, R. E., XXVII, 112, XXVIII, 451
Turner Petroleum Company, XXIV, 983
Turner Valley, Alberta, Canada, correlation of different zones in Paleozoic limestone in, XXIV, 1624-1626
Cretaceous in, XXIV, 1623
development, XXIX, 654
diamond drilling against high gas pressure in, XII, 91
Jurassic in, XXIV, 1623
largest producing oil field in Canada, XXVIII, 866
nitrogen in, GAS, 1060
Paleozoic in, XXIV, 1623
Paleozoic limestone of, XXIV, 1620
upper Mississippian limestone productive in, FOP, 20; XXV, 1452
Turner Valley district, PROB, 161, 347, 360, 702
Turner Valley fault block, 506
Turner Valley gas and oil field, Alberta, geologic column XXIV, 1623
Turner Valley oil field, Alberta, Canada, GAS, 18, 21, 28, 39-53; PROB, 169, 368, XVI, 791; XXIII, 964; XXIX, 660
graph showing bottom hole pressure, XXIV, 1635
Jurassic in, XXIX, 1166
limestone reservoir conditions in, XXIX, 1156
overthrust sheets on, XIX, 1430, 1436, 1438, 1440-1442, 1461
permeability of producing zones in, XXIV, 1634
porosity measurements in, XXIV, 1633
problems connected with conditions in, XXIX, 1168
production, XXVI, 327
section through, showing reverse diagonal shearing faults associated with an overturned fold, XXVII, (Turner)
1253
source of oil at, XXIX, 1165
structure of, XV, 499; XXVIII, 1417
Turner Valley structure, cross section through south end of, XXIV, 1621
Turonian, CAL, 111; MEX, 17, 37, 39, 48, 60, 61; XXVIII, 1150
Hidalgo, XXVIII, 1125
Jalisco, XXVIII, 1122
Oaxaca, XXVIII, 1121
Sierra de Tamaulipas, XXVIII, 1145
Turonian and Coniacian near Zumpango del Rio, XXVIII, 1123
Turonian and upper Cenomanian in Mexico, XXVIII, 1097
Turonian beds, XXVIII, 1153
near Tampico, XXVIII, 1131
Turonian-Coniacian contact in Borrega Cañon, MEX, 57
Turonian formation, V, 7; VI, 526
Turonian fossils from eastern Ecuador, XI, 1278
in Indidura formation of Sierra Mojada area, XXVIII, 1170
Turonian horizon in northern and central Mexico, MEX, 43, 46, 47
Turonian limestone, XXVIII, 1144
Turonian rudist-bearing limestones in San Luis Potosi, XXVIII, 1140
Turonian to Maestrichtian, Cárdenas-Canoas-Tamasopa area of San Luis Potosi, XXVIII, 1135
Turrentine, J. W., SD, 19, IX, 849, 864
theory of origin of salt domes, IX, 849
Turritellinae, MSC, 247
Turritella andersoni bed, XXIV, 1743
Turritella beds in Peru, XII, 11
Turritella chicoensis faunal division, XXVI, 183
Turritella chicoensis perrini faunal division, XXVI, 183
Turritella coquina, XXVI, 270
Turritella inezana fauna, XXV, 216
Turritella inezana zone, MSC, 32, 39, 56, 68, 73, 75, 97, 152, 153
molluscan fauna of, MSC, 152
Turritella ocoyana fauna, XXV, 224, 235, 250
in silt and sandstone, MSC, Fig. 14 (in pocket)
Turritella ocoyana zone, MSC, 23, 39, 97, 153-155, 162, 164
Turritella variata zone, MSC, 33, 85, 97, 103, 152, 153, 174; XXV, 198
Turritellas of California Miocene, XXV, Plate I, fol. 256
Turritellids, MSC, 173
Tuscaloosa, XXII, 809
basal, sand, XXVIII, 804
lower, XXVIII, 40
lower, and upper Eutaw, map of Mississippi showing limits of, XXVIII, 32
lower, sand, XXVIII, 804
manne, XXIX, 923, 926
unconformable on Piedmont in Georgia and South Carolina, and on Paleozoic in Alabama, XXVII, 597
upper, XXVIII, 41
Tuscaloosa conglomerate, XXIX, 807
Tuscaloosa fauna, XXIX, 926
Tuscaloosa formation, I, 153, 154; V, 492, 496; XXII, 820, 1632, 1644, 1648; XXVII, 905; XXVIII, 40; XXIX, 808, 916
Alabama, correlation of, with Woodbine formation of Texas, Raritan formation of north Atlantic Coastal

- (Tuscaloosa)
 Plain, and Cenomanian of Europe, XXII, 1652
 Alabama, section, XXVII, 605
 Florida, section, XXVII, 603
 Florida and parts of Georgia and Alabama, XXVIII, 1718
 Georgia, XXII, 790
 Georgia, continental deposits in, XXVII, 602
 Georgia, section, XXVII, 602
 in southeastern Gulf Coastal Plain, subsurface stratigraphy and lithology of, XXVII, 596
 Jackson area, Mississippi, XVII, 46
 Kentucky, XIV, 849
 Kentucky, fault in, XXV, 2051
 marine fossils in, XXVII, 601
 Tuscaloosa gravels, Oakland fault traversing, XXV, 2049
 Tuscaloosa sands, XXIX, 823
 Tuscaloosa section in South Carolina, XXVII, 600
 Tuscan tuff, CAL, 233
 Tuscarawas County, Ohio (well 423), SBP, 349-379, 410
 Tuscarora expedition, RMS, 50
 Tuscarora sandstone productive in Ohio, XXII, 421
 Tuskahoma syncline, XXII, 866, 880
 Tuskegee pool, STRAT, 437
 Tussey field, XXI, 1011
 Tussy delta deposits, XXI, 1524
 Tuttle, Helen Fowler, Hedberg, Hollis D., Rasmussen, Clayton, and Levoisen, A. I., selected bibliography of articles describing stratigraphic type oil fields, STRAT, 858
 Tuttle, R. C., STRAT, 473
 Tuxpan, MEX, 1, 4, 96, 98, 105, 120, 139, 154
 Tuxpan fauna similar to Chipola fauna of Florida, and to Gatun formation of Panama and Costa Rica, MEX, 139
 Tuxpan formation, MEX, 35, 97, 137-139, Fig. 12 (in pocket)
 Tuxpan region, Mexico, GAS, 1010
 Tuxtla formation, XXVIII, 1118
 Tweedy, Joseph L., criticism of rule of ten dollars increase in barrel-day prices with every one cent increase in price of crude oil, IV, 189
 Twelveteens, W. H., XI, 57, 82
 Twenhofel, William H., GAS, 1078; PTNM, 620; PROB, 362, 431, 761; RMS, 2, 3, 101, 210, 227, 389, 410, 653, 654; SBP, 19; STRAT, 277; I, 26; II, 101, 104; VII, 606; VIII, 201; IX, 1070, 1143, 1208; X, 1068, 1069; XI, 1160, 1164; XII, 177, 188, 901, 912, 914, 1019; XIII, 441, 462, 602, 1382; XIV, 709, 907, 1071, 1536; XVII, 454, 565, XVIII, 1299; XIX, 271, 1407, 1678; XXI, 27, 954, 1103, 1104, 1106, 1109, 1117, 1118, 1132, 1146; XXII, 1384; XXIII, 1068, 1184; XXIV, 1191, 1359, 2022; XXV, 2127; XXVI, 36, 40, 43, 47, 48, 49, 53, 55, 620, 1729; XXVII, 926, 941; XXIX, 13, 1234
 environments of origin of black shales, XXIII, 1178
 general procedure in studies of recent sediments, RMS, 525
 marine unconformities, marine conglomerates and thicknesses of strata, XX, 677
 negligible oil possibilities of Wisconsin, VII, 653
 Ordovician strata in deep wells of western central Kansas, XI, 49
 principles of sedimentation, review, XXIV, 505
 researches in sedimentation in 1925-1926, review, XI, 517
 reviews, IX, 1121, XIII, 181; XXIV, 1684; XXV, 169; XXVII, 1016
 subsurface distribution of Comanchean in western Kansas, IX, 1105
 surface structures of central and western Kansas, IX, 1061
 treatise on sedimentation, review, XVII, 98
 Wisconsin securities law, V, 29
 Twenhofel, William Henry, and Bremet, Bernard, extension of Rose dome intrusives, Kansas, XII, 757
 Twenhofel, William Henry, and Edwards, E. C., metamorphic rocks of Woodson County, Kansas, V, 64
 Twenhofel, W. H., and McKelvey, V. E., sediments of fresh-water lakes, XXV, 826
 Twenhofel, William Henry, and others, report of committee on sedimentation, 1930-1932, review, XVII, 270
 Twenhofel, William Henry, and Shrock, Robert R., invertebrate paleontology (1935), review, XX, 228
 Twenhofel, William Henry, and Tester, A. C., new data on Comanchean strata of central Kansas, X, 553
 Twenhofel, William Henry, and Tyler, S. A., methods of study of sediments, review, XXV, 1420
 Twenhofel coring tube, RMS, 653, 654
 Twenty-fifth annual meeting of the Association, address of welcome, XXIV, 1157
 Twenty-Nine Palms, CAL, 25, 203
 Twenty-sixth annual meeting, remarks made at opening of, XXV, 1201
 Twenty years of petroleum geology in California, XXIV, 1705
 Twin Creek, Preuss, Stump, and Nugget formations, stratigraphic section of, measured on South Piney Creek, XXI, 727
 Twin Creek and Logan seas, fluctuating shore lines of, influence on distribution of oil, XXI, 769
 Twin Creek and Sundance formations, stratigraphic section of, measured on Gros Ventre River, Wyoming, XXI, 728, 729
 Twin Creek formation, V, 194; XXI, 720, 724
 correlated with lower part of Sundance formation, XXI, 747
 equivalent, in part, to Ellis formation, XXI, 770
 in Idaho, XXIII, 1172, 1174
 in northwestern Colorado, STR II, 95
 in Star Valley, XXI, 726
 Twin Creek limestone, XXIX, 1019, 1021
 age and stratigraphic relations, XXI, 728
 of northern Utah, XXIX, 1025
 stratigraphic section of, XXI, 725
 stratigraphic section of, measured on Leeds Creek, XXI, 726
 Twin River area, XXIX, 659
 Twin Rivers nose, XXVII, 855
 Twin States Oil Company, Hickman 3 (well 274), SBP, 255-285, 407
 Twin Tunnels fault, XXII, 1685
 Twinning, RMS, 604, 608
 Twitchell, M. W., and Clark, W. B., XVII, 616
 Two Buttes dome in southeastern Colorado, geology of, XVIII, 860; discussion, XVIII, 1544
 Two Buttes structure, PROB, 721
 Two decades of petroleum geology, 1903-1922, VII, 603
 Two deep water wells near Rapid City, South Dakota, XXVII, 646
 Two Medicine formation, XXI, 910
 Cut Bank field, STRAT, 335
 Mesaverde, XXI, 993
 Two tilts, new mathematical and stereographic net solutions to problem of—with applications to core orientation, XXIII, 663
 problem of, solved by bedding normals, XXII, 1265
 problem of, solved by planes, XXII, 1269
 TXL pool, gravity of oil at, XXIX, 749
 Tygrett, H. V., memorial of Baker Hoskins, Jr., XXV, 2228
 Neale field, Beauregard Parish, Louisiana, XXIV, 2036
 Tyler, IX, 1144
 Tyler, S. A., XXVIII, 109
 Tyler, S. A., and Twenhofel, W. H., methods of study of sediments, review, XXV, 1420
 Tyler, Texas (well 360), SBP, 292-335, 409
 Tyler axis, GAS, 663
 Tyler basin, XXI, 1084, 1086
 northeast Texas, revision of stratigraphy of part of Cretaceous in, XXIX, 170
 Tyler greensand, GC, 1047; XIII, 1366
 Tyler school land, Texas (well 388), SBP, 292-335, 410
 Tyler series in Roland anticline, GAS, 526
 Tyler sieves, XIV, 1338; XXIX, 216
 Tyler syncline, XV, 534
 Tynan field, XXVII, 745
 Tyner formation, IV, 181; V, 121-150, 344, 406, 509; VI, 375, 429; XI, 971
 in Osage County field, Oklahoma, STR II, 381
 Tyner shale in Garber field, Oklahoma, STR I, 178
 Type and control sections, systematic use of, XV, 375
 Type curves on tops and bottoms of cores, XXI, 601
 Type localities and outcrops of Gualf, Mesa, and Honda formations, XXVI, 810
 Type locality of Citronelle formation, Citronelle, Alabama, XXIII, 1553
 Type report on an oil field, outline for, I, 131
 Type section, inclusion of barren sediments in, XXIV, 2046
 of Bainbridge formation of southeastern Missouri, XXIII, 595
 of Ellis formation, Jurassic, of Montana, XXIX, 451
 Type structures carrying oil pools in California, PROB, 228
 Types of Foothills structures of Alberta, Canada, XIX, 1427
 of mountains, CD, 185
 of oil in Rocky Mountain region,

(Types)

- XXVII, 1307
of stratigraphic oil pools in Venango
sands of northwestern Pennsylv-
ania, STRAT, 507
- Types and occurrence of crude oils in
Rocky Mountain region, XXVII,
1305
- Typical American oil fields, structure
of, STR I; STR II, XIV, 628
- Typical sections, two, of Gulf Coast of
Texas, correlation of surface and
subsurface formations in, XXIII,
1603
- Tyrol, RMS, 18
- Tyrone anticline, GAS, 975
- Tyrone field, New York, XV, 672, 681
- Tyrone formation, Big Sinking field,
STRAT, 175
- Tyrone water, GAS, 983
- Tyrone-Wayne field, GAS, 975, 976,
981-984
- Tyrell, G. W., and Peacock, M. A.,
XIX, 212
- Tyrell, J. B., XXIX, 1607
- Tyson, Knox, SD, 350; XIV, 1425;
XXIII, 217
- Tzechomskaya V., and Gubin, V.,
PROB, 915
- Tzuluching anticline, XXVIII, 1438
- Tzuluching brine field, Szechuan
province, oil in, XXVIII, 1434,
1437
- Tzuluching formation, Cretaceous,
XXVIII, 1436, 1437
- U
- U-shaped distributions, in mechanical
analyses, RMS, 582
- U-wells, U-3559 (United Fuel Gas Co.)
(well 430), U-4053 (United Fuel Gas
Co.) (well 425), U-4390 (United
Fuel Gas Co.) (well 427), U-4515
(Howe Oil and Gas Co.) (well 433),
U-4518 (Howe Oil and Gas Co.)
(well 432), SBP, 349-379, 410
- Ucayali River, middle, Peru, and
upper Jura River, Brazil, geo-
logical exploration between, XXI,
97, 1347
- Uchirto member, XXVIII, 22
- Udden, XIII, 903, XVIII, 943
- Udden, J. A., PTNM, 545; SD, 25, 70,
220, 223, 241, 249, 699-702, I,
28, 93, 96, 99, 100, 102, 105; II,
87; III, 175, 222; IV, 284; V, 657;
VII, 242, 368, 612; VIII, 506, 778;
IX, 62, 719, 720, 855; X, 12, 33,
41, 377, 877, XII, 177, 1081; XIII,
163, 441, 959; XIV, 980, 1536; XV,
732, 733, 746, 814, 1030, 1059;
XVI, 741; XVII, 80; XVIII, 1320;
XIX, 241, 245, 1407; XXI, 836,
1415; XXIII, 1511, 1519, 1686;
XXIV, 181, 182, 183, 185, 186, 187,
188; XXV, 1220, 1229; XXVI, 243,
545, 642, 648, 673, 1706, XXVIII,
1604, 1608; XXIX, 215, 1767
- observations on two deep borings
near Balcones faults, III, 124
- rim rock of the high plains, VII, 72
- Udden, J. A., and Bybee, H. P., X,
958, 962; XVI, 746, 747, XXI,
1490
- Udden, J. A., and Phillips, D. McN.,
STR II, 545; V, 154; XIII, 426
- Udden, J. A., and Shaw, E. W., XXIII,
1519, 1523
- Udden, J. A., Baker, C. L., and Böse,
Emil, PROB, 666
- Udden, Johan August, address at
fourth annual meeting, III, 23
- characteristics of some Texas sedi-
mentary rocks as seen in well
samples, V, 373
- hints to prospective geologists, I, 127
- memorial of, XVI, 328
- oil-bearing formations in Texas, III,
82
- Udden, Jon Andreas, exploration for oil
in Australia, VIII, 244
- observations on two deep borings
near Balcones faults, III, 124
- occurrence of Ordovician sediments
in western Kansas, X, 634
- subsurface geology of oil districts of
north-central Texas, III, 34
- suggestions of new method of making
underground observations, IV, 83
- and Waite, Verdi V., observation on
Bend in Bough No. 1 in Brown
County, III, 334
- Uddenites-bearing beds assignable to
Lower Permian in western Texas,
XXIV, 307, 316
- Uddenites fauna, XXII, 1017
- Uddenites zone, XIII, 904; XXII, 1016;
XXIV, 94
- Ufa Plateau, XXI, 1441; XXIV, 251
- divisions, XXIV, 252
- Ufa Plateau and Timan Plateau, com-
parison of sections in, XXIV, 252
- Ufalet region, XXI, 1458
- Uffman beds, XXII, 1014
- Uhlig, V., SD, 122; VI, 529, XV, 3, 9
- Uhrlaub, Rudolph, Butler County,
Kansas, V, 421
- Uinta basin, PROB, 680, 683; XIX,
1486; XXI, 1254
- Colorado, structure section, FOP,
65; XXV, 1497
- oil in Cretaceous beds at Rangely and
DeBeque fields, FOP, 66; XXV,
1498
- unconformity between pre-Cambrian
and Triassic or Jurassic near,
FOP, 66; XXV, 1498
- Utah and Colorado, FOP, 66; XXV,
1498
- Utah and Colorado, hydrocarbons of,
XXVIII, 341
- Utah and Colorado, map showing
general features of, FOP, 64; XXV,
1496
- Utah and Colorado, references on oil
prospects in, FOP, 66; XXV, 1498
- Uinta C horizon, CAL, 156, 303, 304
- Uinta County, Utah, section eastward
along line from Big Cottonwood
Canyon, type section of Park City
formation to Ashley Creek, XXIII,
84
- Uinta element, XXVIII, 301
- Uinta fault, XIV, 1030; XXVII, 430
- Uinta formation, XXV, 141
- Upper, SC, 17; XX, 1563
- Uinta Mountains, Utah, XXIII, 85
- geologic reconnaissance of, with spe-
cial reference to phosphate, XXIII,
82
- Jurassic in, XXI, 720
- Park City beds on southwest flank of,
XXIII, 82; discussion, XXIII,
1249
- primary source of Tertiary sediments
in Vermilion Creek area, XIV, 1027
- sections of Woodside shale, Phos-
phoria formations, and Weber
formation in, XXIII, 97
- Uinta thrust fault, X, 108
- Uinta uplift, GAS, 354; XIV, 1027;
XXVII, 430
- probable source of sediments in
Powder Wash area, XXII, 1044
- Uintahite in Oregon, XI, 398
- Ulrich, Edward Oscar, GAS, 440; I, 31;
III, 235, 290; V, 147, 149, 150, 151,
549; VII, 612, 690; VIII, 457, 622,
XI, 969, 970, 972, 1308, 1316, XII,
152, 184; XIII, 455, 562, 570, 594,
1213, XIV, 618, 801, 1494, 1497,
1546, XV, 175, 818, 827, 1006,
1017, 1018, 1025, 1060, 1061, 1063;
XVI, 632; XVIII, 569, 577, 582,
972, 975, 982, 985, 989, 993, 996,
1013, 1028, 1031; XIX, 1117, 1118,
1119, 1120, 1123, 1128, 1268; XX,
301, 303, 305, 483, 485, 486, 929,
980, 982, 1114; XXI, 2, 5, 1147;
XXII, 1534, 1535; XXIII, 595,
1181, 1182; XXIV, 154, 1650, 1652;
1653, 1657, 2151; XXV, 654, 673,
675, 689, 1218, 1626, 1635, 1641;
XXVI, 4, XXVIII, 1626; XXIX,
13
- biographical sketch of, XX, 1267
- memorial of, XXVIII, 687
- Ulrich, Edward Oscar, and Bassler, R.
S., VIII, 546
- Ulrich, Edward Oscar, and Winchell, N.
H., XIX, 1114
- Ulrich field, XXVII, 745
- Ulrich's correlations for Oklahoma,
XIX, 1122
- Ultimate peneplanation, phenomena of,
XXVI, 783
- Ultra violet studies of source beds,
SBP, 402
- Ulysses pool in Pennsylvania, XXIV,
972
- Umbgrove, J. H. F., XXIII, 1583;
XXV, 411, 412
- geological history of East Indies,
XXII, 1
- Umbgrove, Professor, XXI, 554, 555,
557
- Umbgrove's idioegocline, XXI, 555
- Umbgrove's polyegocline, XXI, 554
- Umr formation, XXIX, 1090
- Umpleby, Joseph B., VII, 625, IX,
1069; XX, 616; XXIX, 1151
- Dougherty asphalt deposits; oil-
stained sands at Center, Okla-
homa; possible importance of
minor fractures in migration, XX,
616
- Umpleby, Joseph B., Westgate, Lewis
G., and Ross, Clyde P., XVII, 118
- Uncertainties, significant, in Pennsylv-
anian correlation in Illinois coal
basin, XXIII, 1507
- Uncompahgre uplift, PROB, 682
- Unconformable contact between Odo-
vician and overlying sediments in
Nemaha Mountains region, Kan-
sas, STR I, 72
- between Pennsylvanian and under-
lying Chester rocks in Basin fields,
Illinois, XXIII, 1498
- Unconformable overlap of upper Art-
insk limestone on Sakmarian,
XXIV, 257
- Unconformable sands, reservoirs due to,
XXIX, 1748
- Unconformities, GAS, 12-15, 45, 62,
106, 126, 127, 149, 176, 192, 193,
197, 233, 329, 331, 346-348, 351,
366, 390, 401, 424, 460, 486, 487,

(Unconformities)

- 516, 579, 585, 587, 626, 627, 692, 748, 749, 751, 754, 760, 762, 780, 782, 793, 821, 835, 847, 854, 872, 876, 878, 883, 884, 887, 889, 917, 953, 954, 956, 958-960, 1083; MEX, 7, 8, 13, 33, 104; PROB, 133, 172, 223, 295, 367, 393, 402, 411, 431, 510, 512, 567, 592, 597, 612, 668, 691, 692, 786; XVII, 550, XXI, 1567
- above and below Mississippian beds of north-central Texas, XXIV, 71
- Alaska, VI, 295
- angular, MSC, 158
- angular, at Sugarland field, GC, 723; XVII, 1376
- angular, and paleontologic criteria used in differentiation of Cambrian, Ordovician, and Silurian systems, XXIV, 287
- Appalachian, VII, 60
- Arizona, New Mexico, and Texas, X, 822, 823, 831, 834, 851, 855
- Arkansas, X, 11
- associated with reservoirs on salt structures, PROB, 674
- association among criteria of, XXVI, 57
- at base of and within Pennsylvanian in trans-Pecos Texas, FOP, 102; XXV, 1534
- at base of Cretaceous, Jurassic, Pennsylvanian, and Mississippian in North and South Dakota, FOP, 76; XXV, 1508
- at base of Mississippian, PROB, 765
- at base of Pennsylvanian, PROB, 767, 769
- at base of Pontotoc formation of Pennsylvanian and of Chattanooga shale in Anadarko-Panhandle region, FOP, 89; XXV, 1521
- at top and base of Mississippian lime in South Burbank area, XXI, 561
- below and above Hueco limestone of Wolfcamp series in Baylor Mountains, Sierra Diablo area, sections, PTNM, 562; XXVI, 562
- below and above Wolfcamp series in Glass Mountains, XXIII, 1674
- Belridge field, PROB, 197
- beneath and above Pennsylvanian in Bowers field, XXVII, 37
- best time markers in South Permian basin, XXV, 80
- between San Andres and Whitehorse, Whitehorse and upper Castile, and upper Castile and Rustler groups, XXIV, 55
- between upper San Felipe and Cenomanian or Albian, MEX, 61, 62
- Big Lake field, PROB, 353
- Big Snowy Mountains, VII, 7
- buried hills in relation to, X, 426, 1036, 1065
- Caddo field, Louisiana, STR II, 183, 188, 195
- caliche as criterion of, GC, 577; XVII, 515
- California, VI, 306; VII, 414-420; VIII, 41, 792, 793, 795, 796, 798, 802; IX, 233, 997, 998; X, 488, 502, 507, 717, 719, 755, 759, 762, 897, 898
- Carpethians, VI, 526
- Chattanooga black shale, Kentucky and Tennessee, VIII, 627
- Chico Martinez Creek area, XXVII,

(Unconformities)

- 1371
- China, X, 1079, 1086, 1091, 1093
- classification of criteria of, XXVI, 60
- Colombia, X, 402
- connected with zones of secondary solution, XXIX, 1540
- criteria for determining time of, XXII, 849
- criteria for subsurface recognition of, XXVI, 36
- Cuba, VIII, 518
- defined, PROB, 761
- Djasky-Karagal and Sakmara regions in Urals, XXI, 1444
- East Texas field, XVII, 776
- effect of, on migration of oil and water, VIII, 705, 706
- Egypt, X, 434, 439
- fields associated with major, PROB, 319
- Germany, IX, 421, 431; X, 414
- Glass Mountains section, PTNM, 644; XXVI, 644
- Gulf Coastal region, VII, 380, VIII, 24-26
- importance of, to oil production in San Joaquin Valley, California, PROB, 785
- importance of stratigraphic position, XXI, 1243
- in California Tertiary, MSC, 158
- in Cretaceous, PROB, 778
- in Eocene, SC, 27, XX, 1573
- in Eocene beds in California, XXIV, 1943
- in Gulf series, XI, 15
- in late Paleozoic in North America, XIX, 1265
- in Mississippian system between Kinderhook and Osage groups and between Meramec group and Chester series, XXIV, 775
- in Oklahoma and their importance in petroleum geology, III, 253
- in Ordovician of Oklahoma and Kansas, PROB, 763
- in Pecan Gap chalk, XVIII, 1528
- in Permian redbeds, XXI, 1559
- in post-Fleming formations in coastal Texas and Louisiana, GC, 436; XIX, 655
- in relation to boundaries between systems, XXIV, 288
- in Ozarks and in western Missouri and eastern Kansas, XXV, 1633
- in rocks of Ozark Mountains, FOP, 91; XXV, 1523
- in Soledad conglomerates at Buckeye field, GC, 752; XIX, 396
- in stratigraphy of central Colorado, XVII, 353
- in stratigraphy of Front Range in Colorado, XVII, 381, 390, 393
- in Tertiary in Harris County, Texas, XXIII, 148
- in Tertiary and Upper Cretaceous beds in Alabama and Georgia, XXVIII, 1731, 1738
- in Upper Cretaceous series of Texas, XIII, 1323
- Indiana, IX, 323
- interference with geological concepts formed during exploration, XXII, 569
- irregular surfaces, X, 1066
- Jesse pool, XXII, 1565, 1568, 1569
- Kansas, VI, 75, 183; VIII, 448, 451; IX, 814, 1063, 1069, 1209, 1210; X, 205, 214, 1303, 1304

(Unconformities)

- Kentucky, VIII, 627
- Kevin-Sunburst field, Montana, STR II, 259, 263
- limitations of subsurface data with reference to, XXVI, 61
- Little Rocky Mountains, VII, 7
- local and regional in Gulf Coast region, XXIX, 1322
- Long Beach field, VIII, 408
- Lost Soldier district, Wyoming, STR II, 642
- Lost Soldier dome, Wyoming, VII, 576
- Louisiana, IX, 750; X, 235
- lower Paleozoic, discussion, XIV, 947
- major, at base of Miocene, Eocene, Triassic, and Permo-Pennsylvanian, and at top and bottom of Jurassic in North and Middle Parks, Colorado, FOP, 59; XXV, 1491
- marine, RMS, 227
- marine, marine conglomerates and thicknesses of strata, XX, 677
- Mexico, IX, 111, 144; X, 442, 673
- Michigan basin, effects of, PROB, 546, 549, 551
- Mid-Continent, sketch to show accumulation found above, XXIV, 2026
- Mid-Continent region, relation of oil and gas pools to, PROB, 761
- Missouri-Kansas-Oklahoma, IX, 1069
- Moab region, Utah, XI, 787
- Montana, PROB, 697; VII, 7; IX, 894; X, 993
- multiple criteria of, XXVI, 58
- New Zealand, X, 1231, 1239, 1246, 1247
- north-central Texas region, XXIV, 99
- Northwest Basin, Australia, XX, 1032
- observed associations among some criteria of, XXVI, 58
- oil fields in limestones or dolomites associated with, PROB, 317
- oil production associated with, FOP, 3; XXV, 1435
- Oklahoma, III, 253; V, 33, 34, 406, 471, 579; VI, 12, 15, 55, 70; VII, 577, 628, 631, 641; X, 140
- on local folds, XI, 817
- paleontologic criteria of, XXVI, 53
- Patagonia, IX, 181
- Pennsylvanian, X, 1303
- Persia, X, 430
- petroleum deposits important at, X, 422
- Pine Island field, VII, 381
- Portuguese West Africa, VII, 479
- Rawlins-Lost Soldier district, VII, 138, 139
- regional, geologic conditions revealed below, XX, 527
- related to limestones, PROB, 513
- relation of oil and gas to, PROB, 768, 781
- relation to oil accumulation, PROB, 294, 295, 339, 383, 520, 793
- relationship of, to oil and gas accumulation, XXIV, 2022
- Rocky Mountains, VII, 62, 64
- Role of, STR II, 692
- San Joaquin Valley, PROB, 792; VIII, 31; XI, 615
- sedimentary criteria of, XXVI, 39
- significance, STR II, 695
- Simpson formation, VII, 558
- Smith-Ellis field, Texas, STR II, 559

(Unconformities)

- stratigraphic traps associated with, XXVI, 36
- structural criteria of, XXVI, 56
- Sugarland dome, GC, 722; XVII, 1375
- terraces not necessarily indications of, X, 908
- Tertiary, PROB, 782
- Texas, VI, 323, VIII, 432, 638; IX, 556; X, 11, 369, 371, 372, 375, 380, 381, 463, 877, 881, 984
- Texas Gulf Coast section, XXIII, 1616
- time intervals represented by, XXIII, 1088
- Trinidad, IX, 1002
- Turner Valley, PROB, 161
- Urals, XXI, 1444
- Utah, VI, 208, 223; VII, 391-393
- Valle Grande, California, XIII, 234
- Wisconsin, VII, 656
- Yates dome, XIII, 1520
- Unconformities and overlaps in Permian section from Texas to Nebraska, XXIII, 1701
- in shelf areas in West Texas, PTNM, XXVI, 622
- in western Canada, FOP, 19, XXV, 1451
- Unconformity, MSC, 164
- above Dominguez surface, XI, 419
- above Exline limestone, XXV, 32
- above La Cira formation, XXIX, 1100
- above *Marginulina* zone in Jennings field, XXVII, 1107
- above or below Oriskany formation, XXII, 554
- above Vicksburg at Eola field, XXV, 1371
- above Wapanucka, XXV, 1669
- above and below Sundance formation, XXI, 746
- Anadarko basin, XXI, 1527
- angular, at base of Custer, XXI, 440, 442
- angular, between Heath sandstones and Ellis formation, XXVII, 1304
- angular, between Tertiary and Triassic in Tupungato field, XXVIII, 1462
- angular, in Fairport field, Kansas, STR I, 37
- angular, in Illinois Basin at base of Chester, XXIII, 1503
- angular, of Travis Peak formation on Pennsylvanian, XXIII, 639
- at base of *Cadoceras* zone, XXIX, 1022
- at base of Cayugan in eastern basin, XXII, 1541
- at base of Chattanooga shale in Kentucky, XVI, 236
- at base of Chattanooga shale in Oklahoma-Arkansas region, FOP, 91; XXV, 1523
- at base of Corsicana marl, XXV, 638
- at base of Cretaceous in northern Mid-Continent, FOP, 84; XXV, 1516
- at base of Custer group, XXI, 1566
- at base of Custer group or base of Marlow, XXI, 1571
- at base of Eocene Wasatch formation, FOP, 56; XXV, 1488
- at base of Gulf series, Schuler field, XXVI, 1475
- at base of Hartshorne sandstone, XXI, 1410

(Unconformity)

- at base of Lower Cretaceous in Oklahoma and Arkansas, XI, 447
- at base of *Marginulina* zone in Tepetate field, XXII, 294
- at base of marine facies of Providence sand, XXII, 1652
- at base of Marlow, XXI, 1562
- at base of Minnelusa, XXVI, 1564
- at base of Navarro group, XXV, 638
- at base of Olean in Bradford field, Pennsylvania and New York, STR II, 411
- at base of Paleozoic in western Canada, FOP, 19; XXV, 1451
- at base of Pennsylvanian, XV, 113
- at base of Pennsylvanian in east-central United States, XXII, 1541
- at base of Pennsylvanian in Glenn pool, Oklahoma, XI, 1056
- at base of Pennsylvanian in northern Mid-Continent, FOP, 84; XXV, 1516
- at base of Pennsylvanian in Ohio, XI, 1026
- at base of Pennsylvanian in Oklahoma, XXI, 1010, 1011
- at base of Pennsylvanian of Chester section, XXII, 76
- at base of Permian in Diablo Plateau, FOP, 104; XXV, 1536
- at base of Permian in Oklahoma and Kansas, XXI, 1520
- at base of Permian system, XXIV, 350
- at base of Pleasanton, XXV, 41
- at base of Porcellanite beds in Trinidad, XXIV, 2107
- at base of Quartermaster in Weatherford area, Oklahoma, XII, 712
- at base of Reynosa formation in Laredo district, Texas, STR I, 391
- at base of Seminole formation, XXIV, 721
- at base of shoestring sandstone in lower Pleasanton of Blue Springs gas field, XXV, 31
- at base of Swift formation, XXIX, 1291
- at base of Triassic, XXVI, 385
- at base of upper Castile formation, XXIV, 49
- at base of upper Eocene, Peru, XII, 16
- at base of Whitehorse formation, Oklahoma, XXI, 1534, 1560, 1561; XXIII, 698
- at base of Whitehorse group in Texas and Oklahoma, PTNM, 707; XXVI, 707
- at base of Wolfcamp, XXIII, 1708
- at base of Woodbine, XXIX, 183
- at base of Word formation in Glass Mountains, XXIII, 1705
- at base and at top of the Ellis, XXI, 731
- at Cane River-Wilcox contact in Eola field, XXV, 1381
- at close of St. Peter time on west side of Cincinnati arch, XXIII, 1837
- at contact of Comanche and Triassic in Big Lake field, Texas, STR II, 515
- at contact of Lower salt beds with Big Lake lime in Big Lake field, Texas, STR II, 515
- at contact of Triassic and Double Mountain formation in Big Lake field, Texas, STR II, 515
- at Rock Crossing, Texas, XXI, 526

(Unconformity)

- at top of Hess limestone member of Leonard formation in Glass Mountains, PTNM, 643; XXVI, 643
- at top of Lower Cretaceous in Oklahoma and Arkansas, XI, 451
- at top of Monterey, in Santa Maria Valley field, XXII, 715
- at top of Monterey formation in Santa Maria Valley, XXIII, 62
- at top of Paleozoic in Mississippi, FOP, 152; XXV, 1584
- at top of San Andres formation, XXVII, 492
- at top of Tejon formation, XXVII, 1364
- at top of Trenton in Lima-Indiana, district, discussion, XIII, 688
- at top of Turkey Mountain lime, STR I, 217
- at top of Whitsett, GC, 487; XVII, 1311
- at Upper Cretaceous-Paleozoic contact in Tennessee, FOP, 153; XXV, 1585
- Bellevue field, Louisiana, STR II, 231
- below Trabuco formation, XXVI, 167
- below and above phosphatic chalk at Prairie Bluff, XXI, 806
- below Pennsylvanian in Jacksonville gas field, XXIII, 818
- below *Pseudoschwagerina* zone in trans-Pecos Texas, XXIV, 320
- between Abo and the Magdalena in New Mexico, XIII, 651
- between Alazón and Chapapote, MEX, 120
- between basal Kootenai formation and top of Ellis, FOP, 42; XXV, 1474
- between Beekmantown and Chazy sediments in Ontario, FOP, 109; XXV, 1541
- between Bend and Strawn formations, XXI, 1017
- between Big Lume of buried ridge and overlying beds at Petrolia field, Texas, STR II, 555
- between Bisbee and Cabullona groups, XXVIII, 1189
- between Black River group and St. Peter and Lower Magnesian groups in Ohio, XXIV, 684
- between Buckner formation and Smackover limestone, XXVI, 1475
- between Caballero formation and Alamogordo member of Lake Valley formation, XXV, 2122
- between Carrizo and Wilcox formations at Mount Sylvan dome, GC, 1047; XIII, 1366
- between Castile and Salado, XXVIII, 1608
- between Chazy and Black River-Trenton sediments in Ontario, FOP, 109; XXV, 1541
- between Chester and Pottsville, XXIX, 132
- between Chico and Panoche in Mount Diablo, XXVIII, 484
- between Clerbo and overlying Neroly near Discovery Gulch, XXV, 241
- between Cotton Valley formation and Smackover limestone, XXVI, 1475
- between Cretaceous and Tertiary sediments in North Carolina, XXII, 807
- between Cypress formation and

(Unconformity)

- Paint Creek formation, XXIV, 216
- between Delaware formation and Bone Springs limestone, XIII, 995
- between Des Moines and Missouri series, XXV, 1661
- between Devonian and Mississippian, XXV, 2110
- between Dona Ana member and Pennsylvanian, XXV, 2137
- between El Reno group and Clear Fork, XXV, 84
- between Ellenburger dolomite and Strawn beds in Cooke County, Texas, XXIII, 853
- between Ellis formation and Madison limestone in Montana, FOP, 42; XXV, 1474
- between Eocene and Miocene in California, XXV, 197
- between Frio beds and Greta sand, XXV, 313
- between Hertha and Worland limestones, XXV, 70
- between *Heterostegina* and Vicksburg in Orange field, GC, 893; XX, 544
- between Kinderhook and Osage along western border of Eastern Interior basin, XXIV, 792
- between Kinderhook shale and Mississippian limestone, XXIII, 649
- between Kinderhook shale and Ordovician, XXIII, 649
- between Kinderhook shale and Viola limestone, XXIII, 649
- between Leonard and Wolfcamp in Glass Mountains, XXVI, 229
- between lower and middle Chester, XXII, 277
- between lower and upper Sundance sediments, XXI, 768
- between Lower Cretaceous and Upper Cretaceous in Sugar Creek field, XXII, 1509
- between lower Tuscaloosa and upper Tuscaloosa, XXVIII, 40
- between Meramec group and Chester series most important stratigraphic break within the Mississippian system in Eastern Interior basin, XXIV, 819
- between McMurray formation and underlying Devonian and Silurian, XXII, 1137
- between middle and upper Chester, XXII, 279
- between Midway and Arkadelphia in Lisbon field, XXIII, 297
- between Miocene and Pliocene in California, XXV, 200
- between Mississippian and Pennsylvanian, XXIX, 132
- between Mississippian and Pennsylvanian in Breckinridge County, Kentucky, XXII, 284
- between Mississippian and Pennsylvanian in Sacramento Mountains, XXV, 2111
- between Missouri and Virgil series, XXV, 1661
- between Monterey and Franciscan in Santa Maria Valley, XXIII, 67
- between Morrow and Des Moines series, XXV, 1661
- between Morrow and Lampasas beds, XXIX, 161
- between Navarro group and overlying Midway group, XXV, 638

(Unconformity)

- between Oligocene beds and Ocala limestone in Florida, XXVIII, 1731
- between Ordovician and Mississippian in Llano Estacado, FOP, 97; XXV, 1529
- between Ordovician and Silurian on Gaspé Peninsula, FOP, 123; XXV, 1555
- between Pennsylvanian and Mississippian in Tri-County field, Indiana, STR I, 25
- between Pennsylvanian and Permian in Sacramento Mountains, XIII, 960
- between Permian and Pennsylvanian in Edwards plateau, FOP, 99; XXV, 1531
- between Permian and Triassic strata in Colorado River Salt Basin, FOP, 67; XXV, 1499
- between plant-bearing clays and overlying sands at Lamberts Station, XXIII, 1558
- between Prairie Bluff and Ripley formations, XXII, 1651
- between Prairie Bluff chalk and Midway group of Eocene, XXII, 1643, 1644
- between pre-Cambrian and basal Paleozoic in Ontario, FOP, 109; XXV, 1541
- between pre-Cambrian and Triassic or Jurassic near Uinta Basin, FOP, 66, XXV, 1498
- between pre-Cambrian complex and Middle Ordovician in central Ontario, FOP, 114; XXV, 1546
- between Renault formation and Bethel sandstone, XXVIII, 70
- between St. Joe formation and Chattanooga formation, XXIII, 337
- between San Cayetano formation and overlying Viñales limestone, XXVII, 1517
- between Santa Margarita and Sisquoc, XXIII, 62
- between Selma chalk and Prairie Bluff chalk, XXII, 1643
- between Silurian and Devonian rocks in Cushing field, Oklahoma, STR II, 403
- between Sisquoc formation and Monterey, XXIII, 61
- between Tamesí and upper San Felipe or basal Méndez, MEX, 83, 90
- between Tepee Creek sediments and anorthosite, XXV, 298
- between Tombigbee sand and Selma chalk, XXII, 1641
- between Triassic and Cretaceous in Wasson field, XXVII, 487
- between Tuscaloosa formation and Eutaw formation throughout eastern Gulf region, XXII, 1641, 1643
- between Tyner-Hominy series and Turkey Mountain lime, section showing, XI, 943
- between Upper Pennsylvanian and underlying Bend series in north Texas, XXIII, 845
- between Wasatch formation and overlying tuffaceous beds of early basic breccia, XXV, 2042
- between Whitehorse and Dog Creek shale, XXI, 466
- between Whitehorse dolomites and underlying Word-Leonard section, XXIV, 135

(Unconformity)

- between Wilcox and Carrizo, XXIX, 1321
- between Wolfcamp and Leonard series, PTNM, 648, XXVI, 648
- between Wolfcamp beds and underlying rocks in Mid-Continent, XXIV, 282
- Cat Canyon field, California, STR II, 20
- characteristic, between Cretaceous and Tertiary in Monroe, Richland, and Jackson gas fields, typical section showing, XXIV, 2027
- Chazy-Sylvan, at Big Lake, Texas, discussion, XIV, 1227
- coastal, sketches showing progressive development of, XXIV, 2029
- Cretaceous-Eocene, of Venezuela, XIII, 617, 618
- Crinerville field, Oklahoma, STR I, 196, 201; XI, 1071, 1072
- Cunningham field, Kansas, XXI, 508
- Cushing field, Oklahoma, STR II, 398, 404
- definition, XXIV, 2022; XXVI, 37
- doctrine of, XXVI, 766
- doctrine of, as key in interpreting geological processes, XXI, 1102
- doctrine of, limitations, XXI, 1105
- Dry Lake section between Bendian and Desmoinesian rocks, XXIX, 1155
- Dry Lake section, Brazer and Wells formations separated by, XXIX, 1154
- East Texas field, XXI, 1084
- eastern Ohio oil fields, STR I, 139
- Eldorado field, Kansas, STR II, 162, 163
- erosional, at East White Point field, XXV, 1991
- erosional, at top of Lower Mississippian in Illinois, XXIII, 815
- erosional, between Rundle and Banff formations, XXVII, 44
- Florence field, Colorado, STR II, 78, 79
- found at base of Mississippian in oil fields of Mid-Continent, section showing type of, XXIV, 2026
- Foxen-Sisquoc, XXIII, 61
- Garber field, Oklahoma, STR I, 179
- Glenn pool, Oklahoma, STR I, 241
- Grass Creek field, Wyoming, STR II, 631
- great angular, at base of Quaternary in Tupungato field, XXVIII, 1459
- Greta, XXIV, 1821
- Hewitt field, Oklahoma, STR II, 291, 293, 295
- Homer field, Louisiana, STR II, 202, 218
- Illinois basin, pre-Pennsylvanian, XXII, 656
- in Carboniferous of Moscow coal basin, XXIX, 133
- in Colorado group in eastern Colorado, XIV, 789
- in Middle Devonian in Michigan, XXI, 319
- in Tertiary in Elk Hills field, California, STR II, 48
- Lance Creek field, Wyoming, STR II, 605
- limestone porosity associated with, XII, 1158
- local, under deltaic conditions at Dog Creek-Whitehorse contact, XXI, 1560

(Unconformity)

- marked, at base of Permian in West Texas, XXIV, 13
- Mallow-Dog Creek-Blaine, XXI, 1547
- Maintinsville field, Illinois, STR II, 132
- Méndez on El Abra, MEX, 62
- necessity for correct identification and interpretation of, XXVII, 914
- New York oil fields, STR II, 274
- northwestern Colorado, STR II, 99
- Oceanic-Scotland, in Barbados, age of, XXIV, 1588
- Ochoa-Guadalupe, XXV, 1727
- of Cairizo on underlying Indio formation in Rio Grande section, GC, 600; XIX, 1369
- of Illinois basin on Pennsylvanian, XXI, 783
- of McLure shale with underlying Santa Margarita sandstone, XIV, 405
- of McMurray formation on Devonian, XIX, 156
- of Meemac formation on Osage, XXI, 1159
- of Tampa limestone on Byram mail in Florida, GC, 406, XVII, 636
- on Alamo Creek near Santa Barbara Potrero, SC, 94; XX, 1640
- Orange field, GC, 892, XX, 543
- Permian-Triassic, in East Indies, XXII, 7
- Pine Island field, Louisiana, STR II, 171, 175
- post-Comanche — pre-Woodbine, XXIX, 178
- post-Mississippian, Cunningham field, Kansas, XXI, 513
- post-Pontotoc, XVI, 124
- pre-Pennsylvanian, XXIX, 132
- pre-Pennsylvanian, Eastern Interior basin, XXIV, 847
- pre-Pennsylvanian, Nebraska, FOP 80; XXV, 1512
- problem of determining time of, XXII, 835
- Unconformity, Quartermaster, of Weatherford area, Oklahoma, XXII, 110
- discussion, XXI, 1529
- Unconformity, regional, between Woodbine and underlying Lower Cretaceous Washita group, XXIX, 171
- reports of, between Franciscan and Knoxville due to misinterpretation, XXVII, 208
- San Felipe on El Abra, MEX, 62, 205
- San Felipe on Tamaulipas, MEX, 47, 48
- Scenery Hill gas field, Pennsylvania, STR II, 447
- section showing effect of, on oil accumulation in Texas Panhandle, XXIV, 2028
- Seminole district, Oklahoma, STR II, 321, 324, 325, 329
- silicified shell fragments as an indication of, XV, 1103
- Stephens County, Texas, STR II, 471
- Stephens field, Arkansas, STR II, 3, 5, 9, 12
- submarine, criteria for determination of, XX, 696
- Tuxpan on Mesón, MEX, 138
- typical Tertiary, at top of Wilcox in Louisiana, sketch of, XXIV, 2027
- variations of, in time and place, XXI, 1559

(Unconformity)

- versus discontinuity, XXI, 1564
- within Sundance formation, XXI, 748
- Yates field, Texas, STR II, 486
- Unconformity and faunal changes between Marble Falls and Lampasas, and between Lampasas and Strawn series, XXV, 1663
- Unconformity oil reservoirs, sketch showing four common types of, XXIV, 2024
- Unconformity-trap type of accumulation, XV, 64
- Unconformity zone, Taylor-Eccene, XXII, 1432, 1433
- Unconsolidated rocks, permeability of, XIX, 1233
- Under- and over-thrusting, relationship between, as revealed by experiments, XII, 825, 952
- Underclays, RMS, 483, 489
- Underground circulation, PROB, 281, 837, 839
- Underground gas storage in Ohio, West Virginia, and Pennsylvania, problems of, XXVIII, 1561
- Underground observations, suggestions of new method for making, IV, 83
- Underground oil reserves, estimation of, by oil-well production curves, review, IX, 361
- Underground position of Ellenburger formation in north central Texas, IV, 283
- Underground storage of gas, our experience with, (The Manufacturers Light and Heat Company, Pittsburgh, Pennsylvania), XXIV, 1478
- our experience with, (The Peoples Natural Gas Company), XXIV, 1482
- Underground storage conditions, effects of, on characteristics of petroleum, XV, 455
- Underground storage problems, XXVIII, 1584
- Underground waters, rôle of, in oil accumulation, PROB, 257
- Undersaturation of calcium carbonate in water, in Atlantic, RMS, 376
- of calcium carbonate in water, in Baltic Sea, RMS, 316, 317
- Underthrust fault at Tupungato field, XXVIII, 1476
- Underthrusting at Palestine dome, SD, 261
- Underwriters Producing Company, XI, 467
- Undulatory surface of contact, XXVI, 56
- Unfaulted anticlines and domes, XXVII, 464
- in Montana, XXVII, 436
- in Wyoming, XXVII, 436
- Unfired properties of clays, RMS, 481
- Unger, T., PROB, 41
- Uniform pressures during flow measurements, methods of maintaining, XXVII, 70
- Union Avenue, Edison, and Fruitvale areas, XII, 658
- Union Avenue field, gravity of oil in, XXVI, 1141
- production in, XXVI, 1141
- Union Church area, Bienville Parish, Louisiana, gas in, XXI, 1071
- Union County, Arkansas, oil in, XXVIII, 268
- radioactivity cross section through

(Union)

- Urbana pool, XXV, 1784
- Schuler field, XXVI, 1467
- Union County, Iowa, log of wildcat well, XXIV, 1495
- Union Exploration Company, XIX, 20
- Union field, XXIX, 748
- gravity of oil at, XXVIII, 815
- Union Gas System, GAS, 486, 501
- Union of Socialistic Soviet Republics, divisions of Carboniferous of, XXIX, 133
- Emba salt-dome region, and some comparisons with other salt-dome regions, XXIII, 492
- general correlation of late Paleozoic ammonoid-bearing beds of, with those of western Texas, XXII, 1016
- geophysical methods of prospecting in, XIV, 93, 325
- largest producer of oil in European area, XXV, 369
- map of type region of Permian system in, XXIV, 238
- "omphalotrochus beds" of, are they Permian? Discussion, XXIV, 1128
- reserves, XXVIII, 1497, 1503
- Union of Socialistic Soviet Republics, United States, and South China, correlation chart of Middle and Upper Carboniferous and Permian formations in, based chiefly on fusuline zones, XXIV, 266
- Union of Socialistic Soviet Republics, upward trend of production in, XXVIII, 1493
- Union of Socialistic Soviet Republics, petroleum reserves, XXVIII, 1499
- Union Oil Company, XXI, 979, 981; XXII, 705, 713; XXIV, 1119
- Alexander 4, 10 17 (wells 123-125), Ayres and Parson 2 (well 195), Bell 4, 8-11, 14-17, 19-21, 23-25, 27, 30, 33, 37, 38, 44, 50, 63 (wells 118-123, 126-143), Bryant 1 (well 92), Callender 16, 18, 22, 28, 30, 32, 37, 44, 50 (wells 66-72), Del Rey 1 (well 34), Dorsey 1 (well 194), El Segundo 1 (well 40), Farwell 2, 3, 9, 10, 17, 19 (wells 145-150), F. W. W. 1 (well 181), Hellman 16, 18, 24 (wells 73-75), Howard 2, 4, 8, 9, 13 (wells 113-117), La Merced 29 (well 99), Meyer 6-8, 11, 13 (wells 182-186), Morse 7 (well 192), New Love 51 (well 25), Newell 5A (well 193), Orchardale 1 (well 189), Padelford 4 (well 60), Rosecrans 6, 11 (wells 56, 57), Trust 2 (well 62), Y. L. G. 14 (well 196), SBP, 7, 87-167, 403-406
- Keeran 1 (well 401), SBP, 335-349, 409
- of California, GAS, 118, 154, 178, 180, 201, 213; XXIII, 48; XXIX, 794
- Union Pacific springs, XXVIII, 1213
- Union Producing Company, XXII, 1191; XXIII, 869; XXIV, 1027
- Union Sulphur Company, GC, 1035; SD, 430, 452, 618, 628, 643, 690, 720, 721, 733; XIX, 646; XXIII, 879; XXIX, 797
- Uniontown, Pennsylvania (well 421), SBP, 349-379, 410
- Union Valley formation, XXII, 889, 1567
- (Cuv) (Pennsylvanian), SBP, 259, 261-280, 414

Union Valley sandstone, XXII, 889
 Unionids, XXV, 135
 Uniontown, Pennsylvania (well 421), SBP, 349-379, 410
 Uniontown-Connelville-Latrobe syncline, V, 368
 Uniontown pool, XXVII, 820
 Unionville field, GAS, 834; XXVII, 819; XXVIII, 758
 Unit operation, PROB, 809
 Cabin Creek field, XI, 718
 of oil and gas fields, involving government lands, relationship of geology to, XVIII, 1454
 Schuler field, XXVIII, 230
 Unit plan of operation used at Dominguez field, GAS, 181
 Unit recoveries from Woodbine sand faultline fields in Texas, significance, XXVIII, 235
 relation to spacing, XXVIII, 236
 Unit volume of oil sand, block diagram illustrating, XXV, 1321
 United Carbon Company, XXII, 187
 United Civil Service Commission, XXVI, 1183
 United Drillers and Producers, Inc., XXIX, 695
 United Fuel Gas Company, XXII, 178, 1160
 U-3559 (Burchett 1) (well 430), U-4053 (Heinzman 1) (well 425), U-4390 (Starkey 1) (well 427), SBP, 349-379, 410
 vertical variation of properties in, SBP, 378, 379
 United Gas Company, GAS, 572, 732, 774; XXIII, 283, XXVI, 216
 United Gas Public Service Company, GAS, 895
 United Kingdom, imports of petroleum into, 1938, XXV, 367
 United Light and Power Company, GAS, 863
 United North and South Oil Company (Kelley 1) (well 397), SBP, 292-335, 410
 United Petroleum Company, Decker 1 (well 249), SBP, 255-285, 407
 United States, analyses of high carbon dioxide gases from wells in, GAS, 1068
 annual consumption of natural gas in, GAS, 1127
 annual production of primary mineral fuels in, GAS, 1146
 average annual oil discoveries by successive five-year periods in, XXI, 698
 average annual prices paid for natural gas in, GAS, 1130
 carbon black situation in, GAS, 1116
 carbon-ratio maps of, PROB, 85
 carbon ratios and oil gravities in Rocky Mountain region of, XIII, 1247
 comparative fuel values in, GAS, 1138
 consumption of fuels in, GAS, 1148
 consumption of natural gas in, GAS, 1134
 diversity of opinion and usage in nomenclature and correlation of Permian rocks in, XXIV, 337
 dominant position of, in manufacture of aviation gasoline, XXVII, 989, east-central, Pleistocene in, XXII, 1519
 east-central, stratigraphy and struc-

(United)
 tural history of, XXII, 1519
 eastern, Ordovician in, FOP, 134; XXV, 1566
 eastern, possible future oil provinces in, FOP, 131, XXV, 1563
 eastern and central stratigraphy of, XXVII, 1016
 estimated waste of natural gas in, GAS, 1095
 fuels used in production of electricity in, GAS, 1134
 future of petroleum exploration in, XXI, 706
 gasoline situation in, GAS, 1119
 greatest consumer of petroleum, XXVIII, 1486
 greatest oil-producing nation, XXVIII, 1486
 manufactured gas industry in, GAS, 1142
 map of, showing location of wells and outcrop sections studied in investigation on source beds of petroleum, SBP, 14
 map showing regions producing natural gas, GAS, 1088
 map showing status as to statistics on oil reserves, XXIX, 1582
 microscopic subsurface work in oil fields of, XV, 731
 natural-gas gasoline plants in, GAS, 1120
 natural-gas gasoline statistics, GAS, 1121
 natural-gas pipe lines in, GAS, 1110
 normal geothermal gradient in, XIX, 78
 northwestern, Jurassic of Sundance of, correlated with European type section, XXI, 758
 notes on early history of water-well drilling in, XXVII, 1268
 occurrence of Middle Jurassic rocks in Western Interior of, XXIX, 1019
 of America, proved oil reserves in, XXI, 1088
 United States, oil and gas field development in 1939, XXIV, 1685
 in 1940, XXV, 1942
 in 1941, XXVII, 555
 in 1942, XXVIII, 127
 in 1943, XXIX, 107
 United States, oil fields discovered in, by five-year periods, XXI, 699
 oil fields discovered in, by successive five-year periods, classified as to method of discovery, XXI, 700
 oil supply of, VI, 42
 open-flow capacity of commercial gas wells in, GAS, vii
 Pennsylvanian overlap in, XV, 113
 discussion, XV, 704
 Permian provinces and basins in, XXI, 837
 Permo-Carboniferous orogeny in, discussion, XVII, 91
 petroleum products used for space heating in, GAS, 1144
 policy of, with regard to exports of petroleum to Japan, XXV, 358
 probable petroleum shortage in, and methods for its alleviation, XX, 15
 production and consumption of metered natural gas in, GAS, 1099
 production of carbon black in, GAS, 1136
 production of coal in, GAS, 1140
 production of commercial gases in,

(United)
 GAS, 1139
 records of producing fields of, XX, 525
 rock temperatures and depths to normal boiling point of water in, XX, 270
 source beds in oil fields of, PROB, 58
 sources of natural gas supply in, GAS, 1093
 south-central, Permo-Carboniferous orogeny in, XV, 991; discussion, XVI, 102
 United States, southeastern, developments in 1941, XXVI, 991
 in 1942, XXVII, 990
 in 1943, XXVIII, 801
 United States, southeastern, Oligocene stratigraphy of, XXVIII, 1313
 southeastern, possible future oil provinces of, FOP, 143, XXV, 1575
 southern, oil possibilities of Jurassic formations in, XXVII, 1528
 southern, regional stratigraphy of, XXVII, 1411
 southwestern, decline of Great Basin, XVI, 1
 southwestern, symposium on Pennsylvanian and Permian stratigraphy of, XIII, 883
 structural conditions of oil and gas accumulation in Rocky Mountain region, XXVII, 417
 summary of sedimentary conditions on continental shelf off east coast of, RMS, 230
 tectonic classification of oil fields in, XIII, 409
 tectonic map of, XXIII, 1435; XXVIII, 1767
 United States, U.S.S.R., and South China, correlation chart of Middle and Upper Carboniferous and Permian formations in, based chiefly on fusuline zones, XXIV, 266
 United States, uses of oil in, XXV, 353
 value of natural gas produced in, GAS, 1128
 western, collections of sands from dune areas of, XXIX, 215
 western, correlation of Permian system of, XXV, 437
 Western Interior, map, XXV, 433
 Western Interior, Permian correlation chart, XXV, 436
 United States and Canada, analyses of rich helium and nitrogen natural gases from wells in, GAS, 1062
 extent of Upper Cretaceous sea in, XXIII, 1147
 fields rich in helium, nitrogen, carbon dioxide, and hydrogen sulphide, GAS, 1058
 hydrogen sulphide in natural gas from fields in, GAS, 1071
 map of Rocky Mountain and Great Plains areas showing Upper Cretaceous sea in, XXI, 900
 possible future oil provinces of, FOP, 1; XXV, 1433
 United States and possessions, petroleum of, discussion, XVI, 704
 United States annual production rates, XXVIII, 1488
 United States Army Engineers, RMS, 216, 228
 United States Bureau of Mines, GAS, 1048, 1053; XIX, 799; XXV, 370, 565; XXVII, 1595

(United)

- accumulation-distillation curve of Bradford crude oil in Bradford field, Pennsylvania and New York, STR II, 432
- analyses, PROB, 149, 151
- analyses of crude oils by, XXI, 924
- analyses of Gulf Coast crude oils, XXI, 916
- analysis of Bradford crude oil at Bradford field, Pennsylvania and New York, STR II, 433
- petroleum engineering in the Deaneer oil field, Okfuskee County, Oklahoma, review, V, 687
- United States Bureau of Soils, SD, 212
- United States Coast and Geodetic Survey, CAL, 51; RMS, 128, 181, 221, 230, 231, 237, 246, 248, 251, 254, 257, 258, 267, 268, 278, 280; XXIV, 2143
- prospect of valuable data from submarine gravity determinations of, CD, 202
- United States Coast and Geodetic Survey snapper type sediment cup, XXIII, 12
- United States cumulative production, XXVIII, 1491
- United States Department of Agriculture, RMS, 631, 639
- United States Department of the Interior, SBP, 6
- United States Engineers, XXVI, 1798
- United States Geological Survey, CAL, 33; MSC, 1, 5, 47, 49, 53, 118, Fig. 14 (in pocket); PTNM, 538; PROB 17, 19, 71, 110, RMS, iii, 428, 473, 526, 641; SD, 212, 545, 642, 643; SC, vii, 74; XX, 1533, 1620; XXIV, 275, 301, 306, 2143; XXV, 9; XXVI, 538
- early work of, on quicksilver, XXVII, 254
- foraminifera collected by, along Chico Martinez Creek, MSC, 50
- Haynesville oil field, Louisiana, review, VI, 142
- mapping of Coast Range oil geology, XXVII, 255
- oil supply of United States, VI, 42
- work on shadowgraphic contour maps, XXV, 2163
- United States Geological Survey staff changes, XXIX, 1802
- United States Geological Survey topographic map of part of Addington and Push Springs quadrangles, Oklahoma, showing oil and gas fields, XXV, 14
- of part of Ardmore and Addington quadrangles, Oklahoma, showing oil and gas fields, XXV, 12
- United States government, first geologic work fostered by, XXII, 1250
- George William Featherstonhaugh the first geologist of, XXII, 1254
- United States Government helium extraction plant at Amarillo, Texas, GAS, 1125
- United States lantern slide, standard, illustration, XXVI, 1658
- United States National Museum, MEX, 114; MSC, 91, 184
- United States oil, export of, XXV, 354
- United States paleogeological maps, XVII, 1109, 1111, 1113, 1115
- United States Potash Company, XXIII, 1691
- United States reserves, XXVIII, 1495

(United)

- speculative possibilities of, XXVIII, 1503
- Unitized gas injection, effect on ultimate recovery, XXVIII, 230
- Unitized pressure maintenance, geologic factors in, Jones sand reservoir, Schuler field, Arkansas, XXVIII, 217
- Unitization contracts for oil production, XXII, 1086
- Unity of ocean, RMS, 51, 52
- Universal Consolidated Oil Company, XXIV, 1118
- Trust 2 (well 61), SBP, 87-153, 404
- Universities, more extensive field courses needed for training young geologists in petroleum geology, XXIV, 1388
- University of California, RMS, 48, 416, 454; SC, vii, XX, 1533
- University of Chicago, RMS, 178, 558, 592
- University of Cincinnati, RMS, 179
- University of Illinois, RMS, 219
- University of Texas Bureau of Economic Geology, XXIX, 414
- University of Wisconsin, RMS, 13, 525
- University field, STRAT, 209
- University Geological Museum, Oslo, Norway, RMS, 387
- University Mesa marl in trans-Pecos Texas, XXII, 1430
- University oil field, accumulation of gas, STRAT, 228
- accumulation of oil, STRAT, 220, 221, 229
- analysis of oil, STRAT, 216
- reserves, STRAT, 216, 217, 220
- stratigraphic reservoirs in, East Baton Rouge Parish, Louisiana, STRAT, 208
- Unloading, effect of, PROB, 818
- Unproved areas, review, VI, 481
- Unsapomifiable substances in organic matter in sediments, RMS, 424
- Unsaturated hydrocarbons, production of, by bacteria, RMS, 424
- Updegraff, IX, 931
- Updip drainage, XXVIII, 243
- Updip wedge belts of porosity in southeastern United States, XXVII, 905
- Updip wedge edge of Etchegoin formation, production in Midway-Sunset-Buena Vista province in California in vicinity of, XXVII, 898
- Uperocinus longirostris* zone, XXI, 1162
- Up-fold, controlling structure factor in occurrence of gas fields, GAS, 1082
- Upham, XII, 130
- Upland Terrace deposits, Lissie, and Reynosa of Coastal Plain of Texas, XVII, 453
- Uplift, PROB, 147, 181, 228
- Caddo field, Louisiana, STR II, 189
- central Kansas, XXII, 1589
- differential, in the lime at West Columbia field, Texas, STR II, 464
- early Pennsylvanian, importance in Mid-Continent, XXV, 21
- epochs of, compared with periods of sinking in Gulf Coast, XXIII, 197
- Flat Top, in northwestern Colorado, STR II, 105
- Homer field, Louisiana, STR II, 202
- in east-central United States at end of Pennsylvanian, XXII, 1548
- Llano-Burnet, STR I, 305
- of borders of Illinois basin at end of

(Uplift)

- Paleozoic era, XXI, 775
- of Kankakee arch in Ordovician, XXI, 775
- of structure with intense folding in Whitehorse and Salado time at North Cowden field, Texas, XXV, 615
- origin of, and accumulation of oil at Amelia field, XXIII, 1650
- periods of, in east-central United States, XXII, 1546
- post-glacial, XXIX, 1646
- recurrence of, in Yates field, Texas, STR II, 496
- regional, at close of Delaware Mountain (Capitan) time, XXIII, 1693
- regional, following Calville time in St. George district, XXIII, 124
- relative, PROB, 296, 627
- three periods of, and consequent erosion by ancestral Nueces River at East White Point field, XXV, 1989
- vertical, PROB, 627
- Uplift type of province in Southern California, XXI, 551
- Uplifts in north-central Oklahoma, nature of, XIII, 23
- of vertical uplift type, XXV, 20
- relation to elasticity, XXIX, 1645
- Upp, J. E., and Condra, G. E., XVII, 171
- correlation of Big Blue series, Nebraska, review, XVI, 495
- Upper Blairmore, Turner Valley field, GAS, 45
- Upper Brazil Block coal, XXIII, 1387
- Upper Cambrian and Lower Ordovician subsurface subdivisions in north-central Texas, XXIX, 413
- Upper Castile beds, XXIII, 1676
- Upper Castile formation, XXIV, 26, 35, 49
- unconformable on Whitehorse, XXIV, 26
- Upper Castile salt, XXIV, 61
- Upper chalk group, East Texas, STRAT, 609
- Upper Cherry Canyon of Delaware Mountain group in Texas, ammonoids from, XXVIII, 1644
- Upper Citronelle sands, GC, 436; XIX, 655
- in coastal Texas and Louisiana, GC, 436
- Upper Cretaceous, SC, 11, 95; XX, 1557, 1641
- Cache Creek section of, Yolo County, XXVII, 290
- Carpathians, SD, 93
- Colorado group of, in northern New Mexico, stratigraphy of, XXIX, 232
- divisions of, in west-central Alabama and east-central Mississippi, XXII, 1644
- foraminifera of, at McFaddin Beach salt dome, XXIII, 340
- Great Valley, California, correlation of divisions of, with Texas Cretaceous groups, XXIX, 960
- Great Valley, California, description of zones of, XXIX, 967
- Great Valley, California, stratigraphic relations of, XXIX, 956
- Great Valley, zonal range of most diagnostic foraminifera species in, XXIX, 968
- Gulf region, breaks in deposition of, XXII, 1641

(Upper)

- Gulf region, physical characters of, XXII, 1630
 Louisiana, correlation of, STR II, 208
 of Rocky Mountain area, XXI, 899
 Putah Creek section of, Yolo, Napa, and Salano counties, California, XXVII, 288
 Sacramento Valley, XXIX, 980
 Salt Creek section of, Colusa County, XXVII, 292
 salt-dome region of northern Louisiana, SD, 280
 Santa Ana Mountains, generalized columnar sections, XXVI, 177
 Santa Lucia Range, XXVIII, 471
 Sites section of, Colusa County, XXVII, 294
 southern California, bibliography on, XXVI, 187
 southern California, correlation of, XXVI, 186
 Vermilion area, XXIX, 1627
 western Venezuela and northeastern Colombia, XXIX, 1090
 Wyoming and Montana, XVI, 866
 Upper Cretaceous and Tertiary in New Zealand, divisions of, XXV, 1813
 Upper Cretaceous beds, STRAT, 849
 Upper Cretaceous chalk in cap rock of McFaddin Beach salt dome, Jefferson County, Texas, XXIII, 339
 Upper Cretaceous deposits in Mississippi, XXV, 1601
 of Gulf region and western interior region, comparison of, XXII, 1629
 of northern Santa Ana Mountains, Orange County, California, map, XXVI, 168
 Upper Cretaceous foraminiferal and ammonite fauna, XXIX, 1090
 Upper Cretaceous foraminiferal zones in Great Valley, California, diagrammatic cross sections, XXIX, 997
 in Great Valley, California, diagrammatic map of areal distribution of, XXIX, 995
 Upper Cretaceous formations, correlation of measured sections of, between Putah Creek, Yolo County, and Logan Creek, Glenn County, California, XXVII, 298
 in Mississippi and Alabama, geologic map of, XXII, 1640
 in Mississippi and Alabama, stratigraphic and age relations of, XXII, 1642
 in Sacramento and San Joaquin valleys, California, foraminiferal correlations of, XXIX, 962
 macrofossils in, XXII, 1652
 Upper Cretaceous formations and faunas of southern California, XXVI, 162
 Upper Cretaceous fossils from wells in Mississippi, significance of, XXIX, 1008
 in Gulf and western interior regions of United States, ranges of identical and analogous species of, XXII, 1637
 Upper Cretaceous nomenclature, need for revision, XXI, 912
 Upper Cretaceous oil and gas in Rocky Mountain states, PROB, 171
 Upper Cretaceous paleogeography, SC, 10; XX, 1556
 of Montana, notes on, VIII, 554
 Upper Cretaceous sea, directions of transgression and recession of,

(Upper)

- XXIX, 1007
 in United States and Canada, extent of, XXIII, 1147
 Upper Cretaceous sediments along west side of Sacramento Valley, distribution and locations of measured sections of, map, XXVII, 286
 in Coastal Plain and western interior regions, map showing areas of outcrop of, XXII, 1630
 in eastern Gulf region, XXII, 1639
 in Great Valley, California, source of, XXIX, 1004
 in Gulf and western interior regions, sections of, correlated with European section, XXII, 1631
 Upper Cretaceous series in Mississippi and Alabama, stratigraphy of, XXII, 1639
 Upper Cretaceous stratigraphy of west side of Sacramento Valley south of Willows, Glenn County, California, XXVII, 279
 Upper Cretaceous transgression regarded as more extensive than that of pre-Cambrian, CD, 196
 Upper Cretaceous Umir and Lower Eocene Lisama formations probable source beds of Colombia asphaltic oils, XXIX, 1136
 Upper Cretaceous zones in Great Valley, California, paleogeographic maps of, XXIX, 1000
 in Great Valley, California, paleogeography of, XXIX, 1002
 Upper Cut Bank sand, Cut Bank field, STRAT, 356
 Upper Delaware Mountain sand, XXVII, 754
 Upper Des Moines and lower Missouri series, references on, XXV, 72
 Upper Demolinesian and lower Missourian rocks in northeastern Oklahoma and southeastern Kansas, XXVII, 632
 Upper Devonian, XXV, 691
 Music Mountain pool, STRAT, 495
 Upper Devonian Genesee black shale, outcrop of, across northern New York, XXIX, 286
 Upper Devonian shale, areal variation of reduction number of, in Appalachian region, SBP, 360
 color and nitrogen-reduction ratio of, in Appalachian region, SBP, 368
 organic content of, in Appalachian region, SBP, 362
 Upper Eocene, SC, 19; XX, 1565
 a time of renewed regression, SC, 27; XX, 1573
 climate of, SC, 27; XX, 1573
 Upper Glen Rose and Glen Rose anhydrite at Lisbon field, XXIII, 294
 Upper Gray tuffs, XXVIII, 1460, 1467
 Upper Heavy Oil zone in Ventura Avenue field, GAS, 162
 Upper Helderberg formations, XXIV, 1986
 Upper Magdalena Valley, Colombia, XI, 152
 Upper Miocene, heterogeneity of facies, SC, 40; XX, 1586
 Upper Miocene breccia, SC, 91; XX, 1637
 Upper Miocene diatoms, CAL, 196
 Upper Miocene dolomitic shales, CAL, 197
 Upper Miocene facies, SC, 42; XX, 1588
 Upper Miocene foraminifera, SC, 46;

(Upper)

- XX, 1592
 Upper Miocene intraformational breccia, SC, 99, XX, 1645
 Upper Miocene oolites, CAL, 198
 Upper Miocene paleogeography, SC, 41, XX, 1587
 Upper Mulinia zone, CAL, 235, 236
 Upper Paleozoic of western Australia, bibliography on, XXV, 412
 correlation and paleogeography, XXV, 371, 1809
 Upper Paleozoic section of Chinati Mountains, Presidio County, Texas, XXIV, 180
 Upper Pennsylvanian anhydrite, West Texas, XXVI, 1412
 Upper Permian Ochoa series of Delaware basin, West Texas and southeastern New Mexico, XXVIII, 1596
 Upper Pico clays and silts, XXI, 553
 Upper redbeds division of Permian, graphic section showing, XXI, 1526
 Upper salt beds in Big Lake field, Texas, STR II, 518
 dome in, STR II, 520
 Upper San Andres pay zone, XXV, 1050; XXVII, 756, 769
 Upper San Pedro, CAL, 268
 Upper San Pedro molluscan fauna, SC, 49; XX, 1595
 Upper shale member of Whitehorse in Kansas, XXIII, 1806
 Upper Sonoran, CAL, 264
 Upper Variegated shale of Kettleman Hills, SC, 61; XX, 1607
 correlation of Big Blue, SC, 62; XX, 1608
 Upper Wichita orogeny, XXIV, 101
 Upper Wilnot sand, in Archer County fields, Texas, STR I, 427; X, 466
 Upsala, Sweden, RMS, 5, 25, 312, 313
 Upshur, Rusk, Cherokee, Smith, and Gregg counties, Texas, East Texas oil field, STRAT, 600
 Upshur County, Texas, vertical variation of properties of sediments in well in, SBP, 333
 water analysis, STRAT, 639
 (wells 307-312), SBP, 292-335, 408
 Upson, J. E., RMS, 209
 Upson, M. E., STRAT, 802; XXIV, 126; XXVI, 858
 Upson, M. E., and Cordry, C. D., Silurian production, Shipley field, Ward County, Texas, XXV, 425
 Upthrust at Damon Mound, SD, 742
 in American domes, SD, 204
 of salt produced by compaction, GC, 47; XXVII, 1052
 of salt, south Texas domes, SD, 742
 of salt through lateral compression, SD, 159
 of salt masses of Germany, SD, 142, 153; IX, 417
 of salt masses of Germany, theories, IX, 428
 of salt plugs, SD, 47
 Upthrust nature of East African rifts, XXI, 113
 Upton-Thornton field, review of publication on, VI, 385
 Upward and downward withdrawal of oil and water, comparison of, XXIV, 2174
 Upward migration of oil, XX, 1481
 Upwelling, RMS, 91, 123, 126, 146
 areas of, organic content of sediments

- (Upwelling)
 in, RMS, 446
 as a cause of fog, RMS, 126
 cause of, RMS, 122
 due to wind action, RMS, 125
 effect of, RMS, 126
 in inland seas, RMS, 127
 Ural-Emba region, gas in, XVIII, 755
 Ural Mountains region, sediments of, XXV, 1396
 Ural Permian basin, XXI, 1078
 Ural portal, CAL, 301
 Ural region, subdivisions of Permian of, XXII, 1014
 Ural-Volga district, oil reserves of, XXIII, 956
 Ural-Volga Permian basin, a major oil-producing province, XXIII, 956
 Ural-Volga region, XXVIII, 1503
 Uralian (Ouralian or De Lapparent), ambiguity of term, XXIV, 249
 Uralian beds, XXIV, 245
 Uralian geosyncline, XXI, 1455; XXV, 1400
 Uralian geosyncline and Russian platform, type Permian in, XXIV, 237
 Uralian limestones, XXIII, 957
 Uralian morphology, XXI, 1442
 Uralian orogeny, XXI, 1459
 major factors of, XXI, 1455
 Uralian orthogeosyncline, uplift of, XXV, 1400
 Uralian strata, XXVIII, 1423
 Uralian system, map, XXI, 1440
 Urals, contribution to study of, XXI, 1441
 geologic sections in, XXI, 1442, 1445-1447, 1454
 igneous rocks in, XXI, 1452
 major structural features of, XXI, 1456
 middle and southern, geologic map of, XXI, 1448-1449
 oil in, XXI, 1461
 Ordovician fossils in, XXI, 1443
 orogeny of, XXI, 1439
 Permian basin west of, section, XXVI, 405
 post-Paleozoic in, XXI, 1451
 pre-Ordovician in, XXI, 1453
 southern, Carboniferous and Permian of, XXIII, 500
 southern, Kungurian of, correlative of mother salt of Emba area, XXIII, 497
 southern, Middle Permian of, XXIII, 497
 southern, Permian ammonite zones of, XXII, 1016
 southern, Permian of, XXIII, 497
 southern, pre-salt sediments in, XXIII, 497
 western, and Predualie, scheme of correlation of sections of lower Permian of, XXII, 775
 Urania crude oil, analysis, STR I, 100
 Urania field, Louisiana, GAS, 774; PROB, 782; STR I, 91
 Urania sand, wells, XXVI, 1267
 Uranium and thorium content of shales and limestones, XXIX, 2
 Uranium salts, precipitation of, XXIX, 15
 Urbana, Illinois, RMS, 219, 466
 Urbana pool, Union County, Arkansas, XXV, 1036
 radioactivity cross section through, XXV, 1784
 Urea from organic matter, RMS, 423, 438
- Uien, Lester Charles, XI, 197, XIII, 309; XIX, 884
 oil-well-spacing problem, IX, 193
 petroleum production engineering—oil field exploitation, review, XXIII, 1859
 petroleum production engineering, review, XVIII, 961
 review, XXI, 1500
 Uren, Lester Charles, and Bradshaw, L. J., XIX, 882, 888
 Urganian, XXII, 22
 Urbante formation, XXIX, 1125, 1127
 Urionic acid in sediments, RMS, 443
 Urry, Wm., and Piggot, C. S., XXIX, 1482, 1483, 1485, 1487
 Urschel pool, V, 144, 509, VI, 88, 426
Uruguay, sobre a Bacia Sedimentaria, Gondwanica na Republica do, review, XIX, 126
 Uruguay, petroleum geology of central sedimentary basin of, XIX, 1205
 Uruguay River, PROB, 57
 Urzhumian division, XXIV, 263
 Usage, relative importance in stratigraphic classification, XXIX, 128
 weight of, in defining a system, XXIV, 346
 Uscari fauna, XXVI, 1647
 Uscari formation, mollusks of, XXVI, 1649
 Uscari shales, XXVI, 1647, 1650
 Use of foraminifera in geologic correlation, VIII, 485
 of mechanical sand analyses for correlation purposes, XXI, 1311
 of petroleum, PROB, 2
 of radioactive heat in molecular changes, CD, 94
 of stratigraphic names, XXII, 763
 of temperature measurements for cementation control and correlations in drill holes, XXI, 789
 Useful science, on the disgrace of, discussion, XV, 474
 Usefulness of nitrogen-reduction ratio, SBP, 392, 394
 Uses of gas oil and fuel oil in United States, XX, 48
 of oil in European countries and Japan, XXV, 353
 Uses and products of petroleum, XXVIII, 1485
 Ushinsky, N. G., XVII, 52
 Usiacuri formation, XXIX, 1096
 Usiglio and van't Hoff, XXI, 1126
 Usiglio's sequence, XVIII, 1243
 Utah, PROB, 88, 89, 161, 163, 165, 167, 169, 334, 645, 658, 658, 680, 683, 931, CAL, 125, 257
 analysis of gas from wells in, GAS, 375
 Utah, Arizona, New Mexico, and Colorado, correlation of Jurassic formations of, XXI, 723
 Utah, Box Elder County, GAS, 240
 Utah, Brazier (Mississippian) and lower Wells (Pennsylvanian) section at Dry Lake, Logan Quadrangle, XXIX, 1143
 Utah, Cambrian in, XXIII, 123
 Cane Creek and Shafer domes, XI, 123
 Carbon County, GAS, 381, 382
 carbon dioxide in, GAS, 1066
 Utah, Colorado and northern New Mexico, natural gas in, GAS, 363
 Utah, Cretaceous in, XXIII, 125, 126; XXVII, 858
- (Utah)
 Daggett County, GAS, 327
 development in, XXI, 997
 eastern, and northern Arizona, oil and gas fields and main structural features of, XXIV, 1106; XXVII, 458
 eastern, and western Colorado, Paradox formation of, XVII, 963
 Emery County, GAS, 381, 383
 Eocene in, XXIII, 125, 126
 extension of Clay Basin field in 1938, XXIII, 917
 extensions to old fields, XXVII, 858
 Farnham anticline, GAS, 382
 gas at Farnham, VII, 293
 gas fields in, XXVII, 450, 461
 geologic map of St. George district, Washington County, XXIII, 126
 geologic structure of St. George district, Washington County, XXIII, 121
 geologic structure of southeastern, XIX, 1472
 geology and structure of portions of Grand and San Juan counties, VII, 384
 Great Salt Lake area, GAS, 240
 Green River basin, VIII, 302
 Green River formation, VIII, 663
 helium in, GAS, 1057
 Jurassic in, XXIII, 125, 126
 Middle Jurassic in, XXIX, 1019
 Miocene in, XXIII, 125, 126
 Mississippian in, XXIII, 124, 126; XXIX, 1143
 Mississippian fossils in Moab region, XI, 789
 Moab district, XXI, 1250
 Utah, New Mexico, and Colorado, correlation of Jurassic formations of, XXI, 723
 nitrogen in, GAS, 1061
 northeastern, index map of part of, showing localities of Park City beds, XXIII, 83
 northeastern, to western South Dakota, cross section, XXIII, 1149
 northeastern, to western South Dakota, cross section of Algonkian to Upper Mississippian, XXIII, 1134
 northern, geologic reconnaissance of Uinta Mountains, with special reference to phosphate, XXIII, 82
 northern, Washington, Idaho, and eastern Oregon, natural gas in, GAS, 221
 notes on stratigraphy of Moab region, XI, 785
 oil in, XXVII, 464
 oil reserves, VI, 44
 Park City beds on southwest flank of Uinta Mountains, XXIII, 82; discussion, XXIII, 1249
 Pennsylvanian in, XXIII, 85, 124, 126, XXVII, 858; XXIX, 1143
 Pennsylvanian fossils in Moab region, XI, 790
 Pennsylvanian production in San Juan field, XXI, 1250
 Permian in, XXIII, 124, 126
 Permian fossils in Moab region, XI, 792
 Permian oil, PROB, 165
 Permian sections along east side of Wasatch Mountains from Diamond Fork to Park City, XXIV, 623

- (Utah)
 Permian sections from Mineral Mountain to Fisher Valley, XXIV, 622
 Permian sections from Park City, to Phosphoria Gulch, Idaho, XXIV, 627
 petroliferous Upper Hermosan in, XI, 131
 possible oil in, VI, 244
 Quaternary in, XXIII, 125, 126
 references on Brazer and lower Wells section at Dry Lake, XXIX, 1155
 review of various publications, VI, 383, 384, 386
 San Juan field of, an example of synclinal accumulation, STR II, 704
 section eastward along line from Big Cottonwood Canyon, type section of Park City formation to Ashley Creek, Uinta County, XXIII, 84
 sediments of Great Salt Lake, XXII, 1305
 sediments of Great Salt Lake—comments, XXIII, 1089
 southeastern, geologic formations of, XI, 812
 southeastern, geologic structure of, XIX, 1472
 southeastern, salt domes of Permian and Pennsylvanian age in, and their influence on oil accumulation, XI, 373
 southeastern, structural history of parts of, from interpretation of geologic sections, XI, 809
 southern, northern Arizona, northwestern New Mexico, and southwestern Colorado, correlation of Permian of, XIII, 1413
 southern, stratigraphy of part of, VI, 199
 stocks and laccoliths in, favorable for trapping oil and gas, XXVI, 197
 stratigraphy, VI, 47, 199
 structure, VI, 243
 surface types of oil and gas fields in, XXVII, 457
 thrust faults, X, 106
 Triassic in, XXIII, 89, 124, 126
 Uinta Basin, review, VI, 261
 unconformities in, VI, 208, 223; VII, 391-393
 unconformities in Moab region, XI, 787
 Upper Cretaceous sequence in, XXII, 1631, 1634
 Upper Hermosan in, XI, 123
 Utah, Washington, Idaho, and Oregon, gas in, GAS, 221
 Utah, Woodside anticline, GAS, 383
 Utah and Arizona, Black Mesa Basin, FOP, 70; XXV, 1502
 Mid-Continent Permian compared with Permian of, XXV, 437
 Utah and Colorado, Colorado River salt basin, FOP, 67; XXV, 1499
 hydrocarbons of Uinta basin of, XXVIII, 341
 map showing general features of Colorado River Salt Basin, FOP, 68; XXV, 1500
 map showing general features of Uinta Basin, FOP, 64; XXV, 1496
 nomenclature of Jurassic formations in, XXI, 721
 Uinta Basin in, FOP, 66; XXV, 1498
 Utah and Wyoming, nomenclature of Triassic and Jurassic formations in, XXI, 722
- Utah-Colorado area, formations in, XI, 115
 Utah-Colorado salt-structure province, PROB, 634, 635
 Utah fields, GAS, 381
 producing zones in, XXVII, 457
 Utah Oil and Refining Company, GAS, 381
 Utah Oil Refining Company, 1 (Gebo) (well 205), Kennedy 1 (well 206), SBP, 194-243, 406
 Utah Refining Company, GAS, 384
 Utica group in Ohio, XXIV, 683
 Utica shale, source of oil and gas, PROB, 59, 528; XXII, 94, XXIII, 1179, XXIX, 13
 Utilities Production Company, GAS, 523
 Utilization of dissolved organic matter by organisms in sea, RMS, 440
 of gas, GAS, 641, 768, 837, 1005, 1006, 1087, 1089
 Utterback, D. D., XX, 1402
 Utting, U. P., XXV, 375
 Utz, XXI, 1469
 Uvalde to Mills counties, Texas, log section, XXIV, 102
 Uvalde formation, XVII, 477
 in Coastal Plain of Texas, XVII, 477
 Uvalde gravel, fossils in, XXIX, 1705
 Uvalde gravel formation, GC, 558; XVII, 496
 Uvalde region, Texas, XVI, 762
 Uvalde terrace, part of San Marcos Quadrangle topographic sheet, showing, XXIX, 1706
 Uvalde terrace deposit, XXIX, 1704, 1707
Uvisgerina cocoensis beds, SC, 28; XX, 1574
Uvisgerina cocoensis zone, XXV, 198
Uvisgerina gallowayi zone, MSC, 110, 111, 113, 161, Figs 6 and 14 (in pocket)
 paleontological criteria for recognition of, MSC, 110
Uvisgerina gardnerae-Marginulina cocoensis zone in Edna gas field, XXV, 112
Uvisgerina glabrans foraminiferal faunule, SC, 58, XX, 1604
Uvisgerina hertensis zone, list of fauna from, XXIV, 439
 in Louisiana, XXIV, 438
Uvisgerina-Marginulina zone in Edna gas field, XXV, 112
Uvisgerina peregrina latalata fauna of Middle Pico of Ventura Basin, XXI, 553
Uvisgerina obesa subzone, MSC, 187
Uvisgerina obesa zone, MSC, 116, 117, 153, 162, 163, Table I and Figs. 6 and 14 (in pocket); XXV, 260
Uvisgerina sparsicostata zone, MSC, 108, 111, 152, 161, Figs. 6 and 14 (in pocket)
 Uvisgeriniinae, MSC, 287
 Uwatoko, Kunio, GAS, 1061; PROB, 370, 449
 genesis of oil by high radial axial pressure, XVI, 1029
 Uwatoko, Kunio, sedimentary natural gases from oil and coal fields of Japan, with special reference to their geologic occurrence, XI, 187
 Uzbek Tadjik district, Russia, XXII, 759; XXIII, 951
- V
 Vaca Oil Exploration Company, XXII, (Vaca)
 706
 Vaca Triste sand member of Salado formation, XXVIII, 1610
 Vacaville, CAL, 13, 14, 318
 Vache Grasse anticline, GAS, 566
 Vacherie dome, Louisiana, SD, 222, 264, 269, 274, 275, 290-297; X, 238-245
 Vacquer, Victor, ultimate precision of barometric surveying, XXI, 1168
 Vacuum field, XXIV, 32; XXVI, 1037; XXIX, 751
 Vacuum field and Lovington field production from porous dolomite in San Andres group, XXIV, 34
 Vacuum Oil Company, XIX, 20
 Vacuum pool, XXV, 1063
Vaginulina regina, marker fossil of Brownstown, XXII, 1480
 Vajna, Pawl, XVIII, 742, 925, 927
 Val Verde basin, XXV, 78
 San Andres group in, XXV, 83
 Valanginian, XXVIII, 1088, 1158
 glauconitic rocks in, MEX, 17
 of Mexico and Central America, fossils of, XXVIII, 1089
 Valanginian and Hauterivian limestones in San Luis Potosi, XXVIII, 1140
 Valanginian fossils, MEX, 13, 22
 Valanginian limestones, XXVIII, 1152
 Valdivia expedition, RMS, 50
 Vale formation, XXIV, 42, 57
 Vale-Ontario area, GAS, 223, 238, 239
 Valene, T. J., Survey, Texas (well 353), SBP, 292-335, 409
 Valentin, RMS, 497, 498
 Valentine, Wm. W., MSC, 26, 51, 53, 213, 221
 Valentine, Wm. W., and Cushman, J. A., MSC, 12, 169, 235, 350
 Valentine (LaRose) dome, Louisiana, discovery of, by reflection seismograph, GC, 1040; XVIII, 543
 Valera anhydrite, XXVI, 230
 Valera shale, XXIV, 42
 Valerius, Claude N., and Markley, E. A., Midway field discovery, Lafayette County, Arkansas, XXVI, 1289
 Valerius, M. M., XIII, 157
 memorial of Charles Albert Cheney, XXI, 1617; XXV, 1617
 Valerius, M. M., and Allan, Thomas H., Fairport oil field, Russell County, Kansas, STR I, 35
 Vallaco-Pontian mass, XVIII, 781
 Vallat, Eugene H., XXIV, 1706; XXVI, 1137, 1154
 California exploration and development in 1940, XXV, 1159
 Wasco field, Kern County, California, XXIII, 1564
 Valle Grande, CAL, 44, 52, 100
 California, tectonics of, XIII, 199
 Vallecillo anticline, trend of, GC, 263
 Vallecillo fault, trend of, XVII, 1206
 Vallecitos, California, CAL, 318; MSC, 119, 124, 258
 outcrop section H, SBP, 167-194, 411
 Vallecitos channel in Refugian time, XXVIII, 966
 Valles, Agua Nueva-El Abra contact south of, MEX, 48
 San Felipe beds east of, MEX, 58
 Valles area, folding less severe in, MEX, 160
 Valles syncline, MEX, 46

- Valley of California, CAL, 193
 Valley Center field, Kansas, PROB, 293, 298, 299, 599
 (wells 257, 258), SBP, 255-285, 407
 Valley River, CAL, 183
 Valleys, RMS, 269, 272
 entrenched, RMS, 156
 submarine (See Submarine canyons)
 terraces, RMS, 156
 Valmeyer anticline, XXI, 777; XXIV, 770
 Valmonte diatomite, MSC, 130, 165, 207, 209, 211, 219, 221, 223, 231, 232, 237, 244, 249, 253, 255, 257, 262-264, 267, 270, 272-274, 279, 281-286, 294, 295, 297-299, 309; 317, 319, 320, 324, 327, 330-332, 334, 342, 344, 347, 348, 350, 351, 354, Fig. 14 (in pocket)
 Valuation of natural gas land, principal factors of, III, 378
 Valuation of natural gas properties, GAS, 1011; III, 378; VI, 390, 444
 Valuation of oil and gas lands, review, IX, 356
 Valuation of oil properties, III, 367, 389, 421, 437; IV, 189, 209, 299; V, 484; VI, 56, 388, 390, 483, 533
 essential factors in, III, 367
 Valuation, oil lease, problems of, III, 389
 oil property, XXVI, 1779
 Value of a crude controlled by its composition, XXV, 1169
 Value of oil geology in Mid-Continent field, II, 124
 discussion, II, 131
 Valve lead for sounding, RMS, 639
Valvulineria beds, SC, 36; XX, 1582
Valvulineria californica, CAL, 163, 164, 189, 210, 214-217, 219, 220
Valvulineria californica division of type Monterey, MSC, Fig. 14 (in pocket)
Valvulineria californica zone, MSC, 38, 49, 50, 67, 68, 71, 97, 243, 274, Fig. 14 (in pocket); SC, 122; XVI, 417; XX, 1668; XXV, 231, 235, 238, 239, 250, 260
 at Gould Hills, XVIII, 450
 at Kettleman Hills, XV, 842; XVIII, 467
Valvulineria californica zone faunule, MSC, Fig. 14 (in pocket)
 of Los Sauces Creek, MSC, Fig. 14 (in pocket)
Valvulineria flood zone, MSC, 125
Valvulineria silt, MSC 38, 233
Valvulineria silt sample, MSC, 208, 214, 230, 234, 241, 262, 266, 274, 302, 305, 316
Valvulineria texana zone, XXIII, 1394
Valvulineria zone, MSC, 26, 27, Fig. 14 (in pocket)
 Valvulinidae, MSC, 193
 Vamoosa formation, XXIII, 223
 Dora pool, STRAT, 411
 in Stonewall quadrangle of Oklahoma, XX, 1459
 Van, XVII, 554
 Van Zandt County, Texas, XXII, 733
 Van Baren, F. A., RMS, 469
 van Bemmelen, R. W., XXI, 813; XXII, 53; XXIV, 361, 362
 Van Burch, Lisle Reed, Lupton, Charles Thomas, and Lee, Wallace, oil possibilities of western Kansas, VI, 69
 Van Burgh, L. R., V, 252
 Van Couvering, Martin, XIII, 387; XXIV, 740, 1706, 1714; XXVIII, 1777
 courses of drill holes, XIII, 109
 Van Dail, John E., XVI, 666, 958, 1024; XXIV, 1537
 van Delden, A., PROB, 914, 923; X, 1275, 1278, 1287; XIV, 143; XVII, 53
 Van Delden's medium, XVII, 57
 van der Gracht, Willem A. J. M. van Waterschoot, GAS, 514, 621, 626, 630, 661; MEX, 206; PTNM, 728; SD, 24, 45, 122, 168, 782; SBP, 3; III, 137, IV, 48; V, 49, 58; IX, 349, 854, 864, 1201, 1228; X, 427, 582, 667; XI, 23, 46, 175, 1221; XII, 468, 469, 798, 800, 1058, 1115, 1155; XIII, 25, 34, 169, 958; XIV, 503, 1452; XVI, 1188, XVIII, 261, 568, 575, 577, 581; 585, 586, 596, 993, 1009, 1014, 1031, 1062, 1254, 1260, 1263, 1266; XIX, 1806, 1811, 1816; XX, 485, 486; XXI, 1103, 1107, 1115, 1121, 1146, XXIV, 98, 100, 101; XXV, 3, 6, 8, 10; XXVI, 728; XXVIII, 1506; XXIX, 144
 barrier reefs in West Texas basin, discussion, XIII, 1397
 biographical sketch of, XX, 1265
 conception of continental drift favored, in part, by Molengraaff, CD, 90
 discussion of climatic problems in continental drift theory, CD, 219
 discussion of Gutenberg's theory of continental spreading, XIX, 1816
 discussion of paleontological arguments bearing on theory of continental drift, CD, 224
 discussion of Roumanian salt domes, SD, 123; IX, 1201
 discussion of Voitești's theory of origin of Roumanian salt domes, SD, 123
 discussion of Willis's comparisons of structure of western and eastern North America, XI, 46
 explanation of distinction between rigidity and strength, CD, 199
 explanation of westerly drift, CD, 90
 map of Paleozoic tectonic features in south-central United States, XXI, 1016
 memorial of, XXVIII, 1066
 memorial of Jan Versluys, XX, 1149
 memorial of Josef Theodor Erb, XIX, 309
 occurrence and production of petroleum in Germany, XVI, 1144
 Ouachita boulder problem, discussion, XX, 1125
 Van der Gracht, W. A. J. M. van Waterschoot, Permo-Carboniferous orogeny in south-central United States, XV, 991
 discussion, XVI, 102
 Van der Gracht, W. A. J. M. van Waterschoot, Permo-Carboniferous orogeny in United States, discussion, XVII, 91
 possibility of oil and gas production from Paleozoic formations in Europe, XX, 1476
 pre-Carboniferous exotic boulders in so-called "Caney shale" in Oklahoma, review, XVI, 495
 problem of continental drift, CD, 1
 (Van der Gracht)
 remarks on recent research work on the genesis of petroleum, XIII, 1221
 remarks regarding the papers offered by other contributors to the symposium, CD, 197
 résumé of problem of continental drift, X, 1002
 reviews, XIII, 1404, XV, 557; XIX, 1074
 saline domes of northwestern Europe, I, 85
 search for Paleozoic oil in western Europe, XIX, 1824
 structure of salt domes of northwest Europe as revealed in salt mines, SD, 45; IX, 326
 theory of continental drift, CD, 40
 theory of origin of salt domes, IX, 854
 Van der Ploeg, XXIII, 493
 van der Vlerk, I. M., MEX, 133; XXII, 29
 Van der Vlerk, I. M., and Leupold, XXII, 29, 30, 42
 Van der Vlerk, I. M., and Gorter, N. E., XXIV, 1593
 Van der Waal, X, 903
 Van Duzen sand, XXVII, 465, 1304
 Van Dyke, John W., XXIV, 1361
 Van Es, XXII, 43, 45, 60
 Van field, Van Zandt County, Texas, XXIII, 895; XXVI, 1055; XXVIII, 849
 production in, XXVII, 788
 water analysis, STRAT, 639
 (wells 362-269), SBP, 292-335, 409
 van Gogh, F. A. A., MEX, ix
 Van Gundy, C. E., XXVII, 112; XXVIII, 451, 490, 514
 Van Hise, C. R., IV, 33; VIII, 721; XI, 1285; XV, 210; XX, 279, 714; XXVII, 159
 Van Hise, C. R., and Leith, C. K., XXV, 1624
 Van Horn, Texas, geologic sketch map of area northwest of, showing distribution of older rocks, XXIV, 144
 Van Horn Quadrangle, XXIV, 162
 Van Horn region, Texas, Bliss sandstone in, XXIV, 153
 Carrizo Mountain schist in, XXIV, 145
 classification of rocks of, XXIV, 145
 Millican formation of Richardson in, XXIV, 147
 older rocks of, XXIV, 143
 possible Silurian and Devonian strata in, XVI, 95
 pre-Cambrian in, XXIV, 147
 pre-Ordovician in, XXIV, 143
 Van Horn sandstone in, XXIV, 152
 Van Horn sandstone, age of, XXIV, 153
 faulting in, XXIV, 153
 in Van Horn region, Texas, XXIV, 152
 Van Horn uplift, XXVI, 232
 Van Mills, V, 467; X, 1033
 Van Nuys, California, outcrop section P, SBP, 167-194, 411
 Van oil field, Van Zandt County, Texas, GAS, 668; PROB, 295, 301, 302, 330, 404, 415, 579, 780, 903; XIII, 1557; XXI, 870
 Van Orstrand, C. E., CD, 30; PROB, 987, 991, 994, 1005; RMS, 574, 582; VIII, 717; XII, 765; XIII, 364; XIV, 536, 551, 999, 1005; XV, 830; XVI, 414; XIX, 501, 560; XX, 255, 270, 278, 279; XXI,

- (Van Orstrand)
790, 1193, 1204
memorial of Ailes Francis Melcher, XVIII, 560
normal geothermal gradient in United States, XIX, 78
review, XVIII, 1209
some possible applications of geothermics to geology, XVIII, 13
temperature gradients, PROB, 989
Van Orstrand method of measuring temperatures in deep wells, XIV, 536
Van Patton pool, XXIV, 997
Van Pelt, J. R., Jr., XXIV, 769
Van pool, XXV, 1698
Van Riel's bathymetric chart, XXII, 57
Van structure, PROB, 302
van Suchtelen, F. H. H., PROB, 37
Van Tongeren, W., XXIV, 1607
Van Tuyl, Francis M., GC, 21, 82, 84; PROB, 274, 280, 435; SBP, 3; IX, 1025; XII, 183; XIII, 325, 350, XVII, 1026; XVIII, 1133, 1160, 1178, 1180; XXIV, 1436; XXV, 1656
contribution to salt-dome problem, XIV, 1041
elements of petroleum geology, review, IX, 362
summary of important developments in petroleum geology, 1943, XXVII, 1653
Van Tuyl, Francis M., and Beckstrom, R. C., PROB, 257, 258, 462; XIII, 559
compaction as a cause of migration of petroleum, XII, 1049
effect of flooding oil sands with alkaline solutions, XI, 223
effect of pressure on migration and accumulation of petroleum, X, 917
Van Tuyl, Francis M., and Blackburn, Chester O., X, 713, 1020; XIII, 308, 311, 320, 327, 328; XVI, 1031
effect of rock flowage on kerogen of oil shale, IX, 158
relation of oil shale to petroleum, IX, 1127
Van Tuyl, Francis M., and Leroy, L. W., review, XXVII, 1393
Van Tuyl, Francis M., and McLaren, R. L., occurrence of oil in crystalline rocks in Colorado, XVI, 769
Van Tuyl, Francis M., and Parker, B. H., XXV, 1872
an appeal for cooperative study of time of petroleum formation, XXI, 268
coalification theory of origin of oil and gas, discussion, XVIII, 1547
extraterrestrial hydrocarbons and petroleum genesis, XIX, 900
suggested research on origin of petroleum, XVII, 743
Van Tuyl, Francis M., and Singewald, Quentin D., discoloration of sediments by bacteria, XIV, 626
Van Tuyl, Francis M., *et al.*, review of petroleum geology in 1942, review, XXVII, 1164
review of petroleum geology in 1943, review, XXVIII, 877
Van Tuyl, Francis M., Levings, W. S., *et al.*, review of petroleum geology in 1944, review, XXIX, 1211
Van Tuyl, Francis M., Parker, Ben H., and Skeeters, W. W., migration and accumulation of petroleum and (Van Tuyl)
natural gas, review, XXIX, 460
Van Tuyn, XXII, 64
Van Veen, J., RMS, 345, 347
Van Vleck sands, XXIII, 1634
Van Vleet, A. H., I, 31
Van Weel, XXII, 61
Van Weelden, A., Jr., XVIII, 581; XXII, 3; XXV, 3
Van Werveke, L., XIII, 1258; XXI, 119
Van Zandt County, Texas, XXVIII, 851
Van oil field, XXI, 810 (wells 362-369), SBP, 292-335, 409
Vanadium, PROB, 451
in the blood of Holothuria, RMS, 149
Vanadium oxides, PROB, 241
Vanadium salts, porphyrins in oil in form of, XXVIII, 930
Vanalta oil sand, STRAT, 297
in Red Coulee field, Alberta, ALTA, 41; XV, 1169
Vanalta sand, PROB, 711
Border-Red Coulee field, STRAT, 292, 299, 319
Vance, Harold, memorial of Curtis J. Hesse, XXIX, 1219
Vance, W. R., XIII, 946
Vance well, Delaware County, Ohio, composition of significant groups in, XXIV, 690
Paleozoic and pre-Cambrian rocks of, XXIV, 672
pre-Cambrian section of, XXIV, 688
section, XXIV, 675
Vancouver Island, CAL, 299
Cretaceous coal-bearing sediments in, XXIX, 1398
Metchosin volcanics on, XXIX, 1406
Vander Leek, Lawrence, VIII, 230; X, 699
foraminifera and California petroleum, X, 699
unproved areas, review, VI, 481
Vander pool, III, 212
Vandergriff field, GAS, 436-438
Vandergrift, S. S., XXII, 1098
first oil producer to undertake study of occurrence of natural gas, XXII, 1098
Vanderhoof, V. L., XXVIII, 1007
Vanderpool, H. C., XIII, 519; XIV, 1425; XV, 794, 798; XIX, 1358
discussion of age of San Miguel formation, XV, 798
Pittsburg field, Camp County, Texas, XXIV, 2032
preliminary study of Trinity group in southwestern Arkansas, southeastern Oklahoma, and northern Texas, XXII, 1069
Vanderwilt, John W., XVII, 353, 354; XVIII, 538
stratigraphy of Pennsylvanian Hermosa formation in Elk Mountains, Gunnison County, Colorado, XIX, 1668
Vanderwilt, John W., and Fuller, H. C., XIX, 1670
Vandiver, Vincent W., XXIX, 957
Vanesti tongue, XXIX, 1620
correlation chart of Wainwright Developments well No. 1 and type locality of, XXIX, 1621
Vanoss formation, XXV, 1668
in Seminole County, Oklahoma, XX, 1462
Vanselow, A. P., RMS, 455
Van't Hoff, I, 56; XXI, 1273; XXII, 1285; XXVIII, 1020
van't Hoff and Uagho, XXI, 1126
Van't Hoff, J. H., and Weigert, F., XVIII, 1298, 1310
Vanuxem and Hall, XXI, 311
Vanuxem, Lardner, XV, 673, XXII, 94, 542
Vapor pressure, lowering, of water, RMS, 65, 68, 71
of atmosphere, RMS, 85
relation to rock pressure, depth, and temperature, XIII, 77
Vaporization of petroleum impossible under ordinary geological conditions, discussion, XIII, 83
Vaquero Canyon, CAL, 10, 11, 318; MSC, opp. iii
Vaqueros, MSC, opp. iii, 53, 56, 153, Figs 5, 6, and 14 (in pocket); SC, 77; XX, 1623
a stage of Lower Miocene, CAL, 163, 164
classified as a desert period, CAL, 293
El Potrero de los, MSC, opp. iii
fauna of, XXV, 219
in Caliente Range, XXV, 216
in southwestern Cuyama valley, XXV, 218
in western Cuyama valley, XXV, 218
unconformable upon Cretaceous and Eocene beds, XXV, 219
upper, ecologic change in fauna of, XXV, 223
Vaqueros and Temblor, differences in aspect between, XXV, 227
Vaqueros Canyon, MSC, 118
Vaqueros facies of Zemorrian, MSC, 180
Vaqueros fauna, pre-Miocene age of, MSC, 9
Vaqueros faunule, MSC, Fig. 14 (in pocket)
from Kings Creek, MSC, Fig. 14 (in pocket)
Vaqueros faunules from west of Big Basin, MSC, Fig. 14 (in pocket)
Vaqueros formation, CAL, 149, 152, 153, 156-158, 161, 164, 165, 168, 175, 176, 179, 183, 189, 227, 297, 298; MSC, 1, 7, 9, 32, 33, 39, 61, 69, 72, 73, 78, 85, 88, 89, 91, 97, 109, 111, 112, 114, 118, 152, 161-164, 172, 175, 178, 179, 184-195, 197-199, 203-205, 209-211, 213-229, 232, 233, 239, 240, 242-246, 249, 251-253, 256, 257, 259, 261, 266, 275, 276, 291-296, 302, 306, 311, 316-318, 321-323, 328, 329, 332-334, 336-338, 341-344, 346, 350, 352-356; SC, 60; VI, 306; XX, 1606
Capistrano district, CAL, 166, 168, 169, 176
correlation, CAL, 212, 214, 303
Elwood field, GAS, 167
flexure in, near Santa Barbara, SC, 96; XX, 1642
folds and faults, CAL, 178
fossils of, CAL, 178, 179, 181, 288, 289
Gabilan Range, CAL, 149
Kern Front field, STRAT, 12
Los Angeles Basin, California, X, 756
marine, MSC, 152
of California, what is it and is it Oligocene? XIX, 521
Salinas Valley, CAL, 189
Santa Ana Mountains, CAL, 168
Santa Cruz district, CAL, 169
Santa Maria district, CAL, 166
Santa Rosa Island, CAL, 6, 166, 169,

(Vaqueros)

- 183
stratigraphic classification, CAL, 182
Teyon Quadrangle, XXI, 215
(Tlm) (Miocene), SBP, 95
type locality in Salinas Valley, CAL, 10, 164
typical, MSC, 180
Ventura Basin, CAL, 164
Wheeler Ridge, California, X, 498
Vaqueros guide fossils, XXV, 217
Vaqueros littoral facies, molluscan genera of, MSC, 110
Vaqueros mollusks, MSC, 173
Vaqueros-Monterey contact, MSC, 7
Vaqueros overlap in San Emigdio Mountains, XI, 611
Vaqueros-San Lorenzo contact, MSC, 53, 61
Vaqueros-San Lorenzo series, XXV, 1329
Vaqueros sand, Santa Maria field, California, STR II, 18
Vaqueros sands, PROB, 185, 189, 194, 207, 739, 756, 790
Vaqueros sandstone, MSC, 8, 28, 117, 160, 199, 201, 203, 208, 235, 236, 279, 283, 285, 301, 304, 315, 325, 326, 330, 332, 335, 339, 340, 348, 349, Fig 4 (in pocket); SC, 36, 91; XX, 1582, 1637
along Reliz Creek, MSC, 1
mollusk-bearing, MSC, 112
Vaqueros-Sespe formation, MSC, 100
Vaqueros-Teyon sequence, MSC, Fig 6 (in pocket)
Vaqueros-Tembler transition, MSC, 39, Fig 14 (in pocket)
in Caliente Range, XXV, 234
molluscan fauna, MSC, 153
Vaqueros-Tembler transitional zone, MSC, 23
Vaqueros-Tembler volcanism, XXI, 1341
Vaqueros-type Maricopa contact, MSC, 61
Vardabasso, Silvio, XV, 268
Varela, Pedro, Survey, Texas (well 390), SBP, 292-335, 410
Variability, coefficient of, SBP, 11
Variable frequency selectivity, XXVI, 1137
Variation, areal, of properties of sediments. (See Areal variation)
in interval between base of Rosiclar sandstone and top of Fredonia sandy zone in Clay City, Noble, and Olney fields, cross section showing, XXIV, 230
in load, RMS, 25
in mean grain size, RMS, 172
in physical properties of crude oils, PROB, 97
in section in succession of Coal Measures strata, XXIII, 1377
in sediments as indicated by statistical studies, RMS, 583
in space and time in ocean, RMS, 55
in transportation of detritus, RMS, 18
in value of products, price of crude, and refiner's margin, XXIII, 767
of A. P. I. gravity of fractions with depth and age, XXI, 919
of A. P. I. gravity of Spindletop crude with depth, GC, 330; XIX, 639
of A. P. I. gravity, shift of normal, PROB, 146
of A. P. I. gravity with depth, PROB, 110, 115, 119, 124. (See Gravity of oil, variation)

(Variation)

- of base of crudes, PROB, 129
of Baumé gravity of crude oil with age in Pennsylvania, Ohio, West Virginia, and Tennessee, PROB, 104
of character of crude oil with depth, PROB, 112
of character of Gulf Coast crude oil with age and depth, PROB, 112, 125
of crude oil from heavier to lighter under migration across stratification, GC, 326; XIX, 635
of Eocene Gulf Coast crude oil with depth, PROB, 120, 122
of Gulf Coast crude oil, law of, XXI, 941
of mineral frequency, RMS, 609
of nitrogen-reduction ratio of samples with respect to distance from oil zones, SBP, 152, 240, 282, 330, 347, 377, 386
of Oligocene crude oil with depth, PROB, 120, 121
of organic matter with depth of sediment in Baltic, RMS, 321
of sulphur, PROB, 131
of temperature, regional, PROB, 147
periodic and aperiodic, in sea, RMS, 57
vertical, of properties of sediments (See Vertical variation)
with different seasons, RMS, 360
Variation and migration of crude oil at Spindletop, Jefferson County, Texas, GC, 309; XIX, 618
Variation curves of glauconite, RMS, 509-511
Variation graphs, RMS, 588, 590
Variations in amount of Eocene deposition, sections, XXIX, 1323
in lithology, vertical and lateral, XXVI, 154
of unconformity in time and place, XXI, 1559
Variometers, magnetic, for vertical and horizontal intensity, simple derivation of working equations of, XII, 855
Variscan era, XX, 852
Variscan folding in Europe, XIX, 1257
Variscan Mountains, RMS, 331, 332
Varney, F. M., RMS, 653, 654, 655, 657
Varney pile-diver sampler, RMS, 653, 654
Varney Redwine hydraulic coring apparatus, RMS, 657
Varney Redwine suction sampler, RMS, 654
Varves, RMS, 299-312; 362, 449, 609
in Baltic, RMS, 299, 303, 307, 309, 310, 312
Vaucun tuffs, XXIV, 1596
Vaughan, XIX, 243; XXIX, 1093
Vaughan, Francis Edward, SD, 355; XVII, 1503; XIX, 646; XX, 179, XXI, 1270, XXIV, 665
Five Islands, Louisiana, SD, 356; IX, 756
Vaughan, George E., Jr., XXIX, 414
Vaughan, Thomas Wayland, CAL, 301; GC, 396, MEX, ix, 77, 99, 101, 103, 104, 114, 116, 117, 120, 122, 123, 132, 137-139; MSC, 171; RMS, 3, 51, 283, 285, 286, 290, 519, 523; SD, 10, 287, 288, 344, 397; I, 29; II, 134, 144, 159, III, 303, VII, 607, 612, VIII, 489, 547, 548; IX, 840, X, 220, 235, 237, 977, 983; XI, 993, 994, 1197, 1221; XII,

(Vaughan)

- 556, 993, 1058, XIII, 383, 1338, 1341; XIV, 281, 283, 512, 709, 711, 1431, 1452, XV, 750, 793; XVII, 616, 620, 621, 623, 626, 627, 629, 641, 744, 1521; XVIII, 290, XIX, 527, 531, 532, 1171; XX, 258, 433, 442; XXI, 959; XXII, 1000, 1002, 1008, 1010, XXIII, 247; XXIV, 1498, 1550, 1558, 1593; XXVI, 1647, XXVIII, 14, 18, 1019, 1317, 1331, 1357
on relative value of species of smaller foraminifera for recognition of stratigraphic zones, VII, 517
Vaux-Fevroux gas field, XVI, 1115
Vaughan, Thomas Wayland, and Hill, R. T., XVI, 692, XVII, 477, 478, XIX, 1513, XXIX, 1704, 1707
Vaughan, Thomas Wayland and Matson, G. C., XXVIII, 978, 981
Vaughn, XII, 132
Vaughn pool, Kansas, XXII, 673
a 1937 Lansing-Kansas City limestone discovery, XXIII, 806
Veale field, III, 166
Veasey, Jas. A., XVIII, 1459
Veatch, Arthur Clifford, G. C., 386, 404, 414, 471; PROB, 665; SD, 10, 11, 12, 16, 211, 223, 272, 273, 280, 285, 305, 307, 308, 312, 318, 338, 344, 356, 395, 397, 421, 426, 782; I, 33; II, 61; IV, 117; VI, 180, 185, VII, 363, 613, 616, 617, 618, 645, IX, 169, 349, 756, 772, 795, 841, 842, 846, 850, 862, 1157, 1164; X, 3, 107, 220, 221, 228, 233, 253, 255; 256, 259, 266, 272, 274, XI, 4, 9, 11, 308, 737, 993, XI, 1140; XIII, 1338; XIV, 1155, XV, 532, 534, XVI, 608; XVII, 617, 629, 630, 635, 644, 654, 922, 1294, 1504; XVIII, 1253; XX, 495, XXI, 720, 721, 724; XXII, 973, 975, 978, 1659, 1669; XXV, 735; XXVIII, 977, 978, 981; XXIX, 25, 35, 1721
evolution of Congo Basin, review, XX, 226
memorial of, XXIII, 621
Veatch, Arthur Clifford and Harris, Gilbert D., PROB, 665; IX, 840, 904; X, 260, 276, 286, 288; XIV, 439; XVII, 614, 629, 636; XXI, 1270; XXIX, 45
Veatch, Arthur Clifford, and Stephenson, L. W., VII, 380
Veatch, J. O. and Stephenson, L. W., XXIX, 920
Veatch, Otto, XXII, 790, 809, 1648
Veatch, Otto, and Stephenson, L. W., XXII, 796, XXVII, 596; XXVIII, 998
Vectographs and anaglyphs, XXIX, 1761
Vector difference, RMS, 119
Vector quantity, RMS, 72
Vector resultant, RMS, 107
Vector study, magnetic, of regional and local geologic structure in principal oil states, XVI, 1177
Vedder (Lower Miocene) sand, XXII, 705
Vedder sand, XXVI, 1144
Edison field, STRAT, 4
Kern Front field, STRAT, 12
Vedder zone, PROB, 205
in Greeley field, XXIII, 939
Vega de Otates, MEX, 80, 82
Vega de Otates pool, MEX, 164, 179
Vegetable matter, gravity of oil from,

(Vegetable)

- PROB, 107
 Vegetable protection over drainage areas, XXV, 830
Vegetation as an indicator of geologic formations, XV, 67
 effect of, on soils, RMS, 486
 Velasco, MEX, 78, 90
 (Tamesi) contact with Pierre (Mendez), MEX, 83
 Velasco bentonitic marl in Pánuco field, Mexico, XII, 400
 Velasco fauna, MEX, 82, 105
 Velasco formation, Mexico, PROB, 392, 397; MEX, 77, 82-84; X, 683
 related to Taylor mail of Texas, MEX, 77
 Velasco series in Pánuco, MEX, 83
Velasco shale, foraminifera of, Tampico Embayment, X, 581
 Velascoteo to Cahuayotcs, correlations, MEX, Fig. 10 (in pocket)
 Veleno member, XXVI, 262
 Velma-Cruce anticline, XXI, 1561
 Velma field, V, 454, 626
 Velma oil pool, XXVI, 1069
Velocities, average seismic, vs. depth from base of weathering, XXV, 1348
 importance of, in seismic calculations, XXV, 1344
 in San Joaquin Valley, variations of, XXV, 1350
 inferred instantaneous seismic, along a line of wells, XXV, 1347
longitudinal seismic, influence of geological factors on, XIX, 1
 methods of measuring, XXVIII, 620
 seismic, effect of geologic age of sediments on, XXV, 1351
 seismic, higher above folded structures, XXV, 1351
 seismic, types of, XXV, 1344
 seismic, use of analytical equations in determining, XXV, 1352
 seismic, variation with lithologic character of sediments, XXV, 1350
Velocity, average seismic, at 7,500 feet below base of weathering, southeastern San Joaquin Valley, XXV, 1356
 average seismic, to marker above Stevens sand, southeastern San Joaquin Valley, XXV, 1357
 average seismic, to Rio Bravo sand, southeastern San Joaquin Valley, XXV, 1358
 change of, with depth, RMS, 120
 effect of, on movement of gravel, RMS, 18
 effect of, on sorting, RMS, 33
 eroding, in streams, RMS, 9-12
 in ocean, RMS, 54, 115
 increase of, with depth, XXVIII, 616
 laws of, with respect to size of particle carried, RMS, 10
 lowest transportation, RMS, 12, 27
 maximum permissible in rivers, RMS, 8
 mean, of fluids, RMS, 74
 minimum eroding, RMS, 27
 of bottom currents, RMS, 136
 of convection currents, RMS, 116
 of currents in deep ocean, RMS, 54
 of currents in North Sea, RMS, 326
 of currents on continental slope, RMS, 236, 237
 of currents with respect to wind, RMS, 121
of elastic waves in Amherst sand-

(Velocity)

- stone, effect of moisture upon**, XIX, 9
 of sand grains, as related to velocity of transporting agent, RMS, 43
 of sound in water, RMS, 68, 71
 of surface currents in North Sea, RMS, 326
 of tidal currents, RMS, 129, 131, 237
 of transported silt in streams, RMS, 15
 of water in streams, RMS, 8
 of water, relation of, to sorting, RMS, 167
 of water movements in Dakota-Woodbine deposits, PROB, 277
 required to move particles, RMS, 13
 seismic, a function of depth, XXV, 1350
 seismic, a function of geographical location, XXV, 1350
 seismic, influence of interstitial fluids on, XXV, 1350
 seismic, variation, causes for, XXV, 1349
 time rate of change of, in sea, RMS, 72
 zone of maximum, in streams, RMS, 18
Velocity adjustments, types of, XXVIII, 626
Velocity components in sea, RMS, 56
 in tides, RMS, 129
Velocity conditions in Tertiary basins of California, XXVIII, 618
Velocity correction techniques, XXVIII, 620
Velocity corrections, how to make, XXVIII, 615
Velocity data, well surveys for, southeastern San Joaquin Valley, XXV, 1345
Velocity determinations, granite and limestone, in Arbuckle Mountains, Oklahoma, XVIII, 106
Velocity distribution with depth, XXVIII, 619
Velocity gradient, RMS, 74, 75, 79, 124 effect of, on plunge of Greeley-Rio Bravo-Wasco trend, XXV, 1355
Velocity variation, regional seismic, XXV, 1353
Velocity variations, seismic, in San Joaquin Valley, California, XXV, 1343
 Velpen coal, XXIII, 1390
 Venado formation, XXVII, 287, XXIX, 993
 Venango Development Corporation, XXVII, 842
 Venango district, XXIX, 675
 Venango First sand in Franklin heavy-oil pool, XXIX, 675
 Venango group, XXIX, 678
 in Bradford field, Pennsylvania and New York, STR II, 414
 Pennsylvania pools, STRAT, 511
 Venango sand, IV, 29
 First, XXVIII, 730
 Second, XXVIII, 730
 Third Stray, XXVIII, 729
 Venango sand fields, PROB, 473
 Venango sands, PROB, 285, 460, 472, 474, 845
 of northwestern Pennsylvania, accumulation of oil, STRAT, 513, 522, 538
 of northwestern Pennsylvania, types of stratigraphic oil pools in, STRAT, 507
 Vendome Petroleum Company, XXIV,

(Vendome)

- 1089
 Venezuela, South America, MSC, 110, 177-180, 196, 197, 209, 210, 215, 220, 222, 226, 229, 293, 302, 322, 327, 336, 337, PROB, 110, RMS, 449, V, 604, VI, 474
 Aptian-Albian fossils in Chimana formation, XXVIII, 9
 as a competitor in United States markets, XIII, 1196
 central, Cabo Blanco beds of, discussion, XXIII, 1853
 central, foothill zone succeeding Coast Range in, XXII, 1226
 central, geological succession of, XXII, 1224, 1605
 central, geology of, discussion, XXIII, 699
 central, post-Ortiz zones of, XXII, 1129
 Coast Range complex in, XXIII, 699
 Cretaceous in, XXII, 1226; XXIII, 959; XXVIII, 26
Cretaceous-Eocene unconformity of, XIII, 617, 618
Cretaceous limestone as petroleum source rock in northwestern, XV, 229
 eastern, XXIV, 1565
 eastern and central, geology of, XXI, 239
 Eocene in, XXII, 1227; XXIII, 701, 959; XXVIII, 26
 Eocene-Oligocene Merecure formation in, XXIX, 526
 fossils from metamorphic rocks of Coast Range, XXVII, 1632
 fossils of Barranquin formation in, XXVIII, 5, 7
 fusulinids in La Quinta formation, XXVIII, 1642
 hydrogen sulphide in, GAS, 1072
 Llanos of, XXIX, 524
 Lower Cretaceous in, XXVIII, 3
 map of states of, XXI, 234
 Maracaibo Basin fields, STRAT, 884
 Miocene in, XXII, 1229, XXIII, 598, 699, 702
 north-central, Ortiz sandstone and Guarumen sandstone group of, XXVI, 126
 northwestern, XXIV, 1566
 Venezuela, South America, northwestern, Cretaceous limestone as petroleum source rock in, XV, 229
 reply to discussion, XV, 475
 Venezuela, South America, oil in, XXVIII, 1503
 Oligocene in, XXVIII, 26
 Oligocene-Miocene Santa Inés formation in, XXIX, 526
 Ortiz sandstone in, XXIII, 701
 Pliocene in, XXIII, 959; XXVIII, 23
 production in, XXIII, 959; XXV, 370
 production in, 1938, XXIII, 958
 Quiriquire field, STRAT, 884
 reconnaissance geological map of state of Anzoátegui, XXI, 236
 reconnaissance geology in state of Anzoátegui, XXI, 233
 references on stratigraphy of Anzoátegui, XXVIII, 27
 so-called Lower Silurian fossils of, discussion, XII, 951
 south-central, tilting of mesa beds indicating movements in Tertiary and possibly Quaternary of, XXII, 1230

- (Venezuela)
 stratigraphy of northeastern Anzoátegui, XXVIII, 1
 tectonics of Maracaibo Basin, XI, 177
 Tertiary in, XXVIII, 26
 Tertiary fauna of, MSC, 177
 third among oil-producing nations, XXVIII, 1493
 western, and Colombia, intermont basins and troughs of, XXIX, 526
 Venezuela and Colombia, correlation chart of Cretaceous-Jurassic beds in, XXIV, 1613
 Jurassic-Cretaceous (Giron) beds in, XXIV, 1611
 Llanos trough and intermont basins of, XXIX, 520
 map of part of, showing location of Jurassic Giron formation, XXIV, 1612
 tectonic structure of Northern Andes in, XVII, 211
 Venezuela and Trinidad, geology of, review, XII, 445
 Venezuelan Andes, geology of, XIX, 769
 marine Eocene deposits on east slope of, XI, 992
 Venezuelan Andes mass, XI, 180
 Venezuelan coast range, XXIV, 1562
 Venezuelan Geological Congress, First, Caracas, February, 1937, XXI, 689
 Second, San Cristobal, April, 1938; abstracts, XXII, 1101
 Venezuelan geosyncline, eastern, XXVIII, 25
 Venezuelan oil, advantage in Atlantic states markets, XIII, 1203
 Venezuelan oil developments, geologic and economic notes on, XIII, 1187
 Venezuelan oil-field waters, XV, 895
 Venezuelan oil fields, preventive medicine and health in, XI, 299
 Venezuelan petroleum oils, refractive index of, XXI, 1471
 Venice, Louisiana, GAS, 712
 Venice and Del Rey fields, California, age and correlation of schist-bearing clastics, XX, 150
 Venice field, California, PROB, 222, 405, 742. (See Playa del Rey), XXVII, 737
 Venice field, Plaquemines Parish, Louisiana, XXIV, 1090
 Vening-Meinesz, F. A., XXI, 114, 813; XXII, 2, 50, 59
 Vening-Meinesz, F. A., and Haskell, XXVII, 53
 Ventifacts, RMS, 44, 242
 Ventilation, RMS, 261, 266, 357-369, 447
 effect of, on basins, RMS, 98
 effect of, on organisms, RMS, 99
 in tropics, RMS, 351
 Ventura, CAL, 122, 175, 192, 318; SC, 47; XX, 1593
 bentonite from, MSC, 115
 maximum Pliocene section near, CAL, 229, 233
 Ventura and Los Angeles counties, geology and oil resources of, MSC, 101
 Ventura anticlinal dome, PROB, 209, 212
 Ventura anticline, SC, 50, 99; XII, 722; XX, 1596, 1645
 Ventura Avenue, XXVII, 865
 Ventura Avenue anticline, California, STR II, 26, 28, 676; GAS, 164, 165; CAL, 255; XII, 118
 Ventura Avenue oil field, Ventura County, California, STR II, 23; PROB, 145, 209, 338, 340, 405, 742, 755, 965-967, 985; GAS, 160-166; VIII, 821; XII, 721; XXIII, 942; XXVII, 872
 analysis of crude oil at, STR II, 39
 at intersection of Cretaceous fold and Pleistocene fold, SC, 97; XX, 1643
 Pliocene in, XII, 729
 (wells 28, 29), SBP, 87-153, 403
 Ventura Basin, California, CAL, 13, 45; MSC, 2, 98, 116, 135, 136, 157, 165, 180, 317, 319, 332, Fig. 14 (in pocket); SC, 14, 49, 75, 86, 98, 100, 138; XX, 1560, 1595, 1621, 1632, 1644, 1646, 1684; XXIII, 533
 close analogies with barred basin, XXI, 1141
 columnar sections of, SC, 100; XX, 1646
 correlation of Oligocene in, CAL, 148
 correlation of Pliocene in, CAL, 236
 correspondence to Maricopa Basin, SC, 104; XX, 1650
 easternmost, stratigraphy of, XXIV, 1841
 faults in, CAL, 48
 foraminiferal zones in, CAL, 248
 magnetic iron sulphide of Pliocene of, XXI, 627
 map of, SC, 99; XX, 1645
 marine Pleistocene beds in, CAL, 256, 262
 mollusk fauna of, CAL, 219, 228
 Pico group of, CAL, 236
 Pliocene in, CAL, 228, 229, 233, 236, 238, 241, 244, 249, 253, 285; SC, 48; XX, 1594
 Pliocene fossils of, CAL, 251
 section across, showing conditions before Middle Pleistocene folding, SC, 103; XX, 1649
 sedimentation cycles in, XIII, 742
 structure sections across, SC, 101; XX, 1647
 subsidence of, SC, 25; XX, 1571
 Tertiary section, CAL, 10
 unconformities of, CAL, 262
 Vaqueros deposits of, from Mohavia, CAL, 164
 Ventura Basin oil field, MSC, 32
 Ventura Bay, CAL, 165
 Ventura County, California, CAL, 42, 229, 257; MSC, 32, 55, 78, 79, 85-87, 108, 112, 113, 202, 305; SBP, 87-153, 403; XXI, 979
 Adams Canyon in, CAL, 208
 clay shale member of Miocene in, CAL, 179
 correlation, CAL, 249
 fossils from, CAL, 288
 helium in, GAS, 1059
 magnetometer survey, XV, 1361
 Modelo formation in, CAL, 199
 oil fields of, VIII, 789
 outcrop section N, SBP, 167-194, 411
 Sespe in, CAL, 147, 148, 155
 (wells 28, 29), SBP, 87-153, 403
 Ventura County and Santa Barbara County, oil fields in, XXI, 780
 Ventura County and Santa Barbara County coast area, PROB, 738, 753, 754
 Ventura County fields, California, PROB, 190-193, 209-211, 405, 739, 755; V, 181, 458; VIII, 789
 Ventura County sections, MSC, 68
 Ventura district, California, CAL, 42, 229, 231, 257; XIII, 435
 Ventura)
 age of oil in Miocene shales in, XI, 88
 conglomerate in, CAL, 125
 detritus in, CAL, 243
 distribution of Sespe in, CAL, 147
 Miocene seas in, CAL, 186
 thrust faults in, CAL, 42
 Ventura field, PROB, 210, 230
 Ventura-Newhall district, XXIII, 938
 Ventura Quadrangle, California, MSC, 79, 281
 sedimentation of Pico formation in, XII, 235
 Tejon, 11,900 feet thick in, CAL, 123
 Ventura-Rincon anticlinal trend, XXI, 979
 Ventura River, MSC, 102
 Ventura-Santa Barbara district, GAS, 160; MSC, 114
 Ver Wiebe, Walter A., MEX, 99, 100, 103, 109, 110, 116, 136; PROB, 110; SBP, 260, 262; STRAT, 96, 124; XIV, 1224; XV, 201, 202; XVI, 939; XVII, 110, 573, 577, 584, 585, 590, 974; XIX, 1002; XX, 441; XXI, 296, 1242, 1273; XXIII, 1404, 1756, 1757; XXV, 8, 327; XXVI, 1395, 1517, 1534; XXVIII, 1079, 1118, 1119; XXIX, 1751
 Ancestral Rocky Mountains, STRAT, 100; XIV, 765
 Cretaceous deformation in Kansas, XXI, 954
 exploration for oil and gas in western Kansas in 1943, review, XXVIII, 1759
 geosynclinal boundary faults, XX, 910
 graptolites in Kansas, XVII, 80
 historical geology, review, XVIII, 1550
 national research fellowships, XXIII, 1880
 oil and gas resources of western Kansas, review, XXII, 1287
 oil fields in United States, review, XIV, 953
 Ver Wiebe, W. A., report of editor for 1937, XXII, 600
 for 1938, XXIII, 735
 for 1939, XXIV, 919
 for 1940, XXV, 961
 for 1941, XXVI, 933
 for 1942, XXVII, 682
 Ver Wiebe, W. A., reviews, XXI, 631, 1498; XXII, 777; XXIV, 1134; XXV, 2082; XXVI, 1849; XXVIII, 127, 1545, 1657
 student awards, XXIV, 2019
 study group reports, XXIII, 1272; XXIV, 363
 tectonic classification of oil fields in United States, XIII, 409
 unconformity at top of Trenton in Lima-Indiana, district, discussion, XIII, 688
 Ver Wiebe, Walter A., Weaver, Paul, Aurn, Fritz L., Owen, Edgar W., and Markham, Edmond O., development and use of engineering geology: foreword, XXVI, 1795
 Veracruz, Mexico, PROB, 634; GAS, 997
 Cretaceous section in, XXVIII, 1127
 geology of eastern Hidalgo and adjacent parts of, XI, 1173
 northern, southern oil fields of, XXVIII, 1129

- (Veracruz)
 section of Gulf series of Upper Cretaceous in, XXVIII, 1131
 southeastern, redbeds and salt in, section, XXVII, 1507
 State of, MEX, 2, 11, 92, 120, 132, 138, 156
 Verbeek, XXVI, 781
 Verbeek, R. D. M., XXII, 3, 57, 60
 Verden sand bar of Oklahoma, sketch of Gulf coast of Florida showing bays enclosed by bays similar to, XXIII, 578
 Velden sandstone, STRAT, 478; XXI, 1543, 1567
 a narrow lens, XXIII, 562
 a part of Marlow formation, XXIII, 566
 butte capped by, XXIII, 560
 characterized by coarse-grained beds, XXIII, 568
 composition, XXIII, 568
 cross-bedding in, XXIII, 570
 deposited as a bar, XXIII, 576
 distribution and form of, XXIII, 559
 features of, similar to stone reefs of Brazil, XXIII, 577
 fossils of, XXIII, 573
 giant ripple marks in, XXIII, 567
 human footprints and bird tracks in, XXIII, 564
 manner of deposition of, XXIII, 574
 map showing outcrops of, XXIII, 561
 of Oklahoma—an exposed shoestring sand of Permian age, XXIII, 559
 of southwestern Oklahoma, IX, 626
 of Whitehorse a barrier beach, XXIII, 1806
 origin of calcium carbonate in, XXIII, 579
 ripple marks in, XXIII, 571
 source of materials of, XXIII, 579
 stratigraphy of, XXIII, 566
 Verdigris limestone, XXV, 35
 Verdigris sandstone, GAS, 24
 Verdugo Hills, SC, 115; XX, 1661
 Vermejo formation, IV, 77, 99
 Verme, XXV, 639, 644
 Vermiculite, relation of, to glauconite, RMS, 514, 515
 Vermilion, XXIX, 654
 Vermilion and Cameron parishes, reports on geology of, review, XX, 838
 Vermilion anticlinal axis, GAS, 357
 Vermilion area, Alberta, Canada, Cretaceous stratigraphy of, XXIX, 1605
 bibliography on Cretaceous stratigraphy of, XXIX, 1628
 Cretaceous in, XXIX, 1608
 geologic history of, XXIX, 1627
 Lower Cretaceous in, XXIX, 1627
 map showing wells, XXIX, 1606
 on a monocline, XXIX, 1607
 Upper Cretaceous in, XXIX, 1627
 Vermilion Bay, Iberia Parish, Louisiana, RMS, 165, 166; XXIV, 1087
 Vermilion Bay field, XXIII, 884; XXVIII, 857
 Vermilion Bay salt dome, Louisiana, example of structurally shortened seismic travel times, XXIV, 1408
 seismological discovery and partial detail of, XVI, 1221
 Vermilion Chutes, Alberta, sections showing gas at Paleozoic contact, GAS, 16
 Vermilion Cliff formation, XXI, 720
 Vermilion County, Illinois and Indiana, Coal Measures in, XXIII, 1387
 Vermilion Creek basin, GAS, 341-361
 Vermilion Creek gas area in southwest Wyoming and northwest Colorado, geology of, XIV, 1013
 Vermilion field, Alberta, FOP, 20; XXV, 1452; XXVIII, 871
 Vermilion Parish, section showing heavy-mineral zones from, to Rapides Parish, Louisiana, XXIV, 2074
 Vermunt, L. W. J., XXVII, 1516
 Vernadsky, V. I., XVII, 62
 Vernalis gas field, production in, XXVI, 1141
 Verneulinidae, MSC, 190
 Vernon, Robert O., XXVIII, 1676
 geology of Holmes and Washington counties, Florida, review, XXVI, 1424
 Vernon and Beauregard parishes, Louisiana, section showing Claiborne thickening, XXIV, 1904
 Vernon field, Isabella County, Michigan, STRAT, 265, 266; XXII, 140, 407
 accumulation of gas, STRAT, 265
 Vernon Heights pool, XXVII, 819
 Vernon Parish, Louisiana, Miocene in, XXIX, 1171
 Vernon pool, PROB, 550; XXIII, 853
 Vernon Township pool, Michigan, GAS, 796, 797, 799, 805
 occurrence of fluore in Monroe formation of, XVI, 91
 Veronda, George R., XXV, 1731
 Versluys, Jan, GAS, 1017, 1026; GC, 239; PROB, 358; XVI, 390, 863; XVII, 944, 1522, 1523, 1525; XXVIII, 548; XIX, 328; XXIX, 1166
 an investigation of the problem of estimation of gas reserves, XII, 1095
 can absence of edge-water encroachment in certain oil fields be ascribed to capillarity? XV, 189
 factors involved in segregation of oil and gas from subterranean water, XVI, 924
 Jamin effect in oil production, discussion, XVIII, 547
 memorial by W. A. J. M. van Waterschoot van der Gracht, XX, 1149
 Vertebrate fauna, post-Delmontian, MSC, 167
 Vertebrate faunas, MSC, 136, 152
 Tertiary, MSC, 173
 Vertebrate fossil from Cook Mountain formation, XXIX, 41
 Vertebrate fossil horizon, SC, 20, 21; XX, 1556, 1567
 Vertebrate fossils, CAL, 70, 155, 181, 211, 247, 264, 287, 303; MSC, 32; XXIV, 263; XXV, 1683, 2042
 Vertebrate horizons, correlation in California, CAL, 303
 Vertebrate relationships, MSC, 176
 Vertebrates, MSC, 167, 175; VII, 186
 California, MSC, 153
 fossil, near Burkeville, Texas, Upper Miocene, XXVIII, 1000
 in western interior, XXII, 1638
 Mint Canyon, MSC, 156
 of north Coalinga area, MSC, 155
 Vertical and horizontal intensity, simple derivation of working equations of magnetic variometers for, XII, 855
 Vertical and lateral migration of oil, a study of evidences for, PROB, 399
 Vertical circulation in ocean, RMS, 69, 90
 Vertical classification of structural units into basement, substructure, and superstructure, XXI, 1596
 Vertical cliffs on North Sea, RMS, 334
 Vertical component in local folding, I, 107
 discussion, I, 109
 Vertical currents in sea, RMS, 124
 Vertical displacement of Los Bajos fault, theory of, XXIV, 2109
 Vertical distribution of bacteria in marine sediments, XX, 258
 of density in ocean, RMS, 59, 115
 of suspended matter in a current, RMS, 81
 Vertical gradients in sea water, RMS, 53
 Vertical intensity survey of Sligo field, XV, 1387
 Vertical leakage, upward, XXII, 843
 Vertical magnetic intensity determinations in northeast Texas, GAS, 664
 Vertical migration. (See Migration) of crude oil at Spindletop, evidence against, XXI, 937
 Vertical mixing in sea, RMS, 59, 74, 91, 145
 Vertical movement, domes formed by STR II, 681
 Vertical movement in sea, RMS, 126, 129
 Vertical movements indicated at Billings dome, XXIV, 2007
 Vertical or lateral migration of petroleum into lower Wasatch sands at Powder Wash, assumption of, untenable, XXII, 1042
 Vertical porosity, XXI, 620
 Vertical profiles in ocean, RMS, 54
 Vertical shears, XXVII, 1263
 Vertical source in oil and gas accumulation, XXIX, 1349
 Vertical stresses, effect of, XIII, 26
 Vertical temperature gradient in sea, RMS, 53, 77
 Vertical turbulence in sea, causes of, RMS, 76
 Vertical uplift, PROB, 624, 625
 Vertical uplift or ramp structure at Wind River Canyon, XXIII, 490
 Vertical uplift type, local, Mid-Continent fields of, XXV, 20
 Vertical variation of properties, Appalachian, SBP, 378-380
 of properties, Dominguez field, California, SBP, 153-165
 of properties, East Texas, SBP, 331-335
 of properties, Gulf Coast, SBP, 348, 349
 of properties, Mid-Continent, SBP, 283-285
 of properties of sediments in Big Lake oil field, Texas, SBP, 291
 of properties of sediments in Bosco oil field, Acadia Parish, Louisiana, SBP, 348
 of properties of sediments in Seminole area, Oklahoma, SBP, 284
 of properties of sediments in well in Cherokee County, Texas, SBP, 332
 of properties of sediments in well in Roane County, West Virginia, SBP, 378
 of properties of sediments in well in Upshur County, Texas, SBP, 333

- (Vertical)
 of properties, Pilot Butte field
 Wyoming, SBP, 242
 of properties, Rocky Mountains,
 SBP, 241-243
 of properties, West Texas, SBP, 290-
 292
 in pressure in the ocean, RMS, 63
 Vertrees, C. D., XII, 1158; XIII, 999
*Verwässerung von Erdölfeldern, ihre
 Ursachen und Bekämpfung*, re-
 view, XII, 451
 Vesicles in basalt, PROB, 75, 79
 Vesicular basaltic lava, MEX, 145, 156
 Veta-accumulation of oil defined, MEX,
 168
 in Tancoco pool, MEX, 191
 Vetter, John M., MEX, 122
 Vettors, Hermann, geological map of
 the Republic of Austria and neigh-
 boring territory, review, XVIII,
 1375
 Veyo fault, XXIII, 136
 Vhay, J. S., XX, 1184
 Vickers, Tansill formation at, XXV,
 1725
 Vickery, Frederick P., CAL, 47; VIII,
 580; XVIII, 435; XX, 871
 consequent streams, XII, 515
 interpretation of physiography of Los
 Angeles coastal belt, XI, 417
 Vicksburg, MSC, 179
 Eocene fossils at, GC, 337, 338,
 XIX, 1647
 in Catahoula Parish, Louisiana,
 thickness of, GC, 403, XVII, 633
 in Edna gas field, XXV, 111, 117
Marginalina-Frio, and Miocene, pro-
 ductive in deep coastal zone in
 Texas and Louisiana, XXIII, 874
 Mississippi study of Vicksburg group
 at, GC, 335
 section, GC, 343, XIX, 1653
 Tennessee, RMS, 18
 Vicksburg and Frio, Jackson group of
 formations in Texas with notes on,
 GC, 470; XVII, 1293
 Vicksburg age of Alazan fauna, MEX,
 120
 Vicksburg beds, XXV, 2007; XXVI,
 1006
 Vicksburg fauna, XXVIII, 1681
 at Eola field, XXV, 1371
 Vicksburg flexure, XXVI, 1006
 Vicksburg foraminifera of Vicksburg
 group, check list of, GC, 352, XIX,
 1662
 Vicksburg formation, XXI, 948, XXII,
 819; XXVII, 1116; XXVIII, 203
 High Island dome, GC, 931; XX, 582
 in deep test, Acadia Parish, Louisi-
 ana, XVI, 609
 south Texas, XXII, 750
 Sugarland field, GC, 716, 723; XVII,
 1369, 1376
 Texas, GC, 498-501; XVII, 1321-
 1325
Textularia warreni shale zone of, at
 Refugio field, XXII, 1194
 Vicksburg fossiliferous loam, GC, 339,
 340; XIX, 1649
 Vicksburg fossils, XXVIII, 1365
 Vicksburg group, GC, 341; XIX, 1651;
 XXVIII, 59, 1316
 at Vicksburg, Mississippi, MSC, 179
 at Vicksburg, Mississippi, study of,
 GC, 335; XIX, 1645
 classification of, GC, 346, 348; XIX,
 1656
 correlation of, GC, 367; XIX, 1171
- (Vicksburg)
 Covington County, Mississippi, GC,
 372; XIX, 1151
 Louisiana, GC, 402, XVII, 632
 Mississippi and western Alabama,
 GC, 359; XIX, 1163
 notes on, GC, 358, XIX, 1162
 Salt Mountain division of, GC, 359;
 XIX, 1163
 section at Rock House Bluff,
 XXVIII, 1325
 Vicksburg heaving shale, XXIII, 216,
 XXVI, 1447
 Vicksburg lime, XXVIII, 60
 Vicksburg limestone, I, 155; III, 360;
 V, 490, VI, 180
 at Mint Spring Bayou, GC, 345,
 XIX, 1655
 Vicksburg Oligocene fauna, exposures
 of, in western Louisiana, XXIII,
 246
 Vicksburg sands productive at Thomp-
 sons field, Fort Bend County,
 Texas, XXIV, 1089
 Vicksburg series, MSC, 178
 Vicksburg shale, XXII, 1191
 Vicksburg species, MSC, 177
 Vicksburg trend, XXV, 107
 Vicksburg uplift, XXVII, 1116
 Vicksburg zone, XXIV, 1078
 Victor, J. J., VI, 193
 Victor, Dark, oil-producing formation
 of Tupungato field, XXVIII, 1463
 Gray, in Tupungato field, XXVIII,
 1463
 Light, in Tupungato field, XXVIII,
 1462
 Victor group, XXVIII, 1458
 Victor oil zone in Tupungato field,
 XXVIII, 1478
 Victoria, MEX, 11, 13, 23, 28, 55, 84,
 160
 Australia, petroleum in, review, VI,
 261
 physiography of, XXVII, 652
 stratigraphy of Tertiary marine
 rocks in Gippsland, XXVIII, 278
 Victoria County, Texas, GC, 665
 (wells 401, 402), SBP, 335-349, 410
 Victoria field, XXVII, 745
 Victoria limestone, MEX, 23
 Victoria shale, VI, 72
 Victorio, Babb, and Bone Spring flex-
 ures, erosional features of, PTNM,
 634, XXVI, 634
 tectonic features of, PTNM, 634;
 XXVI, 634
 Victorio flexure, PTNM, 624; XXVI,
 624
 pre-Wolfcamp features of, PTNM,
 628; XXVI, 628
 Sierra Diablo, panorama and sec-
 tions, PTNM, 625; XXVI, 625
 Victorio Peak gray member, PTNM,
 569; XXVI, 569
 Victory, rhyming letters for, XXVI,
 1838
 Vidofio shale, XXVIII, 12
 Vidrio limestone member of Word
 formation, PTNM, 656, XXVI,
 656
 Vidrio reef, XXV, 81
 of Glass Mountains, Cherry Canyon
 reef equivalent of, XXV, 94
 Vidrio reef dolomite, XXV, 90
 Vienna, RMS, 28
 Vienna fauna, XXIV, 841
 Vienna formation, XXIV, 213
 Vienna limestone, XXIV, 836, XXV,
 875
- (Vienna)
 in Kentucky, XXII, 280
 Vienna pool, XXVI, 1094
 Viennet, Pierre, XVI, 1119, 1120, 1124,
 1125, 1126, 1137
 Vield stage of North Sea, RMS, 332
 Viets, A. J., X, 459
 Vietti, W. V., XXVI, 1441
 View pool extension, XXIII, 857
 Vigo and Clay counties, Indiana, Ash-
 ley's original type section for Indi-
 ana coal fields, XXIII, 1387
 Viking gas field, Alberta, GAS, 2-5, 24,
 28, 53-57, VII, 153
 Viking gas sand, GAS, 22, 24, XXIX,
 1617
 Vilette formation, XXIX, 522
 Villa Nova field, frequency of occur-
 rence of hydrocarbons in, XXVI,
 28
 gas variations in, XXVI, 23
 Villa Nueva sandstone member, XXVI,
 270
 Village Bend limestone, Walnut Bend
 pool, STRAT, 786
 Village field, XXIII, 896
 Villarello, J. D., GAS, 1009, MEX, 209
 Ville Platte and Eola fields, comparison
 of coreographs from, XXIV, 1921
 Ville Platte area of Evangeline Parish,
 Louisiana, XXII, 737
 Ville Platte deep wells, Wilcox section,
 XXIV, 1914
 Ville Platte discovery in Evangeline
 Parish, Louisiana, XXII, 738
 Ville Platte field, Evangeline Parish,
 Louisiana, XXIV, 1903
 Wilcox sand productive at, XXIV,
 1090
 reserves at, XXIV, 707
 typical Sparta oil field, XXIV, 706
 Villeneuve, RMS, 25
 Villeta formation, XXIX, 530, 1088
 Villeta fossiliferous shales, XXIX, 1085
 Vinales formation, II, 139; XXVII,
 1422
 Vinales limestone in Cuba, XXVII,
 1520
 origin of, XXVII, 1523
 upper Portlandian age of, XXVII,
 1521
 Vinales limestone fauna, XXVII, 1521
 Vincent and Welch, XXIX, 795
 Vincent, A., XII, 385
 Vincent, E. T., XIII, 1247
 Vincent pool, XXVIII, 821, XXIX, 748
 Vincent sandstone in Ohio, GAS, 900
 Vinda, Vladimir J., XVI, 561
 Vindobonian, MEX, 138; MSC, Fig. 14
 (in pocket)
 Vine, A. P., XXIX, 893, 895, 896, 950
 Vineyard Island, RMS, 242
 Vingerhoets, F. J. G., XIX, 1825
 Vinther, E., RMS, 537, 544, 548, 549
 Vinton, SD, 203
 Vinton field, Louisiana, GAS, 711, I, 47,
 84; V, 333, 339
 Oligocene production at, GC, 11;
 XVIII, 510
 Vinton salt dome, Calcasieu Parish,
 Louisiana, SD, 203; GC, 156; XII,
 385, XVII, 1507; XXVIII, 836
 salt overhang at, GC, 157; XVII,
 1508
 Viola, Kansas, Richmond fossils in,
 XIV, 1351
 Viola formation, GAS, 480
 Viola graptolites from well-core east of
 Norman, Oklahoma, XXVIII, 873
 Viola group, XXIX, 192

- Viola lime, Depew area, Oklahoma, STR II, 368
- Viola limestone, PROB, 293, 298, 411, 412; IV, 48, V, 34, 150, 471; VI, 6, 15, 423; XXI, 508, 1008, 1011, XXII, 1561; XXIII, 231; XXIV, 2005, 2011; XXV, 11, 1075, 1099, 1109, 1635, 1638, XXVI, 1065, 1067, 1068; XXVII, 801, 809, 810, XXIX, 198
- Arbuckle Mountains, XI, 968
- Bowlegs field, Oklahoma, STR II, 345, 357
- Bowlegs field, Oklahoma, map of structure of, STR II, 354
- Bowlegs field, Oklahoma, map showing thickness, STR II, 360
- Cunningham gas field, XXIV, 1787
- Cushing field, Oklahoma, STR II, 401
- depth determinations for top of, made by use of variations in drilling time per foot, XXIII, 1820
- Earlsboro pool, Oklahoma, STR II, 344
- East Tuskegee pool, STRAT, 448
- Fitts pool, Oklahoma, XX, 956
- Greater Seminole district, STR II, 332
- Greenwich pool, XXIII, 644
- Greenwich pool, structure map of, XXIII, 655
- Jesse pool, Contour map, XXII, 1572
- Little River pool, Oklahoma, STR II, 346
- most prolific zone of Greenwich pool, XXIII, 657
- Nikkel pool, STRAT, 110
- Oklahoma, X, 142
- (Ov) (Ordovician), SBP, 194, 260-284, 415
- productive in Zenith pool, Kansas, XXIV, 1002
- productive of oil and gas in Jesse pool, XXII, 1565
- Ritz pool, Kansas, GAS, 475
- Seaight pool, Oklahoma, STR II, 342
- Seminole district, Oklahoma, STR II, 332, 338, 343
- Wherry pool, STRAT, 125
- Zenith pool, STRAT, 149, 151, 152
- Viola-Simpson beds in Clay County, thickness of, XXV, 1071
- Viola well core from South Dakota, XXVI, 123
- Viola conglomerate, XXVIII, 1461, 1466
- in Tupungato field, structure of base of, XXVIII, 1471
- Violet-Viola fault-line scarp in White Point and Saxet oil and gas fields, GC, 242; XVII, 950
- Violet-Viola scarp, GC, 246; XVII, 955
- Violin Canyon, XXIII, 550
- Violin Canyon fault, XXI, 227
- Virgelle sandstone, GAS, 248, 263, 264, 273; IV, 314
- Border-Red Coulee field, STRAT, 280
- Virgenes, MEX, 11, 12
- Virgil and Missouri section in Kansas, XXV, 1675
- Virgil and Missouri series in Iowa, XXV, 1676
- Virgil pool, Kansas, STR II, 142; PROB, 773
- Virgil series, XXI, 505, XXIV, 91, 293; XXV, 1668; XXIX, 141
- (Virgil)
- in central Oklahoma, XXV, 1671
- in northern Oklahoma, XXV, 1673
- Virgil type section of eastern Kansas, XXIX, 168
- Virgin anticline, XXIII, 123, 136
- Virgin oil field, Utah, XXI, 1258, XXIII, 144; XXVII, 464
- Virgin Valley fauna, CAL, 182
- Virginia, PROB, 2, 4, 73, 90, RMS, 209, 215, XXVI, 1134
- carbon ratio variations, PROB, 90
- Cretaceous in, XXIX, 904, 906
- deep well in Russell County, XXVII, 1543
- discovery of gas in Rockingham County, XXVI, 275
- Eocene in, XXIX, 904, 905
- Virginia, Kentucky, and Tennessee, mechanics of low-angle overthrust faulting as illustrated by Cumberland thrust block, XVIII, 1584
- Virginia, Little Kanawha oil region, PROB, 5
- Lower Cretaceous to Recent in, XXII, 805
- map, XXIX, 904
- map of Coastal Plain area, XXIX, 74
- Miocene in, XXIX, 906
- oil and gas possibilities, XIX, 974
- oil and gas possibilities at Early Grove, Scott County, review, XI, 998
- outcrop of Oriskany formation from New York to, XXII, 544
- possible origin of graphite in some ancient quartzites, slates, and schists in, XVI, 736
- southeastern, basement rock of, XXIX, 73
- southeastern, Eocene in, XXIX, 80
- southeastern, gravity in, XXI, 333
- southeastern, Lower Cretaceous in, XXIX, 79
- southeastern, Miocene in, XXIX, 82
- southeastern, outline of subsurface geology of, XXIX, 73
- southeastern, Pleistocene in, XXIX, 82
- southeastern, post-Eocene disturbance in, XXIX, 91
- southeastern, structural contour map of, drawn on Eocene-Miocene contact, XXIX, 84
- southeastern, structural geology of, XXIX, 71
- southeastern, Triassic sediments in, XXIX, 79
- southeastern, Upper Cretaceous in, XXIX, 80, 87
- southwest, possibilities of oil and gas in, as inferred from isocarbs, VII, 421
- well samples from Coastal Plain of, XXIX, 904
- wells drilled to basement rocks in, XXII, 802
- Virginia and Kentucky, Pennsylvanian in, XXV, 794
- Virginia and Ohio, early petroleum industry in, XXII, 1095
- Virginia and Tennessee, section across, showing thinning of strata westward, XXII, 423
- Virginia Coastal Plain, uniform thickness of Eocene sediments in, XXIX, 85
- Virginia subsurface stratigraphy, XXIX, 904
- Virgulininae, MSC, 261
- Virkki, C., XXV, 411
- Virtual coefficients, RMS, 74
- Viscosity, RMS, 6, 73, 542
- as modified by turbulence, RMS, 75
- definition, CD, 24
- effect on rounding, RMS, 45
- effect on sorting, RMS, 33
- molecular, RMS, 78
- of crude oil at Spindletop, GC, 314; XIX, 623
- of crude oil at Spindletop, decrease with migration, GC, 327, XIX, 636
- of earth, XXIX, 1641
- of fluids, PROB, 278
- of oil in Northern fields, MEX, 152, 156, 173
- of siding sheets slight and temporary, CD, 163
- of water, RMS, 68
- Viscosity coefficient of eddy, RMS, 21, 78, 79
- Viscosity increases of rotary fluids, factors affecting, XXIV, 1368
- Vishnevsky anticline, XXI, 1459
- Visotsky, I W., XXIX, 1748
- Visser, S W., CD, 16
- on behavior of seismic waves, CD, 16
- Vitáls, J., XVII, 927, 938
- Viterbo, H E., XX, 565
- Vitt, A W., XXIII, 25; XXVIII, 954
- Vivar, Gonzalo, MEX, 44, XXVIII, 1079
- Vivian, XIV, 562, 563
- Vivian method of orienting cores, XIV, 563
- Voda well, Kansas, IX, 1067
- Voedisch, Frederick W., XXVI, 336
- Vogelkop, XXVIII, 1451
- Vogesite, MEX, 145
- Vogt, J., CD, 22, 29, 32, XXIII, 1322
- Vogtsberger pool, XXV, 1066; XXIX, 763
- Voisey, A. H., XXV, 400
- Voitesti, Ion Popescu, SD, 87, 112, 122, 138, 141, 179, 182, 206; VI, 525, 527; IX, 152, 154, 1190, 1201, 1239, 1241; XVIII, 872, 941
- geology of salt domes in Carpathian region of Roumania, SD, 87; IX, 1165
- memorial of, XXIX, 1221
- Născut de Geologia Zăcămintelor de Sare*, review, XX, 108
- review, XIX, 1695
- theory of origin of Roumanian salt masses, IX, 152; SD, 136
- Vokes, Harold E., SC, 17; XX, 1563; XXIV, 1743, 1745, 1747, 1750
- Vokes, Harold E., and Clark, Bruce L., MSC, 103, 152, XXIV, 1743, 1930, 1934, 2049, XXVII, 9; XXIX, 963, 996, 998
- Volatile constituents in extracts from shales, variations in amount of, XIII, 321
- loss of, PROB, 25, 110, 141, 152
- Volatile fraction, PROB, 112
- Volatile oil, in El Abra limestone, MEX, 38
- Volatility, SBP, 61-64, 394, 398
- basic data on, SBP, 412
- California, SBP, 118-123, 139-141
- California outcrop samples, SBP, 177, 178
- central California samples, SBP, 139-141
- degree of, of value in recognizing source beds, XXI, 1392
- East Texas, SBP, 310-315
- effect of weathering upon, SBP, 187-

- (Volatility)
189
for productive sediments, XXI, 1391
Gulf Coast, SBP, 340-344
Los Angeles Basin, SBP, 118-123
Mid-Continent, SBP, 270-272
number of determinations of, SBP, 403-411
of sediments, RMS, 433, XXI, 1384
relation of, to source beds, SBP, 381-384
Rocky Mountains, SBP, 225-227
Rocky Mountains outcrop samples, SBP, 247, 248
use of, in recognition of source beds, SBP, 392-394
use of, in regional studies, SBP, 81
West Texas, SBP, 287, 288
Volatility and nitrogen-reduction ratio, areal variation of, in Mid-Continent region, SBP, 271
Volcanic action, RMS, 95, 348, 350, 382
Volcanic activity, MSC, 158
during Catahoula time, XXIII, 184
in Silurian in Urals, XXI, 1444
in Tertiary in Dakota basin, XXVII, 1569
submarine, during deposition of Cretaceous in Colombia geosyncline, XXIX, 1088
Volcanic ash, GC, 534, 605; MEX, 67, 75, 76, 205; RMS, 496, STRAT, 80; XVII, 532, XIX, 1374
altered, from Cretaceous of western Kansas, XII, 1015
Calcasieu Parish, Louisiana, X, 93
erosion of, RMS, 11
in Catahoula formation, Fayette County, Texas, GC, 549; XVII, 547
in Frio formation, Buckeye field, GC, 748
Kansas, II, 82
North Canadian Valley, Oklahoma, VII, 576
northern Louisiana, VIII, 524
Oklahoma, I, 137
Texas, V, 26
Volcanic ash beds, PTNM, 581; XXVI, 581
Volcanic blanket, CAL, 274
Volcanic constituents of sands in East Indies, RMS, 349
Volcanic deposits in Guadalupe time, PTNM, 757; XXVI, 757
Volcanic eruptions in North Sea, RMS, 332
Volcanic extrusion, submarine, in late Austin time, probable origin of Hilbig dome, XIX, 220
Volcanic fragments in sediments, RMS, 387, 497, 498
Volcanic glass, RMS, 379, 382
glauconitization of, RMS, 506-509
similarity of refractive index of, to that of chitin, RMS, 379
Volcanic history of Central Plateau of Mexico, XX, 1293
Volcanic intrusions and plugs in Shiprock basin, XIII, 121
Volcanic islands, beach sands of, RMS, 211
in the Guinea Gulf shown by fauna and flora to be of greater antiquity than Wegener's theory allows, CD, 95
Volcanic material, beds of, as key horizons, IX, 341
Volcanic materials, altered Paleozoic, and their recognition, XII, 143
Volcanic mud in East Indies, RMS, 350
Volcanic plugs, MEX, 151-153
in Mendoza Province, Argentina, oil seepages and oil production associated with, XVI, 819
in Tampico Embayment, XX, 1303
Volcanic rocks, RMS, 258, 269; STRAT, 615
Cretaceous in Louisiana, VIII, 344
Eocene, in trans-Pecos Texas, XXII, 1434
from Triassic to early Jurassic in Patagonia and Tierra del Fuego, XXIX, 498
in Van Horn region, Texas, XXIV, 149
Permian, in Sumatra, Malaya, and Timor, XXII, 5
Volcanic sediments in Leonard and Word formation of Glass Mountains, XXV, 79
Volcanic series in Mendoza, Argentina, XXVIII, 1465
Volcanic stratification in East Indies, RMS, 354
Volcanic tuff, MEX, 49, 63, 181, 203
Volcanic tuffs in central Oklahoma, IX, 344
in Pinnacles area, XXI, 1341
of Santa Lucia Range and Miocene paleogeography of Salinas Valley, California, XXI, 1340
Volcanics in Franciscan, XXVII, 144
Volcanism, further evidence for age of, Pinnacles national monument, California, XXI, 1341
latent heat connected with recent, MEX, 226
Volcano uplift, PROB, 487, 490
Volcanoes as landscape forms, XXIX, 1046
extinct, MEX, 145
in East Indies, XXII, 54
in Malay Archipelago, XXI, 554
in west Texas, X, 13
recent zones of, in East Indies, XXII, 53
Volga, middle—Sterlitamak—Perm district, Russia, XXIII, 951
Volkenroda potash mine, oil production at, XVI, 1150
Volzeta, XXI, 741
Volume of core, apparatus used in measuring, XXVII, 79
of fluid in core, determining, XXVII, 67
of rock specimens in Russell porosity apparatus, use of mercury for determination of, XIII, 677
oil-sand, XXV, 1303
Volume and pressure, amount of, in repressuring work, XXII, 196
Volume changes in chemical reactions in open spaces, geologic evidence on, XXI, 1489
Volume-pressure decline in Viking field, GAS, 56
Volume relations in open-space replacements, XXI, 1486
Volumenometer, VII, 731
Volumes determined by Jolly balance-mercury method and Melcher's paraffine method, comparison of, XIV, 5
Volumetric estimates, factors in, XXV, 1303
procedure in solving, XXV, 1308
relation of well spacing to, XXV, 1322
Volumetric estimation of reserves, de-
- (Volumetric)
pleted sands useful in, XXV, 1305
Volumetric method of analyses, RMS, 551
Volumetric methods, estimation by, of recoverable oil and gas from sands, XXV, 1302
of finding reserves, bibliography on, XXV, 1325
Von Ammon, L., XX, 1230
Von Braun, J., XX, 289
Von Bubnoff, XI, 494; XVIII, 743; XXI, 1441, 1442; XXIII, 501, 502
Von Bubnoff, S., SC, ix, 7, 136; XVI, 176, XX, 1535, 1553
division of Urals into six longitudinal zones, XXI, 1441
Erdgeschichte und Bewegungsbild der Erde, review, XXI, 1595
von Bubnoff, S., et al., Geological Annual Review, review, XXIII, 345
Von Buch, Leopold, XX, 891
von Bulow, B. Fr., RMS, 385
von Colberg, C., theory of continental drift, CD, 34
von Engeln, O. D., geomorphology, review, XXVII, 225
von Englehardt, W., RMS, 469, 486, 625
Von Eotvos, Roland, IX, 807, 808; X, 1201, 1210
Von Estorff, Fritz E., CAL, 150, 154; XV, 257; XVII, 1162, 1183; XVIII, 472
Kreyenhagen shale at type locality, Fresno County, California, XIV, 1321
von Estorff, Fritz E., and Barbat, W. F., MSC, 55, 56, 61, 187, 196, 213, 214, 216, 218, 219, 222, 239, 240, 243, 244, 251, 253, 260, 261, 264, 265, 271, 276, 291, 316, 331, 343, 353, Fig. 14 (in pocket); XVIII, 377
von Estorff, Fritz E., and Schenck, H. G., MSC, 106; XXVII, 1368, 1372
Von Höfer, H., and Engler, C., XVI, 1100
Von Huene, F., XIX, 1745, 1748, 1749, 1752
Von Huene, F., and Stahlecker, XIX, 1751
Von Humboldt, Alexander, XI, 1254; XXIII, 1853
Von Humboldt, Baron, I, 156
Von Ihering, Hermann, CD, 137; XXIV, 2118, 2120
von Karman, RMS, 79
von Keyserling, Alexander, XXIV, 239
Von Koenen, A., I, 90, XV, 153
von Koenigswald, XXII, 61
von Laue, Max, RMS, 616
Von Linstow, O., XX, 855
Von Loczy, XXII, 7, 16, 23
Von Loczy, Ludwig, Sr., *Geologische Studien im Westlichen Serbien*, review, XIII, 183
von Ohlshausen, S., RMS, 624
von Rebeur-Paschwitz, E., XXIX, 1631
Von Sparre, XIX, 834
Von Stahl, A. F., XI, 494
Von Sterwitz, I, 27
Von Streerwitz, W. H., XXIV, 145
Von Tille, XII, 920
Von Trautenberg, H. F. R., XXIV, 1532
Von Walterhausen, XIX, 212
von Wisemann, H., XXII, 1218
von Zwerger, Rudolf F., review, XVI, 424

- Voorhees, Russell, and Gohr, XX, 43, 48
 Voorhies sand, XXVII, 1153
 Vorticity, RMS, 8, 14
 Voshell anticline, STRAT, 110, 112
 Voshell field, McPherson County, Kansas, PROB, 293, 297, 298, 599, 762, 763, 767; STRAT, 107, 111, 112, 114; XVII, 169
 Voshell pool, GAS, 476
 Voshell trend, STRAT, 105-107, 108, 110, 112
 Voskuil, Walter H., oil in international relations, XXV, 353
 Vosnesenskaja, XI, 1036
 Voth field, Texas, XXIV, 1052
 Voth pool, XXIII, 848; XXV, 1076
 Votsberger pool, XXVII, 780
 Vredenburg, E. W., XVIII, 288, 291
 Vreugde, L. M. H., XXII, 50
 Vulcanicity not necessarily result of continental drift, CD, 190
 Vulcanism, PROB, 913
 in California during Tertiary, SC, 123; XX, 1669
 in Eastern Interior basin, XXIV, 852
 in Middle Miocene, SC, 36; XX, 1582
 in southwestern China, XXVIII, 1423
- W
- Waggenoceras, zone of, XXII, 1016
 Wabash arch, PROB, 537
 Wabash River area, lower, Illinois and Indiana map, showing oil and gas pools and producing formations, XXV, 1117
 lower, lateral variation in Chester sandstones producing oil and gas in, with special reference to New Harmony field, Illinois and Indiana, XXVI, 1594
 Wabash spur, FOP, 139, XXV, 1571
 Wabunsee formation, V, 421
 eastern Kansas, GAS, 490
 Eldorado field, Kansas, STR II, 166
 Wabunsee group, GAS, 467, 470, 480; XXI, 506; XXIV, 314
 (Cw) (Pennsylvanian), SBP, 258, 261-284, 414
 helium in, GAS, 1056
 Wabiabi shale, IV, 250
 Wachsmuth, Charles, and Springer, F., XXV, 2109
 Waco, Texas, RMS, 283
 Waddell and McKee sands, Simpson group, West Texas, XXVI, 279
 Waddell Creek, MSC, 53
 Waddell fold, XXIV, 131
 Waddell sand, type section, XXVI, 282
 Wade, Arthur, X, 1124, 1132; XI, 56, 64, 67, 68, 69, 72, 74, 76, 77, 78, 79, 83; XIX, 1816, 1818; XX, 317, 883, 901, 902, 984; XXI, 1274; XXV, 374, 386, 387, 388, 396, 402
 geology of Antarctic Continent, review, XXVIII, 1756
 Madagascar and its oil lands, review, XIII, 694
 new theory of continental spreading, XIX, 1806; discussion, XX, 317
 Pennsylvanian climates and paleontology, discussion, XV, 84
 petroleum geology and Gondwana rocks of Southern Brazil, discussion, XX, 984
 search for oil in New Guinea, XI, 157
 Wade, Arthur, and Tillyard, R. J., XXV, 396, 410
 Wade, Bruce, MEX, 100, XIV, 851; XVII, 1359; XXI, 808; XXII, 1654, XXVIII, 1136
 Wade, R. T., XXIX, 25
 Wadell, Hakon, RMS, 21, 35; XXVI, 1711, XXIX, 1235
 Wadia, D. N., XVIII, 312; XX, 876; XXI, 1274
 Waggoner pool, XXIII, 853
 Wagner, C., and Schilling, K., XIII, 235
 Wagner, C. L., XVI, 961
 Wagner, C. Richard, developments in Texas Panhandle in 1944, XXIX, 721
 Wagner, Carroll M., XVII, 833, 836, XVIII, 435; XX, 950, XXIX, 956
 Pacific section meeting, XI, 207
 Wagner, Carroll M., and Schilling, Karl H., CAL, 156; MSC, 101, 160, XIX, 1203; XX, 220
 Wagner, Oscar E., XXVI, 263
 Wagner, Paul, PROB, 110
 Wagner, R., PROB, 41, 263; XXVII, 1176
 Wagon Yard gypsum member of Blaine of Texas, XXI, 462
 Wagoner, western Rogers, and southeastern Tulsa counties, Oklahoma, Broken Arrow coal and associated strata, XXVIII, 1036
 Wagonmound anticline, carbon dioxide in, GAS, 1065
 Wagonwheel Mountain, CAL, 177, MSC, 102, 108, 113, 197, 205, 210, 213, 223, 276, 288, 292, 296, 305, 306, 349, Fig. 14 (in pocket)
 Wagonwheel Mountain section near Devils Den, Miocene, SC, 59; XX, 1605
 Wagonwheel zone of North Belridge field, XXI, 984
 Wahl, A. W., and Nadai, A., XIX, 804
 Wahlstrom, E. H., XXV, 1046
 Wahlstrom, Edwin A., and DeFord, Ronald K., GAS 430; PROB, 350, 413, 415, XVII, 564; XXVII, 501
 Hobbs field, Lea County, New Mexico, XVI, 51
 Wahlstrom, Edwin A., David, Max, and Young, Addison, Goldsmith field, Ector County, Texas, XXIII, 1525
 Wailes, B. L. C., XVII, 635; XIX, 1650
 Wainwright field, FOP, 20; GAS, 28; XXV, 1452
 Wainwright sand, V, 290
 Waite, Verdi V., IV, 284; VI, 12; XI, 1074; XV, 733, 812; XXIII, 1806; XXV, 1223
 Waite, Verdi V., and Udden, Jon Andreas, observations on Bend in Bough No. 1 in Brown County, Texas, III, 334
 Waitz, Paul, XXVIII, 1079, 1183
 Wakeman Flats area, alkaline New-castle water in, XXIV, 1268
 Wakengut, A. M., XXVII, 1176
 Waksman, S. A., PROB, 37, 38, 41, 42, 43; RMS, 417, 418, 420, 421, 429, 430, 432, 435, 442, 443; SBP, 3, 18, 19, 21, 22, 46; XIV, 1452; XX, 254, 259
 Waksman, S. A., and Carey, C. L., XX, 262, 263
 Waksman, S. A., and Reuszer, H. W., PROB, 43
 Waksman, S. A., and Stevens, K. R., PROB, 43
 Walcott, XI, 22
 Walcott, Charles D., III, 288; XIII, 1075; XIV, 1072; XVII, 380, 382, 385, 387; XXIV, 155
 Walcott, Samuel, XX, 886, 905
 Wald, William Ash, VIII, 769
 Walden, P., XV, 621; XX, 290
 Walden field, carbon dioxide in, GAS, 1065
 Waldo, Allen W., and Yuster, S. T., method of impregnating porous materials to facilitate pore studies, XXI, 259
 Waldram, Robert, XXIX, 221
 Waldrup limestone, III, 137, 138
 Waldrup limestone No. 2, XXIV, 95
 Waldrup fauna, XXV, 1226
 Waldron shale in Tennessee, XXVI, 11
 Waldschmidt, XV, 740; XXVII, 926
 Waldschmidt, W. A., STRAT, 26; XV, 740; XXIV, 2181; XXVII, 926; XXVIII, 103
 cementing materials in sandstones and their probable influence on migration and accumulation of oil and gas, XXV, 1839
 characteristics of older Cretaceous formations of northeastern Colorado, XVII, 411
 review, XXVI, 1293; XXIX, 232
 Walensee, RMS, 25
 Wales, Paleozoic rocks in, XXIV, 288
 Walfisch Ridge, XXIII, 1667, 1670
 Walhalla pool, Michigan, GAS, 807
 Walker, F. E., XVI, 784
 Walker, Lacey, SBP, 8
 Walker, Lucian, memorial of Samuel Jefferson Caudill, XX, 118
 Walker, Morgan, Williams, I. B., and Brandenthaler, R. R., GAS, 1021
 Walker, R. J., X, 1253
 Walker, W. L., memorial of Franklin S. Prout, XXIV, 944
 Walker field, Michigan, XXIV, 981
 Walker formation, CAL, 214; MSC, 114
 Edison field, STRAT, 4
 Walker pool, XXVII, 756
 gravity of oil at, XXVII, 756
 Walkers beds, Barbados, XXIV, 1552
 Walkley, A., SBP, 46
 Walkom, A. B., XXIV, 646; XXV, 408
 Wall, G. P., XXIII, 1853
 Wall, G. P., and Sawkins, J. G., IX, 1001; XX, 1439, 1441, 1442
 Wall Creek sand, PROB, 408, 728; III, 358, IV, 38, 111; V, 201, VI, 514
 Elk Basin field, Wyoming and Montana, porosity, STR II, 584
 Lance Creek field, Wyoming, STR II, 608
 Wall Creek sands of Salt Creek pool of Wyoming of early Upper Cretaceous age, XXIX, 1190
 Wall Creek sandstone, XXVIII, 1198, 1205
 Wyoming fields, XVI, 878
 Wall Creek sandstone equivalent in Lance Creek field, Wyoming, STR II, 605
 Walla Walla Plateau, Gas, 221
 Wallace, XII, 1016
 Wallace, P. A., XIV, 37
 Wallace, William Edwin, XXIX, 51, 579
 recipient of president's award, XXIX, 469
 Wallace, William Edwin and Howe, H. V., GC, 399; XVII, 629
 Wallace, William Edwin, Jr., structure of south Louisiana deep-seated domes, XXVIII, 1249, 1549

- Wallace County, Kansas, STRAT, 81
subsidences in, XVIII, 1499
- Walling, Rolla W., PROB, 404
- Wallis, B. F., XIV, 63; XVIII, 584,
978; XXV, 1669
- Wallis, W. S., XXV, 1313
- Walmer Oil Company, N. O. Bills (well
361), SBP, 292-335, 409
- Walnut Bend pool, Cooke County,
Texas, STRAT, 776; XXVIII, 835**
accumulation of oil, STRAT, 798
analyses of water, STRAT, 803-805
- Walnut clay, V, 16, 309; XXIX, 1454
- Yates field, Texas, STR II, 484
- Walnut Creek fault, XV, 1357
- Walnut formation, XXIX, 171
- Walter, H. J., producer in Chanute pool
STRAT, 62
- Walter, K. L., STRAT, 849
- Walter, Karl, XXIII, 122
- Walters, H. Glen, XVIII, 1659, 1668
- Walters, W. H., Survey, Texas (well,
352), SBP, 292-335, 409
- Walters field, IV, 279; V, 32, 454, 568
- Waltersburg formation, XXIV, 213;
XXV, 875
- Waltersburg sand, XXVI, 1093;
XXVII, 820
- Waltersburg sandstone, XXIV, 837
in Kentucky, XXII, 281
- Waltersburg sandstone production,
XXVI, 1603
- Waltham Canyon fault, CAL, 52, 55,
108, 318; XIII, 220
- Waltham Canyon fault zone, SC, 69;
XX, 1615
- Waltham shale, XXIX, 993
- Waltham Valley, MSC, 127; SC, 55;
XX, 1601
- Walther, XIX, 1210; XXIII, 1191
- Walther, Johannes, SD, 119; VIII, 199;
XVIII, 1299; XXI, 1109, 1118,
1128; XXII, 1285
- Walther, K., XIX, 1741, 1745, 1754,
1756, 1760
- Walton County, southern, and adjacent
counties, Florida, index map of,
XXV, 270
- Walton sand, XXVIII, 268
- Walvis Bay, RMS, 365
- Wamac field, review, VI, 387
- Wamac pool in Centralia-Sandoval
area, Illinois, STR II, 128
- Wanakah marl, XXV, 1750, 1754, 1755,
1759
- Wandagee of North-West and Noon-
canbah of Kimberly, correlation
between, XXV, 391
- Wandagee series, fossils of, XXV, 382
- Wanderley, A. F. W., and Moura, Pe-
dro de, XXIX, 540
- Wanemacher, J. M., review, XIII,
865; XIV, 108, 109
- Wanemacher, J. M., and Gealy, W. B.,
XIV, 429
- surface and subsurface structure of
Tri-County field of southwestern
Indiana, XIV, 423**
- Wanette division of Permian in central
Oklahoma, XXI, 1518
- Wanette series same as Wolfcamp se-
ries, XXIII, 1677
- Wang, C. C., IX, 1296, 1297
- Wanless, Harold R., XIV, 806; XIX,
1304; XXI, 784, 1415; XXIII,
1378, 1521, 1522, 1523; XXIX, 147
- Wanless, Harold R., and Weller, J. Mar-
vin, XIX, 1285; XXIII, 1511
- correlation of minable coals of Illi-
nois, Indiana, and western Ken-**
- (Wanless)**
tucky, XXIII, 1374
- Wanless, Harold R., Weller, J. M.,
Clime, L. M., and Stookey, D. G.,
inter-basin Pennsylvanian correla-
tions, Illinois and Iowa, XXVI,
1585
- Wann formation, XXIV, 726
- Wanner, J., X, 1228, 1234; XX, 700;
XXII, 3, 12, 13, 16, 58; XXV, 406;
XXVI, 778, 781, 787
- Wantland, Dart, review, XXI, 631
- Wapanucka formation, PROB, 439;
XXII, 853, 902, 1567; XXV, 1669
- Wapanucka graben, XXII, 902
- Wapanucka limestone, III, 76, 235, 264,
V, 34-38, 543-564; VI, 12, 153;
XXII, 904, 906; XXIII, 227, XXV
1663; XXIX, 188
- Arkansas basin, GAS, 517
- (Cwp) (Pennsylvanian), SBP, 258,
261-284, 414
- illustration of oft-repeated differential
movements, XXII, 903
- Jesse pool, Contour map, XXII, 1570
- Milton anticline, GAS, 524
- Roland anticline, GAS, 526
- Wapanucka sand, gas wells in, XXII,
1577
- Wapiabi formation, XVIII, 1400
- Yoakum County, Texas, XXIV,
1039; XXVII, 758
- Waples-Platter structure, XXV, 1052
- Wappler, Ed Dickinson, memorial of,
XXI, 543
- War, application of geology to princi-
ples of, XXVII, 1035
- European journals and, XXIII, 1852
- petroleum and, XXV, 1264
- petroleum geologist in, XXVII, 929
- War and geology, XXVI, 1832
- War and peace, geology in, XXVI, 1221**
discussion, XXVI, 1844
- War conditions, California oil develop-
ments hampered by, XXVII, 865**
- War department, foreign maps needed
by, XXVII, 1560
- War effort, geologic data from, XXVIII,
1050
- War products, increased requirements
for, XXVII, 982
- Warburton, K., 1124
- Ward, XI, 83
- Ward, Freeman, memorial of, XXVIII,
692
- structure in north Haakon County,
review, X, 533
- Ward, Freeman, and Wilson, Roy A.,
possibilities of oil in western Dewey
County, South Dakota, review,
VII, 303
- Ward, J. G., STRAT, 846
- Ward, L. Keith, XI, 56, 64, 77, 83
- Ward, R. C., XVIII, 1561
- Ward, W. H., XII, 88
- Ward and Pecos counties, Texas, Pay-
ton pool, XXVI, 1632
- Ward and Winkler counties, Texas, and
Lea County, New Mexico, "Sand
Belt" area of, STRAT, 750
- Ward and Winkler fields, GAS, 453, 454
- Ward County, Texas, Silurian produc-
tion, Shipley field, XXV, 425
- Ward formation, V, 379
- Ward gas field, XXVI, 1081
- Ward sand, XXVIII, 203, 207
- Wardner, W. R., XXIII, 948
- Wardner, W. R., Jr., XX, 948, 950
- Wardwell, H. R., XXIII, 1446
- Ware, John M., XVIII, 586; XX, 1087;
- (Ware)
XXI, 503; XXV, 138
- Ware, John M., and Dott, Robert H.,
XXIV, 721
- Ware, John M., and Lowman, S. W.,
XXIX, 148
- Warfield anticline, GAS 932, 943, 992;
PROB, 485; XXVI, 1127
- Cabin Creek field, West Virginia,
STR I, 466
- Warfield-Chestnut Ridge anticline,
XXV, 822
- Warfield gas field, PROB, 518
- Warfield Natural Gas Company, GAS,
942
- Waring and Hannibal, XII, 979
- Waring, C. A., XXVI, 165
- Waring, Gerald A., XXIV, 2102, 2118
- geology of Trinidad, review, XI, 201
- reviews, XI, 679, 1118; XIV, 331
- use of sketching case in geologic
work, VIII, 672
- Waring, Gerald A., and Carlson, C. G.,
geology and oil resources of Trini-
dad, British West Indies, IX, 1000
- Waring, Gerald A., Stephenson, L. W.,
and Logan, William N., PROB, 666
- Waring, W. W., XXIV, 501
- Warm Creek shale, XXII, 1633
- Warm Springs anticline, XXV, 150
- Warner, XIII, 1272
- Warner, A. J., PROB, 12
- Warner, C. A., field mapping for the oil
geologist, review, V, 634
- Texas oil and gas since 1543, review,
XXIII, 1860
- Warner, J. L., MEX, 91
- Warner, W. W., XIII, 1096
- Warner anticline, GAS, 527
- Warner field, GAS, 525, 527; XIX, 520
- Warner Range, CAL, 26, 318
- Warner sandstone, V, 548
- Warner's Hot Springs district, CAL, 22,
255, 318
- Warped surfaces, RMS, 157, 160
- Warping, XI, 45
- Warping and folding during Des
Moines series of Pennsylvanian in
Kansas, XXII, 1597
- Warren, XI, 239
- Warren, C. M., and Storrer, F. H.,
XVII, 1254; XX, 280
- Warren, E. B., Survey, Texas (well 347)
SBP, 292-335, 409
- Warren, E. F., Jr., and Grage, V. P.,
XXVIII, 579
- Lisbon oil field, Claiborne and Lin-
coln parishes, Louisiana, XXIII,
281**
- Warren, J. E., and Thompson, J. D.,
Jr., GAS, 1107
- Warren, M. A., XXIX, 920
- Warren, P. S., GAS, 11, 20; XV, 502,
1147, 1149, 1265; XVIII, 1388,
1390, 1404, 1406, 1409; XXIV,
1623; XXVII, 41, 44, 46
- invertebrate paleontology of south-
ern plains of Alberta, ALTA, 155;
XV, 1283
- Warren, P. S., and Hume, G. S., XXIX,
1608
- Warren, P. S., and Miller, A. K., XXIV,
272
- Warren, P. S., and Rutherford, R. L.,
GAS, 22; XVIII, 1404, 1405, 1410,
1411; XIX, 296
- Warren, Van Court, and Johnson,
Harry R., XVI, 350
- Warren, W. C., XXV, 2023; XXIX,
1394

- Warren County, Kentucky, oil geology of, VI, 24
- Warren County, Mississippi, Newman salt dome, XXV, 424
- Warren County, Tennessee, GAS, 865
- Warren Thud sand, PROB, 103
- Warrensburg channel sandstone, XXV, 31
- Warrior Basin, FOP, 151, XXV, 1583
- Warsaw and Salem faunas, XXIV, 808
- Warsaw formation, IV, 45, 306, VI, 26, XXIV, 801, 802; XXIX, 1148
- in Illinois, XXI, 1161
- in southern Ozarks, XVIII, 1155
- Warsaw limestone of Missouri correlated with upper zone of Mississippi lime of Kansas, XXII, 1595
- Warsaw-Salem boundary, XXIV, 809
- Wartburg basin, PROB, 515, 518
- Warthin, Aldred S., XXV, 1234
- Warthin, Aldred S., Jr. and Cooper, G. Arthur, XXIV, 1964; XXVIII, 181
- Middle Devonian subsurface formations in Illinois, XXVIII, 1519
- Traverse rocks of Thunder Bay region, Michigan, XXVII, 571
- Wartime changes in petroleum industry, XXVII, 970
- Wasastjerna, J. A., RMS, 624
- Wasatch beds, XXIII, 488
- unconformable on older beds, FOP, 50; XXV, 1482
- Wasatch formation, CAL, 303, 304; GAS, 351, 352, 366, 371; V, 51-55; 199; VI, 204; XXI, 989; XXII, 1023, 1030; XXIII, 125; XXV, 141, 1153, 2034, 2039; XXVII, 470, 1569
- Colorado, commercial light oil in, XXI, 986
- Eocene, unconformity at base of, FOP, 56; XXV, 1488
- Hiawatha dome, Colorado, STR II, 113; XIX, 537
- Hiawatha gas field, XIX, 537
- lenticular sandstones in, XXV, 1152
- non-marine, Hiawatha member of productive of gas in Powder Wash field, XXII, 1022
- northwestern Colorado, STR II, 98
- occurrence of petroleum and natural gas in non-marine sediments of, XXII, 1023
- upper, XXII, 1023
- Vermilion Creek area, XIV, 1023
- White River dome, Colorado, STR II, 111, 112
- Wasatch gas-bearing sandstone lenses, XXIII, 913
- Wasatch Mountains, PROB, 683
- Permian sections along east side of, from Diamond Fork to Park City, Utah, XXIV, 623
- Woodside formation of, XVII, 1668
- Wasatch sandstones, PROB, 171, 172, 334
- Wasatch series, XXVII, 1570
- Wasatch strata, XXV, 2026
- Wasatch zone, XXIX, 1597
- Wasco field, Kern County, California, XXIII, 1564
- discovered by deepest well in world, XXIII, 935
- Wasm, Richard, XXIX, 51
- Wasm, Richard, and Wilbert, Louis J., Jr., XXIX, 51, 61, 62, 63
- Wash on English coast, RMS, 326
- Washakie basin, Wyoming, GAS, 332; XIV, 1029; XXII, 686
- Washburn, E. W., VIII, 729; XVIII, 1347; XXVIII, 927
- Washburn, E. W., and Bunting, E. N., VIII, 729, 731
- Washburn, E. W., and Footitt, F. F., VIII, 729
- Washburn and Hartford anticlines growing throughout late Atoka, Hartshorne, and McAlester time, XXI, 1412
- Washburn College channel-sand body, XXII, 827
- Washburn College pool, Anderson County, Kansas, XXII, 825
- Washburn field, Lasalle County, Texas, XXVI, 276
- Washburne, IX, 204, 349; X, 748
- Washburne, Chester W., PROB, 57, 143, 155, 239, 243, 835, 1003, SD, 20, 28, 225, 782, II, 172; III, 327; V, 460; VII, 607, 608, 664, 671, 698, 700, 719; IX, 850, 858, 862, 899, 1082, X, 714, 1230, 1246, 1249; XI, 73, 395, 397, 979; XIII, 75, XVII, 1221; XIX, 1732, 1734, 1737, 1753, 1754; XX, 291, 819, 820, 821, 1214; XXI, 113; XXIX, 554, 556, 1745
- discussion of Bailey Willis' East African plateaus and rift valleys, XXI, 113
- discussion of organic material of carbonaceous shales, VII, 440
- memorial of Frederick Gardner Clapp, XXIX, 402
- petroleum geology of State of São Paulo, Brazil, review, XVI, 426
- reviews, XIX, 1701; XXI, 120, 273, XXVI, 1163
- salt domes, meteor craters, and cryptovolcanic structures, XXI, 629
- some physical principles of origin of petroleum, III, 345
- state of São Paulo, Brazil, XIII, 1215
- theory of origin of salt domes, SD, 20, 28; IX, 850, 858
- Washburne, Chester W., and Lahee, F. H., GC, 272; XIX, 319
- oil-field waters, foreword, PROB, 833
- Washburne, Chester W., and White, K. D., X, 389; XXVI, 807, 821, 826; XXIX, 1093, 1130
- Washing during decantation, effect of, on size of particles, RMS, 547
- of electrolytes out of clays during mechanical analyses, RMS, 539
- of samples before mechanical analyses, RMS, 541
- Washington, H. S., CD, 13, 118, 155, XVIII, 198, XXIII, 1325; XXV, 172; XXVII, 161
- petrographic investigations, unfavorable to Wegener's theory, CD, 86
- Washington, Colorado, and Waller counties, Texas, section, XXIV, 1906
- Washington, D. C., RMS, 428, 659; SBP, 7
- Washington, Osage, and Nowata counties, Oklahoma, results of recent field studies in, XXIV, 716
- Washington, state of, CAL, 133, 156; MSC, 26, 73, 79, 99, 101, 103, 109, 111, 154, 161, 171, 172, 185, 187, 188, 191, 196-205, 210, 213, 215, 228, 259, 317, 318, 322-324, 329, 346, 355, RMS, 225, 446, 471
- Aberdeen area, GAS, 231
- (Washington)
- Bellingham area, GAS, 231
- Blakely faunule from Clallam County, MSC, Fig. 14 (in pocket)
- carbon ratios in, PROB, 88
- check list of foraminifera from Blakely formation of, MSC, 77
- geology and petroleum possibilities of Olympic Peninsula, XI, 1321
- Grand Coulee Dam, XXVI, 1808
- Hoh River area, GAS, 230
- Washington, Idaho, eastern Oregon, and northern Utah, natural gas in, GAS, 221
- Washington, state of, Jurassic in, XXVI, 1809
- Miocene in, FOP, 29; XXV, 1461
- nitrogen in, GAS, 1059
- Washington, state of, northern California, and Oregon, MSC, Fig. 14 (in pocket)
- Washington, state of, oil reserves, VI, 44
- Oligocene in, FOP, 29; XXV, 1461
- Pleistocene in, XXVI, 1809
- Rattlesnake Hills area, GAS, 222
- Rattlesnake Hills gas field, Benton County, XVIII, 847
- references on oil prospects in, FOP, 29, XXV, 1461
- rocks of northern Cascade Range, XXIX, 1392
- rocks of Olympic Mountains, XXIX, 1400
- southwestern, occurrence of oil in basalt in, XI, 87
- Tertiary in, XXVI, 1809
- western, and western Oregon, geologic column in, FOP, 28; XXV, 1460
- western, and western Oregon, map, FOP, 27, XXV, 1459
- Washington and Austin counties, Texas, structural features of Brenham salt dome, GC, 780
- Washington and Oregon, geology of, and its relation to occurrence of oil and gas, XXIX, 1377
- map showing locations of drill holes for oil and gas, XXIX, 1380
- Tertiary in, FOP, 27; XXV, 1459
- Washington County, Illinois, correlation of radioactivity logs in Cordes pool, XXV, 1788
- Washington County, Ohio, new interpretation of Monongahela-Dunkard contact, XXII, 103
- Washington County, Oklahoma, geology and mineral resources of, XXIV, 2185
- Washington County, Pennsylvania (well 419), SBP, 349-379, 410
- Washington County, Texas, Clay Creek salt dome, GC, 757; XX, 68
- Washington County, Utah, Bloomington dome, XXIII, 142
- geologic map of St. George district, XXIII, 126
- geologic structure of St. George district, XXIII, 121
- Washington County field, GAS, 952
- Washington fault, XXIII, 136
- Washington pool, XXIX, 715
- Washington Prairie, GC, 529; XVII, 527
- Washington State Geological Survey, GAS, 221
- Washita and Fredericksburg beds, STRAT, 781

- Washita and Fredericksburg groups in south Arkansas, XXII, 972
- Washita ammonite fauna, XXIV, 1183
- Washita County, Oklahoma, deepest well in Mid-Continent region, XXIV, 735
- Washita formation, V, 7, 307; VI, 74, 181
- Caddo field, Louisiana, STR II, 193
- correlation with El Abra formation of Mexico, MEX, 45, 48
- Washita fossils, XXIX, 178
- Washita-Fredericksburg formation in Pine Island field, Louisiana, STR II, 171
- Washita group, XXV, 1692, 1693; XXVI, 383; XXIX, 172
- (Kwa) (Cretaceous), SBP, 295, 296-335, 415
- Palestine dome, SD, 257, 261
- Texas, X, 49
- trans-Pecos Texas, XXII, 1431
- Vacherie dome, Louisiana, X, 243
- Walnut Bend pool, STRAT, 781
- Washita red shales, Pine Island field, Louisiana, STR II, 174
- Washita sand, Caddo field, Louisiana, STR II, 195
- Washita shale, PROB, 276
- Waskom area, Harrison County, Texas, XXIII, 895
- Waskom field, Harrison County, Texas, XXIV, 1067; XXV, 1087
- Wasmund, E., RMS, 205; XIV, 714; XXV, 839; XXVI, 1728
- Wassall, Harry, XXV, 2158
- Wasson, H. J., and Hopkins, Edwin B., geologic and economic notes on Venezuelan oil developments, XIII, 1187
- Wasson, Isabel B., SBP, 357; XIX, 1119, XXV, 820
- Wasson, Theron, PROB, 331; SBP, 357; XII, 658; XXII, 651
- Lost Lake salt dome, Texas, XI, 633
- recent oil discoveries in southeastern Illinois, XXII, 71
- review, XXI, 123, 959
- Wasson, Theron, and Sinclair, Joseph H., XIV, 295; XVII, 221; XXI, 1350; XXIX, 521
- geological explorations east of Andes in Ecuador, XI, 1253
- Wasson, Theron, and Wasson, Isabel B., Cabin Creek field, West Virginia, STR I, 462; XI, 705
- Wasson area, gas cap in, XXVII, 509
- post-Permian movement in, XXVII, 507
- structural history of, XXVII, 504
- Wasson-Bennett pay zone, XXV, 1052
- Wasson casinghead gas, analysis of, XXVII, 510
- Wasson deep pool, XXVII, 520
- Wasson-Denver field, XXIII, 841
- Wasson field, east, Yoakum County, West Texas, high-pressure Yates sand gas problem, XXV, 1880, 2070
- acid treatments at, XXVII, 520
- artificial lift at, XXVII, 521
- attitude of bottom and edge waters of, XXVII, 512
- bottom-hole pressure map, XXVII, 516
- bottom-hole pressures, XXVII, 514
- chart showing relative depths and stratigraphic position of porosity and fluids in, XXVII, 505
- chemical analyses of waters, XXVII, 514
- (Wasson)
- 514
- completion practices at, XXVII, 520
- composite generalized stratigraphic section, XXVII, 486
- cross sections of upper San Andres, XXVII, 494, 495
- crude oil, Hempel fractional distillation analyses of, XXVII, 522
- development of, XXVII, 481
- drilling methods at, XXVII, 519
- exploitation of, XXVII, 517
- field rules for, XXVII, 518
- isopach map, XXVII, 504
- map of part of West Texas and New Mexico showing relative position and size of, to other fields, XXVII, 480
- map showing topography, XXVII, 482
- pipe lines from, XXVII, 521
- pressures in Yates sand in, XXV, 1883
- production statistics, XXVII, 522
- San Andres group in, XXVII, 492
- sections, XXVII, 503
- subsurface stratigraphy of, XXVII, 485
- Whitehorse group in, XXVII, 489
- Yeso-Clear Fork group in, XXVII, 497
- Yoakum and Gaines counties, Texas, geology of, XXVII, 479
- Yoakum County, West Texas, XXV, 1052; XXVI, 1018, 1025; XXVIII, 826
- Wasson pay zone, XXVI, 1024; XXVII, 757, 758, 769
- Wasson pool, West Texas, XXIV, 1037
- Wasson reservoir, bottom-hole water in, XXVII, 510
- structural and stratigraphic relations of, XXVII, 508
- Wastage, GAS, 1092, 1094
- from decline in gas pressure, XII, 171
- Waste products of organic metabolism in sea, RMS, 440
- Watchhorn, Oklahoma, PROB, 293
- Watchhorn Oil and Gas Company, GAS, 466
- Watchhorn Oil Company's Watkins No. 1 in Arbuckle limestone in Clark County, deepest well ever drilled in Kansas, XXIII, 796
- Watchhorn pool, XXVII, 920
- Water, RMS, 443; STRAT, 8, 18, 72-75, 101, 116, 137, 162-163, 244, 315-322, 365, 377-381, 402-403, 433, 487, 488, 505, 513, 538, 597, 627, 632-639, 653-659, 678, 693-694, 734, 736, 744, 769, 825-826, 855
- above oil and gas in Refugio field, XV, 960
- absence of, in reservoir sands, PROB, 469
- action of sulphur, PROB, 198
- adsorbed, effect of, on settling velocity of clay particles, RMS, 543
- analysis. (See Analysis of water)
- Artesia field, New Mexico, STR I, 119
- as rounding agent, RMS, 42
- associated with oil and gas, GAS, 57, 72, 122, 643, 647, 983
- Bellevue field, Louisiana, STR III, 250
- beneficial in Luling field, Texas, STR I, 277
- (Water)
- between flakes of clay, RMS, 479, 480
- Big Lake field, Texas, STR II, 522, 531
- Bradford field, Pennsylvania and New York, STR II, 431, 434, 435
- character of, in Luling field, Texas, STR I, 276, 278
- circulation a cause of oil and gas migration, PROB, 7, 172, 256, 258, 259, 272
- Crinerville field, Oklahoma, STR I, 208
- effect of, in increasing conductivity of rock, XXI, 1197
- Elk Basin field, Wyoming and Montana, STR II, 586, 587
- Elk Hills field, California, STR II, 57
- Ellenberger, III, 160
- escape of, PROB, 371
- fresh or low-concentration, influence on oil accumulation, XXVII, 925
- from Berea sand, PROB, 846
- from Clarendon and Bradford sands, PROB, 849
- from oil sands of Pennsylvanian age, PROB, 849
- function and control of, XXVI, 114
- Garber field, Oklahoma, STR I, 189, 191
- held by soil after centrifuging in tests by A. F. Lebedeff, XX, 716
- hydraulic theory of oil migration and accumulation by means of downward circulation of, IX, 1143
- Iles field, Colorado, STR II, 114
- importance of, VIII, 87
- in Bend, III, 151
- in Dakota sands of Lance Creek field Wyoming, STR II, 612
- in glauconite, RMS, 504
- in halloysite, effect of heating on, RMS, 625
- in kaolinite, RMS, 481
- in La Barge region, XXV, 1743
- in Madison limestone, PROB, 160
- in oil fields of Mexia fault zone, Texas, STR I, 371
- in oil production and some analyses from Poison Spider, Wyoming, IX, 927
- in wells, control of, XXII, 1245
- influence of, RMS, 66
- Irma field, Arkansas, STR I, 14
- Kevin-Sunburst field, Montana, STR II, 259, 264
- Long Beach field, California, STR II, 67, 73
- Lytton Springs field, Texas, X, 969
- masses of, transportation of, by currents, RMS, 54, 116, 117
- migration of oil and, a further discussion, VIII, 697
- Moffat field, Colorado, STR II, 114
- moving. (See Moving water and currents)
- New York oil fields, STR II, 287, 288
- of high mineral content in Houston district, depth to, XXVII, 1099
- of hydration, RMS, 505, 509, 535, 543
- of plasticity, RMS, 480
- of plasticity in hydrogen clays, RMS, 482
- Ordovician, Crinerville field, Oklahoma, analyses of, XI, 1085
- Osage County field, Oklahoma, STR II, 389
- Petrolia field, Texas, STR II, 550, 554

(Water)

- Pine Island field, Louisiana, STR II, 180
 possible cause of absence of, STR II, 705
 properties of, RMS, 66
 relationship to oil, VIII, 607
 removal of, PROB, 280
 residual connate or interstitial, in oil sands, relation to estimation of reserves, XXV, 1304
 Rock River field, Wyoming, STR II, 621
 Scenery Hill gas field, Pennsylvania, STR II, 446, 450
 Seminole district, Oklahoma, STR II, 343
 Sherard dome, Wyoming, STR II, 664
 Smith-Ellis field, Texas, STR II, 569
 southern West Virginia, STR II, 576
 Stephens County, Texas, STR II, 478
 sterile, with regard to plant and animal life, RMS, 357
 Sulphur dome, analysis of, IX, 490
 temperature of salt, in salt domes, I, 47
 transfer of heat by migration of, PROB, 999
 Tri-County field, Indiana, STR I, 34
 Turkey Mountain field, Oklahoma, STR I, 219
 underground, in Laramie Basin, XXVIII, 1213
 Urania field, Louisiana, STR I, 101
 Ventura Avenue field, California, STR II, 34
 vigorous artesian circulation of, unfavorable for accumulation and retention of oil and gas, STR II, 679
 Yates field, Texas, STR II, 499
 Water analyses, PROB, 423; STRAT, 8, 18, 41, 117, 164, 207, 317, 377-381, 403, 639, 696, 741, 803-805, 855; XXIV, 1497. (See Analyses of water)
 application of, to production of oil and gas in Rocky Mountain region, XXIV, 1214
 Barbers Hill salt dome, Texas, PROB, 895
 correlation within oil fields by means of, PROB, 900
 Darst Creek, Texas, PROB, 904
 from Berea sand, PROB, 846
 from Clarendon and Bradford sands, PROB, 849
 from oil sands of Pennsylvanian age, PROB, 849
 from 2nd Venango or Hundred-Foot sand, PROB, 848
 from 3rd Venango or Gordon sand, PROB, 848
 interpretation of, PROB, 855
 Powell-Mexia fault fields, PROB, 901
 practical application of, to oil-field development, PROB, 897
 relation of, to structure and porosity in West Texas Permian basin, PROB, 869, 879, 880, 883
 value of, XXIV, 1373
 Water analysis, Jones sand, Schuler field, XXVI, 1513
 Morgan sand zone, Schuler field, XXVI, 1513
 Reynolds oblique, Schuler field, XXVI, 1513
 Water-bearing properties of geologic formations in Louisiana, XXIX, 1171

(Water)

- of geologic formations in Natchitoches area, XXIX, 37
 Water-bearing zones, Beaumont-Lissie sands, GC, 282, XIX, 330
 Water circulation in relation to oil accumulation, PROB, 228, 274, 280, 282, 343, 677, 725, 729-731, 833
 Water classification, Palmer system of, XXIV, 1215
 Water conditions, Currie field, Texas, VII, 76
 East Texas field, XVII, 785
 Horner field, Louisiana, STR II, 224
 in First Wall Creek sand, Salt Creek oil field, Wyoming, preliminary report on, VIII, 492
 in Urschel pool, Marion County, Kansas, VI, 426
 Mexia field, Texas, VII, 77
 Stephens field, Arkansas, STR II, 15
 Water cone, formation of, around the periphery of a well, XXIV, 2164
 Water cones and water sheaths in experimental oil wells, XXIV, 2163
 references on, XXIV, 2178
 Water content, RMS, 199, 472
 of clays, RMS, 460, 478
 of sediments, RMS, 528
 of tidal muds, RMS, 199
 Water dipoles, RMS, 478
 Water displacement by oil and gas, PROB, 8
 Water disposal at Buckeye field, XXIV, 1981
 at Cunningham field, Kansas, XXI, 524
 in Kansas wells, XXII, 668
 Water drive, PROB, 833, 834, 837, 935, 936; XVIII, 354
 Amelia field, XXIII, 1656
 Keokuk pool, XXIII, 242
 Rocky Mountain fields, PROB, 839
 West Columbia field, XXVI, 1451
 Water-drive fields, ultimate recovery not affected by well spacing, XXII, 1247
 Water encroachment, PROB, 466, 473, 481, 834, 936, 938
 Conroe field, GC, 809; XX, 755
 Government Wells field, GC, 645; XIX, 1145
 Greenwich pool, XXIII, 662
 in Bartlesville sand pools of northeastern Oklahoma and its bearing in East Texas recovery problem, XVI, 881, 1038
 North Cowden reservoir, XXV, 621
 Oklahoma City field, XVI, 1018
 Water films in illite, RMS, 480
 Water flooding, PROB, 481, XXV, 1319
 for oil recovery in Ohio, XXIV, 494
 in Bradford field, XXV, 1139
 in northeastern Oklahoma fields, XXI, 1006
 Water-flooding methods at Bradford field, Pennsylvania and New York, STR II, 437
 Water-flooding pressures at Bradford, Pennsylvania, safety of, XIX, 793, 1239
 Water-flooding project in Venango Second sand in Clintonville pool, XXIX, 675
 Water-free sands, STRAT, 52, 53, 825; PROB, 101
 Water glass in glauconite experiments, RMS, 511
 Water horizon in eastern Ohio, STR I, 145

(Water)

- in Northwest Basin, Australia, XX, 1065
 Water-insoluble residue in rock salt of Gulf Coast salt plugs, data on, XXI, 1271
 Water-insoluble residues, XXI, 1594
 in Gulf Coast rock salt, high percentage of anhydrite in, XXI, 1306
 in rock salt of Louisiana salt plugs, XXI, 1268, 1496
 Water level, changes in, PROB, 18
 use of, at Heights well field, XXIX, 279
 Water levels, fluctuations of, XXVII, 1098
 in Houston and Pasadena areas, XXVII, 1094
 in Houston district, decline of, between 1937 and 1942, XXVII, 1096
 in Raccoon Bend field, GC, 693; XVII, 1476
 in wells, decline of, since 1937, throughout most of Harris County, XXIX, 254
 in wells in Houston district, Texas, altitudes of, XXVII, 1090; XXIX, 254, 260
 in wells in Houston district, Texas, hydrographs, XXVII, 1095
 in wells, significance of rise in, XXIX, 271
 relation of phenomenal rise of, to a defective gas well, Harris County, Texas, XXIX, 253
 relation of rise in, to geology, XXIX, 268
 Water levels and pumpage, XXVII, 1093
 Water loss by heating of clays, RMS, 472
 Water-oil withdrawal curve, percentage of, at West Columbia field, XXVI, 1460
 Water problem, Santa Fe Springs field, California, VIII, 193
 Water problems in Nemaha Mountains region, Kansas, STR I, 70
 in New Grosny oil field, Russia, XI, 1035; discussion, XII, 950
 of Bend series, general discussion, III, 151
 Water production, Tupungato field, XXVIII, 1483
 Water ratios, experimental work on, XXIV, 2170
 fine-grained, porous limestone under different rates of fluid production, XXIV, 2171
 in fine-grained, unconsolidated sand under different rates of fluid production, XXIV, 2170
 in fine-grained limestone under different modes of withdrawal, XXIV, 2174
 in fine-grained sand under different modes of fluid withdrawal, XXIV, 2172
 in oil wells, high, XXIV, 2164
 Water samples, collecting, PROB, 842
 Water sands at Camp Polk and North Camp Polk, XXIX, 1177-1181
 chemical methods for selective shut-off of, XXII, 1249
 in Miocene in Kistatchie Wold, Louisiana, recharge of, XXIX, 1183
 miscellaneous, in Wyoming, analysis of, XXIV, 1310
 of Miocene in Louisiana, XXIX, 1176
 Water sheaths and water cones in experimental oil wells, XXIV, 2163

- Water soluble minerals in Bethel sandstone, XXVIII, 89
- Water-soluble proteins, PROB, 31
- Water sources, PROB, 955
- Water supplies, Camp Polk, XXIX, 1185
- Houston district, geologic formations from which obtained, XXVII, 1100
- Iraq, XXIV, 751
- North Camp Polk, XXIX, 1187
- Water table, XVI, 337
- effect of impervious rock floor on shape of, XVI, 355
- effects of variations in porosity on, XVI, 358
- in Camp Polk area, XXIX, 1171
- Water troubles in drilling wells, VIII, 146
- in Russian oil fields, review, VII, 586
- Waterwell drilling in United States, notes on early history of, XXVII, 1268
- Water witch, PROB, 972
- Waterfall, Louis N., CAL, 257; XXIX, 957
- Waterford, L. M., XXV, 375, 378, 387
- Waterloo anticline, XXI, 777; XXIII, 821
- Waterloo-Dupo anticline, St. Clair and Monroe counties, Illinois, XXIV, 770, 965
- Waterloo field, Illinois, V, 94, XXIII, 821
- Waterman, H. I., and Perquin, J. N. J., XVII, 1256
- Waters, XV, 736, 747
- Waters, A. C., XXVIII, 953, 957
- Waters, J. A., GC, 762; XX, 73, 74
- Waters, J. A., and Cushman, J. A., XIII, 467, 885; XXV, 133, 738
- Waters, J. A., Heath, F. E., and Ferguson, W. B., PROB, 648, 649, 654; XV, 279
- Clay Creek salt dome, Washington County, Texas, XV, 43
- Waters associated with petroleum in Appalachian region, occurrence of, PROB, 844
- Border-Red Coulee field, XXVI, 1370
- Bowdoin field, XXVI, 1372
- Boxelder field, XXVI, 1372
- Bull Creek field, XXVI, 1373
- calcium chloride, from certain oil fields in Ventura County, California, IX, 1071
- California oil-field, PROB, 953
- Cat Creek field, XXVI, 1373
- chlorine content of, and geology at Hull field, PROB, 900
- Cretaceous, in northwestern Colorado, PROB, 947
- Cut Bank field, XXVI, 1370
- Dominguez field, PROB, 969, 971
- from Amaden formation, XXIV, 1312
- from Chugwater formation, XXIV, 1313
- from Eagle sandstone, XXIV, 1312
- from Fort Union formation, XXIV, 1312
- from Green River shales, IX, 171
- from Greenhorn limestone, XXIV, 1313
- from Madison formation, PROB, 950
- from Mesaverde formation, XXIV, 1312
- from miscellaneous formations in Wyoming, XXIV, 1312
- from Mowry shale, XXIV, 1313
- from oil-bearing formations of Rocky Mountain province, PROB, 837
- (Waters)
- from Ordovician in Kansas and Oklahoma, PROB, 856
- from producing zones of Montana fields, analyses of, XXVI, 1324, 1335, 1344, 1351, 1353, 1358, 1362
- from Steele shale, XXIV, 1313
- from Tensleep sandstone and equivalent units, XXIV, 1291
- Goldsmith field, XXIII, 1547
- Gulf Coast region, classification of normal shallow, PROB, 893
- Gulf Coast region, Texas and Louisiana, PROB, 836, 891
- Hardin field, XXVI, 1374
- Kettleman Hills, PROB, 985
- Kevin-Sunburst field, XXVI, 1371
- Lake Basin field, XXVI, 1374
- Laurel field, XXVI, 1374
- Larondale-Hawthorne-Manhattan area, PROB, 979, 980
- Lower Cretaceous, in Mexia fault zone, Texas, comparison of, STR I, 379
- mineralized, PROB, 148
- occurring in Pliocene and Miocene formations of California, PROB, 985
- of oil- and gas-bearing formations of Rocky Mountains, PROB, 927
- oil-field, PROB, 833
- Oklahoma, analyses of Hunton and Wilcox, PROB, 860
- Oklahoma and Kansas, PROB, 835
- Pinhorn field, XXVI, 1371
- Signal Butte field, XXVI, 1371
- South Willow Creek, XXVI, 1373
- surface, in Wyoming, XXIV, 1222
- surface, in Wyoming, analysis of, XXIV, 1224, 1225
- Whitlash field, XXVI, 1371
- Wathen pool, XXVII, 820
- Wathlingen-Hanigsen salt dome, SD, 202; IX, 1262
- Watts shale, III, 364
- Watson, E. A., XXVII, 1380
- Watson, E. H., XIX, 1473
- Watson, R. J., XVI, 1264
- Watson, R. J., and Ehrenburg, D. O., XVI, 1292
- Watson, T. L., RMS, 215
- Watson field, XXVII, 772
- gravity of oil in, XXVII, 772
- Watt, W. A., X, 1257
- Watten (tidal-flat deposits), RMS, 334
- Wattenberg, Hermann, RMS, 148, 316, 379, 403
- Wattenschlick, tidal flat deposits, RMS, 195
- Watts, RMS, 604
- Watts, W. L., VII, 620; VIII, 75, XXIV, 1728, XXVII, 6
- Waugh dome, Embar water in, XXIV, 1287
- Tensleep and Embar waters in, XXIV, 1293
- Wautubee beds, XXVIII, 56
- Wave action, RMS, 170, 171, 211, 212, 236, 259, 286
- depth of, in North Sea, RMS, 336
- depth of, on continental shelf, RMS, 235, 236
- effect of, on beach deposits, RMS, 165, 208, 210, 212, 213.
- limit of effect of, with depth, RMS, 237
- on calcareous sediments in shallow water, RMS, 293
- on coast, RMS, 235
- Wave base, RMS, 238
- Wave-cut terrace, RMS, 219, 228
- Wave energy, use of, XXVIII, 914
- Wave erosion, RMS, 164, 165, 268, 270, 272, 275
- of shore cliffs, RMS, 213
- Wave-front diagrams in seismic interpretation, XIV, 185
- Wavelength, RMS, 83
- of ripples, RMS, 16, 17
- Wave motion, RMS, 77, 128
- Waverley shale, II, 40; IV, 306
- Waverly Beach, RMS, 209
- Waverly sand, XXV, 802
- Waverly series, XXIV, 789
- Waverly shales in Paint Creek uplift, GAS, 927
- Waves, RMS, 208, 228, 277, 279, 289, 296
- as rounding agents, RMS, 41-43
- effect of, on density, RMS, 59
- effect of, on sediments, RMS, 336
- effect of, on sediments in North Sea, RMS, 337
- effect of, on turbulence, RMS, 79
- on deltas, RMS, 172
- tidal, RMS, 129
- Wavy bedding, MEX, 31
- Waxes, PROB, 182, 261, 452
- in sediments, RMS, 435, 443
- Waxy esters, PROB, 261
- Wayland, E. J., XVIII, 1160, 1172
- Wayland's compression theory, XXI, 114
- Wayne, Richland, and Jasper counties, Illinois, structural disturbance across, XXII, 651
- Wayne County field, GAS, 975
- Wayne-Dundee field, Schuyler County, New York, XXII, 241; XXIX, 668
- first commercial development of gas in Oriskany, XXII, 260
- Waynesburg coal, XXII, 103
- Waynesburg syncline at Scenery Hill gas field, Pennsylvania, STR II, 447
- Wayside sand, V, 293; VI, 465; XXV, 30
- Weakness of earth's crust, implied by Wegener's theory, incompatible with penneplanatation, CD, 86
- Weatherby, XXIV, 1395
- Weatherby, B. B., XI, 633, XV, 1330; XIX, 18; XXVII, 951
- discussion of geological application of seismography, XV, 1330
- magnetometer study in Louisiana, discussion, XIV, 1087
- reviews, XV, 1117; XVI, 949, XVIII, 1205
- symposium on geophysics, foreword, XVIII, 1
- Weatherby, B. B., and Faust, L. Y., influence of geological factors on longitudinal seismic velocities, XIX, 1
- Weatherby, B. B., Born, W. T., and Harding, R. L., XIX, 6
- granite and limestone velocity determinations in Arbuckle Mountains, Oklahoma, XVIII, 106
- Weathered or aerated surface layer, seismic, XVI, 1230
- Weathered pool, Kansas, XXIII, 803
- Weatherford area, Oklahoma, XII, 706
- discussion of Quartermaster unconformity of, XXI, 1529
- Quartermaster unconformity of, XXII, 110
- stratigraphy of, XII, 705, discussion, XII, 1024
- Weatherford dolomite and Cloud Chief

- (Weatherford)
gypsum, relations between, XXI, 1530
- Weatherhead, W. R. A., XIV, 689
- Weathering, RMS, 144, 211, 269, 534, 536, 540, 582; SBP, 13, 168, 187, 245; XXVI, 1767
- California outcrop samples, SBP, 168, 169
- definition of units of measurement of, SBP, 168
- effect of, on properties of sediments, SBP, 187-189
- realms of, XXVI, 1768
- submarine, RMS, 507
- use of, in regional studies, SBP, 81
- Weathering processes, RMS, 487
- in formation of glauconite, RMS, 507
- Weathering products, RMS, 484
- in tropics, RMS, 382
- Weatherly, E. P., XXVII, 981, 1002
- Weaver, XXVII, 1506
- Weaver, Charles E., CAL, 13; MSC, 65; XX, 220; XXVIII, 1079, 1116; XXIX, 1513
- geology of Oregon and Washington and its relation to occurrence of oil and gas, XXIX, 1377
- Weaver, Donald K., PROB, 404
- Weaver, Donald K., and Hendrickson, A. B., GAS, 203
- Weaver, Paul, GAS, 997; MEX, ix, 53, 210, 212-214, 224; X, 628; XI, 1321, 1324; XII, 101, 398; XIV, 73, 74, 78; XV, 1334; XVI, 385, 652, 1350; XVII, 1175, 1201; XXVII, 1411; XXIX, 1417, 1487
- discussion of fluid mechanics of salt domes, GC, 105; XVIII, 1201
- discussion of geological application of seismography, XV, 1334
- memorial of John Malcolm Murr, XXII, 509
- relations of geophysics to geology, XVIII, 3
- report of committee on applications of geology for 1943, XXVIII, 666
- review, XXIV, 2186
- Section of Hydrology of American Geophysical Union, XXVI, 856
- Weaver, Paul, and Belt, B. C., PROB, 396, 397
- memorial of Lovic Pierce Garrett, XXVIII, 1064
- Weaver, Paul, and Botset, Holbrook G., XVIII, 68
- Weaver, Paul, Aurin, Fritz L., Owen, Edgar W., Markham, Edmond O., and Ver Wiebe, Walter A., development and use of engineering geology: foreword, XXVI, 1795
- Weaver, Sam, MEX, 224
- Weaver, T. J., Ball, Max W., Crider, H. D., and Ball, Douglas S., shoe-string gas fields of Michigan, STRAT, 237
- Weaver, W., XVI, 1264
- Weaver, Kansas (well 261), SBP, 255-285, 407
- Weaver-Perry Oil Company, XXIII, 320
- Weaverville quadrangle, CAL, 61, 63, 318
- Webb, XVIII, 1406
- Webb, E. W., and Bell, A. H., GAS, 188
- Webb, J. B., GAS, 41; XV, 1176
- occurrence of *Baculites ontus* zone of Upper Alberta shales in southeastern British Columbia, discussion, XIX, 703
- Webb, J. B., and Hentlein, Leo George, XIX, 296, 297, 298
- zones in Alberta shale (Benton group) in foothills of southwestern Alberta, XVIII, 1387
- Webb, Robert W., and Putnam, William C., laboratory exercises in physical geology, review, XXII, 501
- Webb and Duval counties, Texas, Lopez oil field, STRAT, 680
- O'Hern field, STRAT, 722
- Webb County, Texas, STRAT, 725
- Webb field, XXVII, 776
- Webb pool, Gray County, Texas, pre-Redbed columnar section, XXIII, 1008
- Webb-Zapata counties fault zone, XII, 428
- Webber & Andegree, SD, 623, 625
- Weber, Fr., XXII, 3, 11, 16, 18, 19, 23, 38, 49, 52, 59
- Weber conglomerate, CAL, 61
- Weber deposition in Salt Creek area, XIX, 1003
- Weber formation, V, 190; VI, 226; XXVI, 1384
- relationship of lower member of Park City formation to, XXIII, 95
- Woodside shale, and Phosphoria formation in Uinta Mountains, sections of, XXIII, 97
- Weber quartzite, XXIII, 84, XXVII, 472; XXVIII, 791
- Weber River, South Fork of, XXIII, 83
- Weber sandstone, XXIII, 84
- oil in Rangely dome from, XXI, 1250
- Weber, C. J., IX, 758, 781
- Webster and Bossier parishes, Louisiana, Carterville-Sarepta and Shongaloo fields, XXII, 1473
- Webster Parish, Louisiana, discovery of oil in Bodcaw sand, Cotton Valley field, XXII, 1603
- Webster sand in Laredo district, Texas, STR I, 393
- Weches fauna, typical, in Mount Selman near Mier, GC, 602; XIX, 1371
- Weches formation, XXVI, 260
- Weches greensand marker at Mount Sylvan dome, GC, 1041; XIII, 1361
- Weches greensand member of Mount Selman formation (Twe) (Eocene), SBP, 337, 338-349, 416
- Weddle, H. W., MSC, 53
- Wedekindellina zone, XXIX, 1145
- Wedel, Arthur, XXI, 1561, 1562, 1563, 1564, 1565, XXVIII, 29, 39
- Wedel, Arthur Albert, memorial of, XXV, 2230
- Wedge belt of porosity, occurrence of reservoir rocks in, FOP, 4; XXV, 1436
- Wedge belts, application of principle of, XXVII, 907
- of porosity, XXVII, 895, 896
- of porosity, unexplored updip, in United States, XXVII, 908
- of porosity, updip, explanation of association of oil and gas pools with, XXVII, 901
- of porosity and layers of geology, XXVII, 917
- Wedge reservoirs, XXIX, 1748
- Wedging-out, updip, of producing sands, section along Gulf Coast showing, XXVII, 896
- Wedges, GAS, 1080, 1082
- Wedington sandstone, XXV, 1653
- in Interior Highlands of Arkansas, GAS, 543; XIV, 128
- Weed and Hague, X, 986
- Weed, W. H., STRAT, 285; V, 258; VII, 177; VIII, 556, XXVI, 313, 314; XXVII, 1288; XXIX, 1266
- Weed Patch member, XXIV, 801
- Weeks, Albert W., GC, 437; XIX, 656, 658, XXII, 1335
- Balcones, Luling, and Mexia fault zones in Texas, XXIX, 1733
- developments in north-central Texas and Panhandle, 1936-1937, XXI, 1015
- geology of Larremore area, Caldwell County, Texas, XIV, 917
- hydraulic theory of oil migration and accumulation by means of downward circulation of water, IX, 1143
- Lissie, Reynosa, and Upland Terrace deposits of Coastal Plain of Texas, between Brazos River and Rio Grande, XVII, 453
- Miocene, Pliocene, and Pleistocene in Rio Grande region, Starr and Hidalgo counties, Texas, XXI, 491
- Oakville, Cuero, and Goliad formations of Texas Coastal Plain between Brazos River and Rio Grande, XXIX, 1721
- Quaternary deposits of Texas Coastal Plain between Brazos River and Rio Grande, XXIV, 1693
- Weeks, Joseph D., GAS, 1087
- Weeks, L. G., XVIII, 305, 307
- Weeks, Warren B., XXVII, 1410, 1423, 1442, 1448, 1452, 1466; XXVIII, 33, 579, 594, 597; XXIX, 1417
- review, XXIX, 1211
- south Arkansas stratigraphy with emphasis on older Coastal Plain beds, XXII, 953
- Weeks, Warren B., and Alexander, Clyde W., XXVIII, 579, 606, 608; XXIX, 1257, 1258
- Schuler field, Union County, Arkansas, XXVI, 1467
- Weeks, Warren B., and Purzer, Joseph, developments in southern Arkansas and northern Louisiana during 1939, XXIV, 1092
- during 1940, XXV, 1024
- Weeks Island dome, Louisiana, SD, 374-380; IX, 774-780
- Wegemann, Carroll Harvey, SBP, 196; I, 33, II, 116; III, 257; VII, 18, 166, 607; VIII, 312, 323, 326, 493, 500; IX, 245, 246; X, 117, 150; XVII, 245, 246; XXVIII, 1107
- location of lines of faulting in Salt Creek field, VII, 99
- memorial of Salvador Ortiz Davila, XVI, 330
- notes on oil fields of Wyoming, IV, 37
- report of resolutions committee for 1932, XVII, 606
- Wegemann, Carroll Harvey, and Heald, K. C., VII, 611
- Wegener, XI, 38, 46
- Wegener, Alfred, CD, 13; XIX, 1811, 1816; XXIII, 106; XXV, 409
- argument for continental drift based on distribution of earthworms, CD, 137
- difficulties in his flotation theory, CD, 78
- map of breaking up and migration of Pangaea, CD, 107

- (Wegener)
map of Carboniferous and Permian, CD, 21
map of climatic zones of the earth, CD, 7
map of Cretaceous, CD, 31, 33
map of Eocene, CD, 37
map of Jurassic, CD, 27
map of Miocene, CD, 41
map of Permian, CD, 17
map of Pliocene and early Pleistocene, CD, 45
map of Triassic, CD, 23
map showing wandering of the poles, CD, 53
maps of Carboniferous, CD, 11
objections to his arguments, CD, 4, 76, 83, 90, 95, 104, 111, 145, 170, 178, 187, 189, 194, 210
origin of continents and oceans, review, IX, 916
theory of continental drift, CD, 34
two notes concerning my theory of continental drift, CD, 97
weaknesses in his geological arguments, CD, 155
Wegener's attitude that of an advocate of his theory, rather than of a scientific investigator, according to Berry, CD, 194, according to Lake, CD, 139; according to Willis, CD, 82
Wegener's continental drift, CD, 90
Wegener's drift explanation inadequate if Daly's Pacific mountain girdle exists, CD, 193
Wegener's hypothesis, CD, 93
abstract of, CD, 105
Berry's comments on, CD, 194
Bowie's comments on, CD, 178
co-magmatic regions and, CD, 155
Permo-Carboniferous glaciation and, CD, 137
Wegener's sea movements as proof of polar wandering, CD, 116
Wegener's theory, discussion of, CD, 189
Wegener's theory of continental drift, favored in whole or in part, by Gregory, CD, 93; by Joly, CD, 88, by Molengraaff, CD, 90; by Singewald, CD, 193; by van der Gracht, CD, 223
inharmonious with continuity of earth behavior throughout geological time, CD, 83
intangible, according to Termier, CD, 140
objections to, by Berry, CD, 194; by Bowie, CD, 178, 182; by Chamberlin, CD, 83; by Diener, CD, 111; by Gregory, CD, 95; by Longwell, CD, 145; by Molengraaff, CD, 90; by Schuchert, CD, 104; by Singewald, CD, 189; by Taylor, CD, 170; by van der Gracht, CD, 4, 210; by White, CD, 187; by Willis, CD, 76
suggested by present geographical similarities between eastern coast of Brazil and western coast of Africa, CD, 133
Weglowka field, Poland, XV, 19, 32
Wegmann, C. E., XX, 51
Wegmann, C. E., *et al.*, Gronland, 1939, review, XXIV, 882
Wegner, Th., XVIII, 729, 731; XX, 1491, 1492
Wehrenfels, A., XXIX, 1093
Weichsel glaciation, RMS, 332, 333
Weidman, Samuel, XVIII, 992, 1297, XXI, 258
igneous intrusives in Silver City area, Kansas, XVII, 1268
Weigelt, J., RMS, 203
Weigert, F., and Van't Hoff, J. H., XVIII, 1298, 1310
Weight percentage versus number percentage in sediment studies, RMS, 607
Weight percentage frequency, RMS, 560, 561
Weigner, St., XV, 2; XVII, 215
Weil field, XXVIII, 862
Weiler, Wilhelm, XXV, 321
Weiler sand, XXIII, 1499
Weiler well in Illinois, XXI, 785
Weimar beds, MSC, 133
Weiner pool, XXVI, 1020; XXVII, 755
Queen sand production at, XXVIII, 826
Weintz, C. A., XVI, 53; XXVII, 1410
Weinzierl, Laura Lee, memorial, XIII, 94
Weinzierl, Laura Lane, and Applin, Esther R., XXII, 1006
Weir gas field, in Lawrence and Johnson counties, Kentucky, GAS, 916
Weir sand, PROB, 490, 494, 495, 506; IV, 31, 307; XXV, 1147, XXVIII, 741
eastern coal field, Kentucky, STR I, 88
Elliott County field, Kentucky, STR I, 85
productive in Appalachian area, XXV, 803
Weir sandstone, eastern Kentucky, 927, 936, 944, 945
Weirich, T. E., PROB, 585, 586, 587, 770, 772; STRAT, 661; XI, 868; XVI, 882; XVII, 1120; XX, 1105; XXI, 40; XXII, 923, 1548; XXVII, 1041
Cushing oil and gas field, Creek County, Oklahoma, STR II, 396
Simpson of central Oklahoma, XIV, 1507
South Tyler field, Smith County, Texas, XXVIII, 1646
Weirich, T. E., and Kirk, Charles T., XII, 769
Weisbord, Norman E., graphic method for determination of true dip in pits, XIX, 908
Weiser sand, V, 293
Weiske, F., XXIV, 502; XXVI, 807, 817, 820, 821, 824, 827, XXIX, 1104
Weiss, T. F., XVI, 1021
Weizmann, A., and Stadnikoff, G., XV, 623; XVII, 1253
Welborn-Switch area, XXVI, 1093
Welch, L. L., XXII, 287
Welch, R. N., XXVIII, 981, 1010, XXIX, 51
Welch chert, GAS, 465; STRAT, 127
age of, STRAT, 127
in Salina basin, origin of, XII, 186
Welch field, Louisiana, GAS, 734
Welch pool, STRAT, 122, 131; XXVI, 1023; XXVII, 757
Weld County, Colorado, STRAT, 21, 22
Greasewood oil field, STRAT, 19
Weld County area, STRAT, 21
Welda shoestring, GAS, 499
Welden limestone, XXV, 1650
Weldon Canyon, XXIX, 991
Weldon limestone, XXII, 1566
Weldon Oil Company, SD, 503, 504
Weldonian stage, XXIX, 991
lower, XXIX, 990
upper, XXIX, 989
upper and lower, XXIX, 1006
Well, important, in New Mexico, XXV, 1059
in Mexico, SBP, 410
in Montana, SBP, 406
in Nebraska, SBP, 406
in New Mexico, SBP, 408
in Roane County, West Virginia, vertical variation of properties of sediments in, SBP, 378
in Upshur County, Texas, vertical variation of properties of sediments in, SBP, 333
producing from metamorphosed shale, MEX, 219
producing, influence on other wells, MEX, 176, 230
vertical variation of properties of sediments in, in Cherokee County, Texas, SBP, 332
Well and outcrop samples, California, comparison of properties of, SBP, 186
Rocky Mountain, comparison of properties of, SBP, 252
Well borer, early, XXII, 1091
Well completion practice, proper, discussion of, XXVI, 103
Well completion problems and methods at Amelia field, XXIII, 1661
Well completions by petroleum industry in United States, XXVII, 970
decrease in 1942, XXVII, 970
in United States, annual rate of, XXVII, 971
in United States, by years, 1915-1937, XXII, 634
Well construction at Camp Polk, Louisiana, methods of, XXIX, 1186
Well cores, laboratory orientation of, by their magnetic polarity, XXI, 580
Well-cutting examination, procedure in, initiated by J. A. Udden, XXV, 1220
Well cuttings, first, examined for foraminifera from Santa Clara County, California, XXV, 1219
importance in oil field discovery, XXIV, 1359
Well data, Belle Isle dome, GC, 1035; XIX, 646
detailed examination of, XXVI, 154
for subsurface map of Medina formation, XXII, 85
for subsurface map of Trenton limestone, XXII, 91, 92
Schuler field, XXVI, 1497
Tupungato oil field, XXVIII, 1469
Well-day costs versus barrel costs, IV, 299
Well head pressure, deliverabilities and gas in storage from East End Tioga storage pool, relationship between, XXVIII, 1591
Well logging, electrical, XXIII, 1287
by radioactivity, XXV, 1768
by radioactivity, development and history of process of, XXV, 1769
by radioactivity, discussion, XXV, 2211
Well logs, correction for, XI, 1116
giving typical sections of formations in North Dakota, XXVI, 358
Illinois, XXII, 1553-1556
Kentucky, XXII, 1558, 1559
Michigan, XXII, 1548-1551

- (Well)
Ohio, XXII, 1551, 1552
representative graphic, Wyoming, XXIV, 1218
Scanlan, or Midway dome, XXII, 818
Tennessee, XXII, 1556-1558
Well pressures, MEX, 229
Well references in index from Source
Beds of Petroleum, note of explanation, SBP, 530
Well samples, SBP, 412
collection of, in Raleigh, XXIX, 909
location, SBP, 87-89
number of, SBP, 16
relation of, to outcrop samples, SBP, 185-189, 252
remarks on care of, VII, 432
Well section, Jennings dome, GC, 967; XIX, 1314
Well sections in northeastern Colorado, XVII, 422
Well spacing, Conroe field, GC, 826; XX, 773
intra-field data used in, recovery chart, XXVIII, 238
its effect on recoveries and profits, XXVIII, 231
Lisbon field, XXIII, 322
patterns, XXII, 192
problem of, XXVI, 100
recovery chart showing influence of, XXVIII, 237
references on problem of, XXVI, 119
relation of cost of finding and development to, XXVIII, 252
relation to volumetric estimates, XXV, 1322
reservoir conditions as related to, XXII, 1442
Schuler field, XXVI, 1514
southern Oklahoma fields, GAS, 602
trend toward wider, XXVI, 116
West Columbia field, XXVI, 1458
Well spacing and production interference in West Columbia field, Brazoria County, Texas, XXVI, 1441
Well spacing and recoveries, mathematical relation between, XXVIII, 247
Well spacing and recovery, discussion of relation between, XXVI, 104
Well-spacing patterns, wider, economic advantage of, XXII, 644
Well-spacing problem and the geologist, XXII, 1440; discussion, XXIII, 1855
Well-spacing regulations in North Cowden field, XXV, 628
Well spacings, various, comparison of effects of, XXVIII, 254
Well surveys for velocity data, southeastern San Joaquin Valley, XXV, 1345
Well Surveys, Inc., XXV, 1769
Well-treating data, Wyoming, XXV, 862
Welland fields, GAS, 69, 82, 83
Wellborn Plain, GC, 529, XVII, 527
Wellborn sandstone at Raccoon Bend field, GC, 683; XVII, 1466
Wellborn sandstones, GC, 481; XVII, 1305
Wellodon, XIII, 1158
Weller, J. Marvin, XIV, 806; XVI, 250; XVIII, 294; XIX, 1275, 1304; XX, 876, 1397; XXI, 784, 1415; XXII, 283; XXIII, 1357, 1378, 1851; XXV, 675, 684, 691, 692; XXVI, 1192; XXVIII, 1523, 1528
outline of Chinese geology, XXVIII, (Weller)
1417
Pennsylvanian overlap in United States, discussion, XV, 704
petroleum possibilities of Red basin of Szechuan province, China, XXVIII, 1430
Weller, J. Marvin, and Bell, Alfred H., Illinois basin, XXI, 771
Weller, J. Marvin, and Newton, Wm. A., XXIII, 1498, 1506, 1518
Weller, J. Marvin, and Sutton, A. H., XXII, 272, XXIII, 1500, XXVIII, 92, 113; 117; XXIX, 136
Mississippian border of Eastern Interior basin, XXIV, 765, 1133
Weller, J. M., and Wanless, Harold R., XIX, 1285, XXIII, 1511
correlation of minable coals of Illinois, Indiana, and western Kentucky, XXIII, 1374
Weller, J. M., Wanless, H. R., Cline, L. M., and Stookley, D. G., interbasin Pennsylvanian correlations, Illinois and Iowa, XXVI, 1585
Weller, Stuart, III, 174; VII, 612; XVI, 247; XVIII, 1133, 1134, 1139, 1537; XXII, 78, 271, 275, 280-283; XXIII, 598, 1357, 1359, 1498, 1500, 1502, 1503, 1506; XXIV, 182, 765, 767; XXV, 675, 683, 880, 2049; XXVI, 5, 17; XXIX, 1151
memorial of, XI, 1347
Weller, Stuart, and St. Clair, Stuart, XXIII, 1839; XXV, 675, 682
Weller and Wanless theory of Pennsylvanian sedimentation and stratigraphy, XXIII, 1511
Welles, S. P., XXVIII, 506
Wellhead gauge, Austin field, STRAT, 246
Six Lakes field, STRAT, 258, 260
Vernon field, STRAT, 265
Wellings, F. E., MEX, ix
Wellington anticline, Colorado, GAS, 377-379
Wellington-basal redbeds contact in Kansas, XXIII, 1758
Wellington field, PROB, 937
Wellington formation, XXI, 505
(Cch, Ccg) (Permian), SBP, 258
fossil zones in, XXIII, 1756
in subsurface, XXIII, 1758
Kansas, X, 793; XXIII, 1755
Oklahoma, X, 793
Wellington salt, XXVI, 230
Wellington shale, II, 76; V, 508
Hugoton field, STRAT, 88
Wellington shale and anhydrite, XXIII, 1058
Wellington well, Colorado, VIII, 82
Wellman, Dean C., insoluble residues of Dundee and Detroit River (upper Monroe) formations of central Michigan, XXI, 317
Wells, III, 327
Wells and McLeod, X, 462
Wells, Charles, XIX, 908
Wells, H. G., XXIX, 492
Wells, H. P., XXV, 195
Wells, John W., MEX, 137; XXVII, 1450; XXVIII, 7; XXIX, 929
Wells, Lloyd, III, 137
Wells, M. G., XXIX, 956
Wells, M. J. C., SD, 324
Wells, Murray, XIV, 37, 55
Wells, Roger C., GAS, 1054, 1072; PROB, 913; RMS, 285; SBP, 57; SD, 28, 84; IX, 76; XXVI, 77
reviews, XXIII, 351, XXV, 1416
Wells, Roger C., and Erickson, E. T., XX, 296, XXVIII, 927
Wells, Roger C., and Mills, R. Van A., PROB, 465, 466, 467, 470, 841, 845, 850, 852, 853, 910; STRAT, 319, 825, IX, 240, 858, 1082, XI, 1284; XII, 362, XIV, 141, XVI, 934; XVII, 839, 1214, 1215; XXII, 263; XXIV, 487, 1428; XXV, 1862, 1865
Wells, Roger C., and Richardson, L. J., XXI, 1198
Wells, Samuel, III, 137; XXIX, 958
Wells along Granite ridge and Dumas-Stratford structural trend in Texas Panhandle field, XXIII, 1030
Amelia field, XXIII, 1638-1640, 1658
Appalachian region, logs and oil zones of, SBP, 351
Bayou Bouillon salt dome, Louisiana, IX, 1286
Bistineau dome, Louisiana, X, 253
Bellevue field, XXII, 1660
Bellevue field, logs of, XXII, 1670, 1671
Blue Ridge field, IX, 314
California, SBP, 403; XXI, 978-985
carried to Sparta and Wilcox productive, high percentage of, XXIV, 705
Carterville-Sarepta and Shongaloo fields, XXII, 1484
Cedar Creek dome, Louisiana, X, 284, 287
classification of, XXVIII, 705
Colorado, SBP, 407
Colorado, carbon dioxide from, VIII, 831
completed in 1939 in Oriskany sand area of southern New York, XXIV, 970
completed in 1939 in Tioga, Potter, and McKean counties of northern Pennsylvania, XXIV, 970
completed in north and west-central Texas, XXV, 1078
completed in north-central Texas, XXIV, 1060
completed in Ohio in 1941, by sands, XXVI, 1126
completed in Ohio in 1942, XXVII, 847
completed in Ohio in 1943, XXVIII, 735
completed in Wasson field, chart showing monthly rate of, XXVII, 484
completed in west-central Texas, XXIV, 1060
completed, total, in 1942, per cent of dry-hole completions to, XXVII, 972
completed and drilling in Summit pool, Fayette County, Pennsylvania, in 1940, XXV, 1138
completed and drilling in Summit pool, Fayette County, Pennsylvania, in 1941, XXVI, 1117
Cunningham field, Kansas, XXI, 502
Damon Mound, Texas, IX, 511
Darrow dome, XXII, 1413, 1414, 1417, 1421
deep, in St. Lawrence lowlands, GAS, 102
deep, in salt domes, XX, 735
deep, in Texas and Louisiana salt domes, GC, 118; XX, 735
deviation from vertical, PROB, 972
discovery, drilled in south Arkansas and north Louisiana during 1939,

(Wells)

XXIV, 1098
discovery, drilled in south Arkansas and north Louisiana during 1940, XXV, 1032
discovery, drilled in Michigan during 1940, XXV, 1933
Dora pool, XXIII, 692
drainage of oil by, MEX, 168
Drake's dome, Louisiana, X, 272
drilled for oil and gas in Dakota basin, XXVII, 1586
drilled in Camp Polk and North Camp Polk, Louisiana, XXIX, 1174
drilled in East Coast district, New Zealand, X, 1252
drilled in Mississippi in 1940, XXV, 1022
drilled in north and west-central Texas in 1941, XXVI, 1049
drilled in north-central Texas, 1938, XXIII, 858
drilled in Ohio in 1944, XXIX, 680
drilled in Oklahoma in 1938, XXIII, 826, 827
drilled in Oklahoma in 1941, XXVI, 1061
drilled in Rocky Mountain region, 1938, XXIII, 907-909, 911, 913, 915, 917, 919-923, 925-931
drilled in Taranaki district, New Zealand, X, 1243
drilled in west-central Texas, 1938, XXIII, 858
drilled, number in Northern fields, MEX, 173
drilled, number in Southern fields, MEX, 208
drilled on interior salt domes of Louisiana, X, 222
drilled on Vacherie salt dome, X, 239
drilled, proportion of successful, MEX, 171
drilled through overhanging cap rock or salt at High Island dome, GC, 942; XX, 594
drilled through overhanging salt, GC, 168; XVII, 1519
drilled to basement rocks in Florida, XXII, 802
drilled to basement rocks in Georgia, XXII, 802
drilled to basement rocks in North Carolina, XXII, 802
drilled to basement rocks in Virginia, XXII, 802
drilling or completed in Oklahoma during early 1940, XXIV, 1021
East Texas fields, developed during 1938, XXIII, 891-895
eastern Midland basin, XXIV, 53, 56
eastern New Mexico, concerning granite in, V, 163
Florida, stratigraphic and paleontologic studies of, XXVI, 1425, 1426
gas, in eastern Kansas, XXIV, 1779
Goose Creek field, SD, 552; IX, 292
Gulf Coast fields, developed in 1938, XXIII, 877-880, 882-886
Hebron pool, XXII, 258
Hockley dome, Texas, SD, opp. 591, 595; IX, opp. 1052, 1056
important, drilled in Forest City basin and adjacent areas in 1939, North Mid-Continent region, map showing location of, XXIV, 1004
important, drilled in New Mexico in 1938, XXIII, 837
important, drilled in West Texas in 1938, XXIII, 837

(Wells)

important, New Mexico, XXVI, 1009
important, West Texas, XXV, 1059; XXVI, 1009
Illinois basin, XXI, 785
Illinois fields, XXII, 653-655, 658
in Apco structure, Pecos County, Texas, XXIV, 479
in central California, and part of wells in Los Angeles Basin, logs and oil zones of, SBP, 92
Wells in La Blanca structure, Texas, XXI, 947
in Oriskany sand, completed in north-central Pennsylvania during 1940, XXV, 1145
in Oriskany sand in West Virginia, XXII, 178, 179, 182, 183, 186
Jennings field, Louisiana, SD, 405, X, 79
Jesse pool, XXII, 1560, 1561, 1563, 1564
Kanawha County, West Virginia, XXII, 1160
Kansas, SBP, 407; XXII, 673
Kentucky, SBP, 410
Keokuk pool, Oklahoma, XXIII, 220, 222, 230, 231, 237-245
King's salt dome, Louisiana, SD, 309, X, 257
Lisbon field, XXIII, 283, 284, 287, 300, 306, 308, 310, 312, 314, 320, 321, 323
location of, in Mid-Continent area, SBP, 256
location of, in Santa Fe Springs area, California, SBP, 90
logs and oil zones of, in East Texas Basin, SBP, 296
logs and oil zones of, in Gulf Coast region, SBP, 338
logs and oil zones of, in Mid-Continent region, SBP, 261
logs and oil zones of, in northeastern part of Rocky Mountain area, SBP, 193
logs and oil zones of, in southwestern part of Rocky Mountain area, SBP, 194
logs and oil zones of, in West Texas area, SBP, 286
logs and oil zones of part of, in Los Angeles Basin, SBP, 91
Louisiana, SBP, 410
lower, and Dry Lake section at Dry Lake, Utah, references, XXIX, 1155
map of Burbank and South Burbank oil fields, Osage and Kay counties, Oklahoma, showing initial daily yields of, XXV, 1176, 1177
map, Sulphur salt dome, SD, 455, IX, 482
Michigan, studies in locating and correlating Antrim, Ellsworth, and Coldwater shales, XXV, 726, 728, 730
Michigan oil and gas fields, XXII, 150, 154, 155, 164, 168, 169
near Itaituba, Brazil, XXIX, 544
New York, SBP, 410
north- and west-central Texas, XXIII, 848, 850-858
Northern fields, reaching Otates horizon in Tamaulipas limestone, MEX, 30
number of, 1859-1910, PROB, 14
Ohio, SBP, 410
oil, in Sulphur Bluff field, Hopkins County, Texas, XXI, 112
Oklahoma, SBP, 407

(Wells)

Oklahoma, drilling at end of 1940, XXV, 1102
Oklahoma fields, XXI, 1007-1014
Orange field, GC, 901
Pecos Valley, XXI, 867, 876
penetrating Wilcox formation, XXIV, 1898
Pennsylvania, SBP, 410
Powder Wash field, XXII, 1022
producing from different zones at Wilmington oil field, XXII, 1074
producing in East Texas during 1940, XXV, 1086
producing, in Sewell-Eddleman area, XXVI, 206
productive in Wilcox sand, XXIV, 1919
Quebracha fields, MEX, 198
Refugio field, XXII, 1189-1197, 1200
Rocky Mountain region, XXI, 989-999
Santa Maria field, XXIII, 46, 48, 50, 69
Santa Maria field, map, XXIII, 49
Saxet field, XXIV, 1812
shooting and acid treatment of, MEX, 234
size of, in Pánuco field, MEX, 175
size of, in Southern fields, MEX, 204
South Burbank pool, XXI, 564
South Dayton dome, Texas, IX, 660
stratigraphic position of oil zones in, in Los Angeles Basin, SBP, 100
Stratton Ridge dome, Texas, SD, 651; IX, 8, 32
stripping, MEX, 190
studied in investigation of source beds of petroleum, list of, SBP, 403-412, 417
studied, in investigation of source beds of petroleum, location, SBP, 87-89
studied in investigation of subsurface subdivisions in north-central Texas, XXIX, 419
Sulphur Bluff field, XXI, 111
synclinal areas in Gaspé Peninsula, GAS, 104
Tancoco, list of, MEX, 235
Tepetate field, Louisiana, XXII, 289
Texas, SBP, 408
Texas and Louisiana salt-dome fields, SD, 222, 233, 260, 278, 291, 293-295, 305, 307, 309, 311, 313, 320, 324, 326, 329, 335, 336, 339, 348, 353, 354, 371, 372, 380, 389, 405, 427-430, 432, 438, 443-446, 451, 453, 462, 464-468, 475, 480, 482, 484, 496, 498, 502-504, 507, 508, 518, 526, 531, 533, 552, 565, 572, opp. 591, 595, 610, 615, 620, 633, 651, 675, 700, 701, 730, 760, 773
used in cross section of Illinois basin, XXV, 882
used in geological cross sections in southwestern Michigan, XXIV, 2161
used in isopach and structural studies of Cretaceous system in Nebraska, XXVI, 1519
used in study of Devonian and Silurian in Kentucky, list of, XXV, 700
variation in character of offset, MEX, 176
Welsh field, Louisiana, IX, 478
West Ranch field, XXVIII, 215
West Texas and New Mexico, XXII, 697
West Texas-New Mexico Permian

- (Wells)
 basin, XXIV, 17, 31, 39
 West Virginia, SBP, 410
 Wilmington oil field, XXII, 1052
 Winnfield dome, Louisiana, X, 277
 Wyoming, SBP, 406
 Wells and electric log cross sections,
 West Ranch field, Jackson County,
 Texas, map showing, XXVIII, 198
 Wells and feet drilled, 1942, South Arkan-
 sas and north Louisiana,
 XXVIII, 258
 Wells and footage drilled, 1940 through
 1943, in Colorado, Montana, Utah,
 and Wyoming, XXVIII, 790
 Wells and operators in Miocene of south-
 ern Louisiana, XXIV, 443
 Wells and outcrop sections, location of,
 in California, SBP, 88
 location of, in Los Angeles Basin,
 California, SBP, 89
 location of, in Wyoming and Colo-
 rado, SBP, 192
 Wells and producers in north and west-
 central Texas fields, XXIV, 1056
 Wells beds, XXIX, 1143
 Wells Creek basin, XXVII, 1043, 1054
 Wells formation, faunules in basal part
 of, XXIX, 1152
 Wells Ranch syncline, Monterey of,
 XXV, 235
 Neroly unconformable on Temblor in,
 XXV, 236
 Pliocene of, XXV, 255
 Welsh, J. E., XIX, 691
 Welsh, R. A., IX, 286
 Welsh dome, Louisiana, I, 46
 Welsh field, Louisiana, SD, 437, IX, 464
 Welsh Oil & Development Company,
 SD, 443
 Welsh pool, PROB, 772
 Wellstead, J. R., XXII, 1219
 Wellsville Mountain and the Dry Lake
 and Deweyville sections, map,
 XXIX, 1144
 Wendlandt, E. A., SBP, 297; STRAT,
 608; XII, 528; XIII, 1362; XV,
 537, 870, XVII, 623, 764, 1129; XX,
 1422; XXV, 898; XXVII, 920,
 XXIX, 1417
 Talco field, Titus and Franklin coun-
 ties, Texas, XX, 978
 Wendlandt, E. A., and Herold, C. L.,
 résumé of development in East
 Texas during 1937, XXII, 728,
 1111
 Wendlandt, E. A., and Knebel, G.
 Moses, GAS, 654; PROB, 331
 Lower Claiborne of East Texas, with
 special reference to Mount Sylvan
 dome and salt movements, XIII,
 1347
 Mount Sylvan dome, Smith County,
 Texas, GC, 1041
 Wendlandt, E. A., and McLellan, H. J.,
 developments in East Texas during
 1939, XXIV, 1062
 Wendlandt, E. A., and Pirtle, G. W.,
 developments in East Texas dur-
 ing 1938, XXIII, 889
 Wendlandt, E. A., McLellan, H. J., and
 Murchison, E. A., GAS, 677;
 PROB, 330, 332, 639, 659, 660,
 676, 780
 Boggy Creek salt dome, Anderson
 and Cherokee counties, Texas,
 XVI, 584
 Wendler, Arno P., and Bowling, Leslie,
 detailed study of beds commonly
 known as Catahoula formation, in
- (Wendler)
 Fayette County, Texas, with par-
 ticular reference to their age, GC,
 528; XVII, 526
 Wenner-Gish-Rooney set-up of elec-
 trodes, XIX, 38, 44
 Weno formation, XXII, 1431; XXIX,
 173
 in northern Texas, XIII, 1297
 Wentworth, Chester K., RMS, 40, 212,
 544, 560, 565, 566, 567, 568, 569,
 574, 575, 578, 579, VII, 425,
 XVIII, 1587, 1595; XIX, 210;
 XXI, 257; XXVI, 1706, 1710,
 XXVIII, 1387, XXIX, 1235
 Wentworth grade classes, RMS, 183,
 184, 560, 565-569
 relation of, to Phiscale, RMS, 567
 Wentworth grade scale, XXII, 201
 Wentworth recording micrometer,
 XXIX, 1028
 Wenzel, L. K., XX, 711, 712, 718
 computation of coefficients of per-
 meability, XX, 713
 development of field method of de-
 termining permeability, XX, 711
 review, XXV, 1418
 Werenfels, A., XVI, 1105
 Werner, XII, 102; XXVI, 1698
 Werner, Abraham Gottlob, MSC, 80
 Werner, Donovan, RMS, 551
 Werner, H., XVIII, 33, 728
 Werner's volumetric method of me-
 chanical analyses, RMS, 551
 Werra district, SD, 187; IX, 1247
 Wertz dome, Wyoming, PROB, 343;
 STR II, 648, 651-653; VII, 144;
 XXI, 990, 991; XXIV, 1101; XXV,
 1152
 Cloverly formation productive at,
 XXIV, 1101
 faults, X, 120
 Mowry shale productive at, XXIV,
 1101
 Sundance formation productive at,
 XXIV, 1101
 Wertz field, GAS, 309, 310, 312, 313;
 PROB, 688, 938, XXV, 1157,
 XXVIII, 798
 Weser River, RMS, 195, 201, 334, 335
 Wesley, George, XXII, 267
 Wesley shale, XXII, 886
 Wesley siliceous shale, type locality of,
 XXII, 887
 Wesson tongue, type section, XXVIII,
 608
 West and Hazlett, VII, 133
 West, C. K., and Pitzer, P. W., XX,
 1410
 West, W. W., XXVI, 1026
 West, W. W., and DeWolf, F. W.,
 stratigraphic studies of Baker-
 Glendive anticline, eastern Mon-
 tana, XXIII, 461; reply to discus-
 sion of, XXIII, 1247
 West, W. W., Secor, Dana M., and
 Fritz, W. C., developments in West
 Texas and southeastern New Mex-
 ico during 1939, XXIV, 1033
 West Abrams fault, XXVI, 1447
 West Allen field, XXI, 1010
 West Allen pool, PROB, 411
 West Andrews pool, XXV, 1051
 West Bay field, XXV, 1013; XXVIII,
 856
 West Bloomfield Township, Ontario
 County, New York, gasin, GAS, 951
 West Blue Springs field, XXV, 1407
 West Branch pool in Ogemaw County,
 Michigan, XXII, 663
 West Butte, California, outcrop section
 C., SBP, 167-194, 411
 West Butte, Sweetgrass Hills, Mon-
 tana, XXIX, 1266
 West Cat Canyon field, XXIII, 942;
 XXVII, 1349
 West-central and north Texas develop-
 ments in 1939, XXIV, 1044
 in 1940, XXV, 1064
 in 1942, XXVII, 771
 in 1943, XXVIII, 834
 West-central and north Texas, oil pro-
 duction in barrels, XXV, 1079
 wells completed in, XXV, 1078
 West-central Texas (Cisco) district,
 tests drilled in, during 1936, XXI,
 1026
 West-central Texas, structural map of.
 Datum, base of Barnett formation,
 XXIV, 108
 West Charenton field, St. Mary Parish,
 Louisiana, XXIV, 1090
 West Coast, MSC, 32
 academic and commercial back-
 grounds of micropaleontology on,
 XXV, 1227
 West Coast foraminiferal taxonomy,
 MSC, 182
 West Coast stratigraphy, MSC, 99
 West Columbia, Texas, GAS, 709;
 XXII, 742
 West Columbia and other domes of
 Texas Gulf Coast, map, XXVI, 1442
 West Columbia dome, subsurface map
 of, contoured on top of basal Mio-
 cene sands, XXVI, 1444
 West Columbia field, Brazoria County,
 Texas, V, 212
 cumulative production of oil at,
 XXVI, 1462
 gas-oil ratio in, XXVI, 1453
 graph showing total fluid production
 Hogg-Abrams producing unit,
 XXVI, 1450, 1452, 1454, 1456,
 1464, 1465
 gravity of oil, XXVI, 1453
 oil recoveries, XXVI, 1457
 producing sands, XXVI, 1451
 production from basal Miocene sands,
 XXVI, 1443
 production from Oligocene sands,
 XXVI, 1443
 production decline curve, XXVI,
 1455
 section through north flank producing
 area, XXVI, 1446
 structural contours on basal Miocene
 sand in, XXVI, 1459
 water drive at, XXVI, 1451
 well spacing and production inter-
 ference in, XXVI, 1441
 west-east section through, near
 Japhet lease in southeast producing
 area, XXVI, 1448
 West Columbia oil field and Japhet
 lease, Texas, production curves,
 STR II, 468
 West Columbia pool, PROB, 340, 418
 West Columbia salt dome and oil field,
 Texas, STR II, 451, 465, 466, 682;
 II, 34; V, 102, 247, 325; VI, 253;
 X, 981
 abstract, V, 102
 Beaumont formation, STR II, 454
 flank production at, GC, 6; XVIII,
 505
 section, PROB, 675
 West Conroe area, XXIII, 877
 West Côte Blanche field, XXV, 1011;
 XXVII, 737

- West Coyote anticline, SC, 133, XX, 1679
- West Coyote field, California, PROB, 752, GAS, 204-206, SBP, 87-153, 406
- (wells 189, 190), SBP, 87-153, 406
- West Coyote Hills field, PROB, 225
- West Edison area, gravity of oil in, XXVI, 1148
- West Edmond field, references on, XXIX, 720
- West Edmond pool, XXIX, 710
- production at, XXVIII, 780
- West Eunice pool, XXVI, 1038; XXVII, 768
- West Ferris and Ferris domes, Wyoming, Dakota sand, STR II, 657
- West Ferris dome, Wyoming, STR II, 642, 659
- West Ferris field, GAS, 311, 315, 318
- West field, XXIII, 868
- West Fork of Lake Fork, XXIII, 83
- West Franklin formation of southwestern Indiana, structural features of, XIII, 1301
- West Freezeout Mountain anticline area, XXV, 884, 891
- West Gueydan field, Vermilion Parish, Louisiana, XXIII, 883; XXVIII, 1258
- electric-log cross section, XXVIII, 1260
- West Hackberry dome, PROB, 659, 661
- West Hewitt extension, XXV, 1100
- West Hiawatha dome, XIV, 1033
- West Hickman fault in central Kentucky, GAS, 924
- West Hopkins field, XXVI, 1109
- West Hotulke pool, gravity of oil in, XXVI, 1068
- West Indian geology, bibliography of, XXII, 1460
- West Indian region, MSC, 169
- West Indies, RMS, 283-297, 348, 376
- map of, XXIV, 2122
- review, VI, 263
- West Kimberly division, Western Australia, XXV, 386
- great thickness of Paleozoic glacial sediments in, XXV, 387
- West Lake Verret field, XXIII, 884
- West Lovington strike, XXIX, 751
- West Lusk pool, XXVII, 768
- West Mauritz field, XXVII, 744
- West Mermintau, XXV, 1012
- West Michigan Consumers Company, GAS, 804
- West Montebello anticline, XXIV, 1119
- West Moore pool, XXVIII, 782; XXIX, 716
- West Mule Creek oil field, potable Fall River and Lakota waters in, XXIV, 1269
- West Navarro Crossing oil and gas field, Leon County, Texas, XXIV, 1064
- West Noble pool, XXIX, 715
- West Pampa pool, dolomite section in, XXIII, 1007
- West Point member, XXIV, 801
- West Point salt dome, I, 80
- West pool, XXIX, 763
- West Production Company, SD, 612; XXIII, 882
- West Ranch oil field, Jackson County, Texas, XXIV, 1071; XXVII, 745; XXVIII, 197
- drilling methods at, XXVIII, 216
- map showing location of, and relationship to other fields, XXVIII, 198
- (West)
- map showing wells and electric log cross sections, XXVIII, 198
- Oligocene in, XXVIII, 203
- petroleum development of, XXVIII, 215
- Pleistocene, Pliocene, and Miocene in, XXVIII, 201
- producing sands in, XXVIII, 203
- production at, XXVIII, 208, 215
- proration in, XXVIII, 216
- sections, XXVIII, 209, 210
- stratigraphic column, XXVIII, 200
- structure contour maps, XXVIII, 211-214
- type section, XXVIII, 202
- wells in, XXVIII, 215
- West Ranch structure, XXVIII, 208
- West sand, XXVIII, 203, 204
- West Saxet field, XXII, 755
- West Side field, PROB, 195
- West Side fields in California, PROB, 745
- West Tennessee arch, XXVII, 1042
- West Tepetate field, XXIX, 795
- West Texas, PROB, 351, 352, 369, 372, 577
- additions to crude reserves in 1942, XXVII, 951
- basement rocks in Shell-Humphreys well, Pecos County, Texas, XIV, 314
- basin and shelf areas in, PTNM, 617; XXVI, 617
- burned ridges in, XI, 1109
- counties productive in, XXIV, 1034
- developments in Permian of, XXIX, 734
- developments in Permian of, 1940, XXV, 1047
- developments in Permian of, 1941, XXVI, 1016
- developments in Permian of, 1942, XXVII, 753
- developments in pre-Permian in, XXVI, 1028
- developments in pre-Permian in Crane, Crockett, Pecos, and Ward counties in 1940, XXV, 1054
- developments in pre-Permian of, 1942, XXVII, 762
- developments in pre-Permian of, 1944, XXIX, 748
- discoveries in 1943, XXVIII, 814, 816
- discoveries in 1944, XXIX, 735
- division of Ellenburger in, XXVI, 1401
- Dockum group in, XXIV, 63
- dolomite in Permian limestones of, XIX, 1678
- dolomite fields of, XXVII, 479
- drilling wells, close of 1943, XXVIII, 828
- Ellenburger production in 1944, XXIX, 750
- exploratory wells completed in 1943, XXVIII, 822
- exploratory wells completed in 1944, XXIX, 736
- extensions of existing fields in 1938, XXIII, 840
- fields in, XXIV, 1034
- foreland facies in, XXIX, 1346
- general correlation of late Paleozoic ammonoid-bearing beds of U.S.S.R., with those of, XXII, 1016
- geologic structure of a portion of Glass Mountains, X, 877
- geophysical operations in 1943, (West)
- XXVIII, 830
- high-pressure Yates sand gas problem, east Wasson field, Yoakum County, XXV, 1880, 2070
- igneous rocks from deep wells in, XXIX, 1028
- important deep tests in 1938 and 1939, XXIV, 1034
- important drilling wells, December 31, 1944, XXIX, 741
- important wells in, XXV, 1059; XXVI, 1009
- important wildcats, XXVII, 749
- limestone production in, 1936, XXI, 1035
- lower boundary of Permian rocks zone of *Uddenites*, XXIV, 316
- lower Permian in, XXVIII, 815
- McKee and Waddell sands, Simpson group, XXVI, 279
- Mesozoic in, PTNM, 615; XXVI, 615
- microscopic subsurface work in, XV, 738
- Mississippian in, PTNM, 616; XXVI, 616; XXIX, 1343
- new fields added and extensions made during 1939, XXIV, 1030
- new Permian pay zones in, XXV, 1047
- oil fields of, XXVI, 382
- Ordovician in, XXV, 1055, 1056, 1057; XXVII, 751
- Ordovician pools in, XXIV, 1037
- paleogeography of parts of border province of Mexico adjacent to, XX, 417
- Paleozoic stratigraphy of Franklin Mountains, XXIV, 157
- Pennsylvanian in, PTNM, 616; XXV, 1055; XXVI, 616; XXVII, 763; XXIX, 1336, 1346
- Permian in, FOP, 95; PTNM, 616; XXIV, 1037; XXV, 1527, XXVI, 616; XXVII, 751
- pipe lines constructed in 1941, XXVI, 1010
- possible future oil provinces of, FOP, 95, XXV, 1527
- pre-Carboniferous stratigraphy of Marathon uplift, XV, 1059
- pre-Permian axes of maximum deposition in, XXIX, 1336
- pre-Permian exploration in, XXVIII, 817
- producing fields in, XXVIII, 807; XXIX, 728
- Silurian in, XXVIII, 817
- Silurian production in, XXV, 1055
- Simpson production in, XXV, 1056
- spacing of wells in, 1940, XXV, 1046
- structural and stratigraphic development of South Permian basin, XVI, 189
- subsurface study of Ellenburger formation in, XXVI, 1398
- Triassic of, XIII, 1045; XXIV, 63
- Uddenites*-bearing beds in, assignable to lower Permian, XXIV, 307, 316
- Upper Pennsylvanian anhydrite, XXVI, 1412
- West Texas and eastern New Mexico, regional structure of, map, XXV, 76
- West Texas and New Mexico, correlation chart for, XXIV, 4
- important drilling wells in, XXVII, 749
- map showing relative position and size of Wasson field to other fields,

(West)

- XXVII, 480
Ordovician in, XXII, 696
Permian in, XXII, 696, XXV, 73, 1715
position of San Andres group, XXV, 73
references on geological developments in 1941, XXVI, 1011
references on oil prospects in, FOP, 97, 101, XXV, 1529, 1533
West Texas and southeast New Mexico, base map of, showing location of fields and more important wildcats, XXIV, 1035
correlation chart, Permian and post-Permian rocks, XXVI, 1013
decrease of drilling in 1943, XXVIII, 813
West Texas and southeastern New Mexico, developments in 1936, XXI, 1034
in 1937, XXII, 694
in 1938, XXIII, 836
in 1939, XXIV, 1033
in 1940, XXV, 1044
in 1941, XXVI, 1007
in 1942, XXVII, 747
in 1943, XXVIII, 806
in 1944, XXIX, 725
West Texas and southeastern New Mexico, expansion of exploration and development in 1943, XXVIII, 830
exploratory methods and developments in, 1943, XXVIII, 827
fields in, XXI, 1040
map, XXIX, 726
map showing areal geology, structure, and oil and gas fields, insert, PTNM, prec. 535; XXVI, prec. 535.
map showing location of basins, XXIII, 1683
map showing location of fields, XXVI, 1008
map showing location of fields and wildcats, XXIII, 837; XXV, 1058
map showing oil and gas fields, XXVIII, 810
natural gas in, GAS, 417
Permian of, PTNM, 535; XXVI, 535
production in 1944, XXIX, 732
references on developments in 1943, XXVIII, 831, 832
references on geology of, XXVII, 751
stratigraphy of, XXVIII, 827
Tansill formation, XXV, 1713
underlain by layers of geology, XXVII, 911
Upper Permian Ochoa series of Delaware basin, XXVIII, 1596
West Texas area, key to productivity of samples in, SBP, 289
logs and oil zones of wells in, SBP, 286
Permian basin, STR II, 516
relation of properties of samples in, to oil zones, SBP, 290
stratigraphic units sampled in, SBP, 285
summary of properties of samples in, SBP, 287
West Texas areas extended in 1937, XXII, 695
West Texas basin, XIII, 1034; XXI, 1086; XXVI, 225
an important regional structural basin, STR II, 703
barrier reefs in, discussion, XIII, 1397
correlation of Permian outcrops on

(West)

- eastern side of, XIII, 945
West Texas basin province, XIII, 430
West Texas developments during 1939, XXIV, 1036
West Texas district, general report and review to December 31, 1931, review, XVI, 424
references on stratigraphy and occurrence of oil in, SBP, 287
West Texas fields, XXV, 1059; XXVI, 1009, XXVII, 749
West Texas formations, correlation chart of, XXIV, 1041; XXV, 1060
West Texas Geological Society, field trip, June, 1940, XXIV, 952
field trip, September, 1940, XXIV, 1704
field trip, September, 1941, XXV, 1838
possible future oil provinces of West Texas, FOP, 95; XXV, 1527
West Texas Geological Society committee, West Texas and southeastern New Mexico development in 1941, XXVI, 1007
West Texas Geological Society fall meeting, August, 1940. Abstracts, XXIV, 1698
West Texas Geological Society student merit award, XXIV, 194, 1143, 2019; XXV, 1188; XXVI, 1169; XXVII, 659; XXVIII, 883
West Texas-New Mexico Permian, PROB, 322
West Texas-New Mexico Permian basin, Central Basin platform of, XXIV, 15
extent of Castile formation of, XXIII, 1682
regional cross sections, XXIV, 12
section through, showing operators and wells, XXIV, 38
section through, showing operators, wells, and locations, XXIV, 16, 30
West Texas-New Mexico region, index map of regional structure of, XXIV, 2
Permian nomenclature, XXIV, 6
pre-Permian nomenclature, XXIV, 6
West Texas-New Mexico symposium: Part I. Editorial introduction, XXIV, 1
Part II, foreword, PTNM, 533; XXVI, 533
West Texas operations, drilling time important in, XXIII, 1820
1937-1941, XXVI, 1007
1937-1942, XXVII, 750
1938-1943, XXVIII, 813
1939-1944, XXIX, 733
West Texas Permian, provinces of, PTNM, 664; XXVI, 664
stratigraphic complexities, PTNM, 543; XXVI, 543
subdivisions of, PTNM, 549; XXVI, 549
West Texas Permian basin, GAS, 417; PROB, 373, 835; V, 108; XXI, 1084; XXIII, 1683; XXVI, 222
dolomite porosity in Devonian of, XXVIII, 1043
relation of water analyses to structure and porosity in, PROB, 869
subsurface correlation methods in, XIII, 171
top anhydrite marker in, XXV, 601
Upper Permian stratigraphy of, XIX, 1010, 1544
West Texas Permian basin fields, PROB, 413

- West Texas Permian gravity-interval pattern of oils, XXV, 578
West Texas region, great thickness of Permian in, PTNM, 541; XXVI, 541
in Permian time, paleogeography and geologic history of, PTNM, 711; XXVI, 711
map showing linear features of Permian, pre-Permian, or post-Permian age, PTNM, 723; XXVI, 723
map showing paleogeology of surface underlying Wolfcamp series, PTNM, 678; XXVI, 678
map showing provinces of Permian time, PTNM, 665, XXVI, 665
map showing tectonic features at end of Permian time, PTNM, 722; XXVI, 722
tectonic maps, PTNM, 712-715; XXVI, 712-715
West Texas samples, carbon content of, SBP, 27-31
carbon-nitrogen ratio of, SBP, 34, 35 (wells 302-304), SBP, 285-292. (See also Texas samples)
West Texas-southeastern New Mexico area, production in, 1940, XXV, 1046
West Union district, West Virginia (well 424), SBP, 349-379, 410
West Union field, New York, XXVII, 837; XXIX, 668
West Virginia, PROB, 7, 9, 12, 13, 15, 72, 73, 106, 338, 340, 465, 485, 497-499, 510; STRAT, 825
anticlinal theory and later developments in, XXII, 1097
barium in brines from Pennsylvanian, Mississippian, Devonian, and Silurian formations in, XXIV, 490
Baumé gravity of crude oil in, PROB, 103
Big Injun sand highly productive in, XXII, 1178
Cabin Creek field, STRAT, 883; STR I, 462; XI, 705
column showing coal seams in, XXVII, 1202
Copley field, STRAT, 883
Copley oil pool of, STR I, 440; XI, 581
development, III, 21; IV, 27
development in Kanawha County, XXII, 1160
developments in 1940, XXV, 1146
developments in 1941, XXVI, 1126
developments in 1943, XXVIII, 737
developments in 1944, XXIX, 681
Devonian in, STRAT, 834; XXV, 784, 1146
Devonian in Cabin Creek field, STR I, 469
early development of drilling practices in Kanawha County, XXII, 1088
eastern Ohio, and eastern Kentucky, occurrence of oil and gas in, PROB, 485
gas fields in, GAS, 993, 994
gas-producing counties, GAS, 993
Gay-Spencer-Richardson oil and gas trend, Jackson, Roane, and Calhoun counties, STRAT, 806
geologic column for oil and gas fields of, XXII, 1156, 1157
Granny's Creek field, STR II, 575
Grassland syncline in Copley pool, STR I, 452, 453
great thickness of Permian near

(West)

- Wileysville, Wetzel County, XXV, 796
- Griffithsville field, STR II, 571
- Helderberg group in, XXIV, 1983
- Hughes River development in Ritchie County in 1844, XXII, 1095
- map of, review, VI, 260
- map showing isocarbs, composite of all coal seams, XXVII, 1201
- map showing oil fields in Pottsville sediments, XXIV, 492
- map showing probable minable extent of bituminous coal seams, XXVII, 530
- map showing structure of Big Creek pool, STR II, 572
- map showing structure of southwestern Clay County, STR II, 575
- map showing structure of Tanner Creek pool, STR II, 574
- migration of oil at Copley pool, STR I, 456
- Mississippian in, STRAT, 810, 834
- Mississippian in Cabin Creek field, STR I, 468
- natural coal gas in, XXVII, 529
- natural gas in, GAS, 989
- new map of, VI, 260
- West Virginia, Ohio, and Pennsylvania, problems of underground gas storage in, XXVIII, 1561
- West Virginia, oil and gas development in, for year 1920, V, 80
- oil and gas fields of, PROB, 491
- oil and gas horizons of, XIX, 868
- oil fields in, SBP, 410
- oil reserves, VI, 44
- Ordovician in, XXIX, 683
- Oriskany in, XXII, 175, 176
- Pennsylvanian in, STRAT, 809, 833
- Permian in, STRAT, 809, 833
- production, STR I, 458, 467, 469, 470, 472, 474
- production of gas in, GAS, 771
- productive anticlines, PROB, 10
- recent oil and gas developments in, IV, 27
- references on regional metamorphism of coal in, XXVII, 1223, 1227
- résumé of Devonian system of, XXIV, 1983
- review on carbon ratios, VI, 387
- Shinnston oil pool, Harrison County, STRAT, 830
- Silurian in, XXV, 1146
- southeastern, causes of regional metamorphism in, XXVII, 1215
- southeastern, regional metamorphism of coal in, XXVII, 1194; discussion, XXVII, 1225
- southern, synclinal oil fields, STR II, 571
- southern, water conditions, STR II, 576
- southwestern, maximum thickness of Mississippian system in, XXV, 794
- stratigraphy of deep well in Harrison County, XXVII, 1539
- synclinal oil pools, STR II, 703
- synclinal oil production, STR II, 571
- Tanner Creek field, STR II, 573
- vertical variation of properties of sediments in well in Roane County, SBP, 378
- wells completed in Elk-Poca field during 1939, XXIV, 973
- wells in Kanawha County, XXII, 1160

(West)

- wildcat prospecting in Oriskany sand area of, during 1939, XXIV, 972
- West Virginia and Pennsylvania, clay dikes in Redstone coal, XVII, 1527
- West Virginia Big lime, XXV, 796, 798, 800
- correlation of, with Greenbrier and Maxville formations, XXV, 800
- productive of oil and gas in West Virginia, XXV, 800
- West Virginia developments in 1942, XXVII, 850
- West Virginia Iron sandstone, XXV, 816
- West Virginia Little lime, XXV, 799
- West Virginia maps and sections, list of, XXII, 477
- West Virginia-Missouri, cross section, XXII, 1544-1545
- West Virginia Oriskany gas fields data, XXVI, 1128
- West Virginia Pencil Cave, XXV, 799
- West Virginia samples (wells 424-429), SBP, 349-379, 410 (See also Appalachian samples)
- West Virginia sands producing from synclines, STR II, 704
- West Virginia University, RMS, 207
- West White Lake field, XXIX, 797
- Westbrook field, Mitchell County, Texas, STR I, 282; XI, 467
- helium and nitrogen in, GAS, 1055
- porosity an important accumulation factor, STR II, 678
- Westby, G H, XV, 1307, 1331, XXV, 1344
- discussion of geological application of seismography, XV, 1331
- introduction to symposium on geophysics, XV, 1309
- memorial of Alex M. Alexander, XIX, 147
- reviews, XVII, 445, XIX, 119
- Westcot, F. S., XVII, 981, 1002
- Westermann, J. H., XXIV, 1570
- Western Australia, bibliography on
- Upper Paleozoic of, XXV, 412
- Coal Measure series in, XXV, 378
- Desert Basin, X, 1119, 1128
- foreign correlations of Paleozoic of, XXV, 401
- geology of Northwest Basin, XX, 1028
- Helicoprion davisii* most important index fossil of, XXV, 402
- Irwin River district, XXV, 376
- map of, showing distribution of outcrops of upper Paleozoic, XXV, 373
- North-West artesian basin in, XXV, 378
- Paleozoic fossils of, XXV, 377-385, 387-398, 402-408, 410, 411
- period of marine sedimentation in, XXV, 394
- Permian in, XXV, 371
- sections of upper Paleozoic rocks in, XXV, 390
- upper Paleozoic of: correlation and paleogeography, XXV, 371, 1809
- West Kimberly division, XXV, 386
- Western Australia and Gondwanaland, XXV, 409
- Western Australian correlations, XXV, 388
- Western Australian sequence, correlation of, with that of eastern Australian Kamilaroi system, XXV, 397
- Western Cacalilao anticline, MEX, 192
- Western Canada, STRAT, 273, 285
- Western Coal basin, PROB, 515, 517; XXIII, 1851
- of Kentucky, XVI, 232
- production in, XXV, 1123
- Western coal deposits, significant features of, I, 148
- Western Dial pool, Hutchinson County, Texas, columnar section of Big lime in, XXIII, 1024
- Western Exploration Company, GAS, 297
- Western extension of Santa Maria field, XXIII, 72
- Western Gas Company, GAS, 429, 430
- Western Gulf Oil Company, XXIV, 1113
- Bagg 1 (well 63), Vail 1 (well 100), SBP, 87-153, 404
- Western Gulf province, analysis of Midway fauna of, XXV, 644
- new Rangia from upper Miocene of, XXIV, 476
- Western Hemisphere, oil fields of United States, Mexico, Venezuela, and Colombia, XXVIII, 1502
- Western Highland Rim, PROB, 515
- Western Illinois, Coal Measures in, XXIII, 1382
- Western Illinois notes, review, V, 108
- Western Interior of United States, occurrence of Middle Jurassic rocks in, XXIX, 1019
- Western interior and Gulf regions of United States, ranges of identical and analogous species of Upper Cretaceous fossils in, XXII, 1637
- Western Interior coal basin, XXII, 1539
- Western Interior coal basin province, XXII, 421
- Western Interior region, correlation of Jurassic formations in, XXIX, 1020
- types of Upper Cretaceous in, XXII, 1633
- Western interior region and Coastal Plain, map showing areas of outcrop of Upper Cretaceous sediments in, XXII, 1630
- Western interior region and Gulf region, comparison of Upper Cretaceous deposits of, XXII, 1629
- Western Interior United States, map, XXV, 433
- Permian correlation chart, XXV, 436
- Western Kansas, extensions to old pools in, XXII, 674
- Western Kansas pools, 1942, XXVII, 810
- Western Kentucky coal basin, XXVII, 820; XXVIII, 759
- Western Michigan, study of sedimentation and stratigraphy of lower Mississippian in, XXV, 713
- Western National Gas Company, GAS, 271
- Western Pánuco, MEX, 164, 186
- Western Rift zone of East Africa, XXI, 115
- Western states, correlation of Pennsylvanian in, XV, 134
- diagram indicating succession and stratigraphic relations of Paleozoic formations in, XXIV, 310

(Westen)

- tion of, with that of eastern Australian Kamilaroi system, XXV, 397
- Western Cacalilao anticline, MEX, 192
- Western Canada, STRAT, 273, 285
- Western Coal basin, PROB, 515, 517; XXIII, 1851
- of Kentucky, XVI, 232
- production in, XXV, 1123
- Western coal deposits, significant features of, I, 148
- Western Dial pool, Hutchinson County, Texas, columnar section of Big lime in, XXIII, 1024
- Western Exploration Company, GAS, 297
- Western extension of Santa Maria field, XXIII, 72
- Western Gas Company, GAS, 429, 430
- Western Gulf Oil Company, XXIV, 1113
- Bagg 1 (well 63), Vail 1 (well 100), SBP, 87-153, 404
- Western Gulf province, analysis of Midway fauna of, XXV, 644
- new Rangia from upper Miocene of, XXIV, 476
- Western Hemisphere, oil fields of United States, Mexico, Venezuela, and Colombia, XXVIII, 1502
- Western Highland Rim, PROB, 515
- Western Illinois, Coal Measures in, XXIII, 1382
- Western Illinois notes, review, V, 108
- Western Interior of United States, occurrence of Middle Jurassic rocks in, XXIX, 1019
- Western interior and Gulf regions of United States, ranges of identical and analogous species of Upper Cretaceous fossils in, XXII, 1637
- Western Interior coal basin, XXII, 1539
- Western Interior coal basin province, XXII, 421
- Western Interior region, correlation of Jurassic formations in, XXIX, 1020
- types of Upper Cretaceous in, XXII, 1633
- Western interior region and Coastal Plain, map showing areas of outcrop of Upper Cretaceous sediments in, XXII, 1630
- Western interior region and Gulf region, comparison of Upper Cretaceous deposits of, XXII, 1629
- Western Interior United States, map, XXV, 433
- Permian correlation chart, XXV, 436
- Western Kansas, extensions to old pools in, XXII, 674
- Western Kansas pools, 1942, XXVII, 810
- Western Kentucky coal basin, XXVII, 820; XXVIII, 759
- Western Michigan, study of sedimentation and stratigraphy of lower Mississippian in, XXV, 713
- Western National Gas Company, GAS, 271
- Western Pánuco, MEX, 164, 186
- Western Rift zone of East Africa, XXI, 115
- Western states, correlation of Pennsylvanian in, XV, 134
- diagram indicating succession and stratigraphic relations of Paleozoic formations in, XXIV, 310

- Western Union Oil Company, GAS, 154
 Western United States, correlation of
 Permian system of, XXV, 437
 fossils of, XXIV, 317
 Pennsylvanian-Permian boundary in,
 XXIV, 308
 Western world, relation of, to oil trade,
 XXV, 370
 Western Ziebach County, South Dakota,
 possibility of oil in, review, X, 638
 Westerveld, J., XXII, 30, 53
 Westfall, Chester A., X, 582
 Westfield to Houston, cross section,
 XXIX, 271
 Westfield limestone, IV, 45
 main producing formation of West-
 field pool, XXIII, 815
 Westfield pool, Clark County, Illinois,
 XXIV, 966
 production from Salem formation in,
 XXIV, 232
 structure, XXIII, 816
 Westgate, Lewis E., XI, 148
 Westgate, Lewis G., X, 872
 Westgate, Lewis G., and Branson, E.
 B., XXV, 146
 Westgate, Lewis G., and Knopf, Adolph,
 XXIII, 130
 Westgate, Lewis G., Umpleby, Joseph
 B., and Ross, Clyde P., XVII, 118
 Westheimer, Jerome, XXV, 1667
 Westland district, New Zealand, geol-
 ogy, X, 1236
 Westman, A. E. R., XIV, 2
 Westmoreland County field, GAS, 952
 Westoak Gasoline and Carbon Com-
 pany, GAS, 415
 Weston County, Wyoming, Osage oil
 field, STRAT, 847
 map, XXVII, 462
 Weston shale, II, 104; V, 66, 67, 71
 Westphal balance, RMS, 596; XXVII,
 67
Westsudeten, Kaledonische und varia-
zische Probleme der, XXIII, 1418
 Westward drift, absolute, cause and
 enhancement of, CD, 71
 Wet gas, GAS, 121, 152
 Wet Mountains, XXVII, 430
 Wetherbee, George, XXII, 1659
 Wethered, E., XX, 1087
 Wettstein, H., theory of continental
 drift, CD, 34
 Wetumka formation, Dora pool,
 STRAT, 413
 Olympic pool, STRAT, 459
 Wetumka pool, PROB, 411
 Wetumka shale, STRAT, 443; III,
 269; V, 34, 283; VI, 13
 Wetzel, W., RMS, 201
 Wewoka formation, I, 135; III, 265; V,
 39, 285, 400; VI, 13
 Dora pool, STRAT, 413
 Olympic pool, STRAT, 459
 Wewoka pool, PROB, 411, 766
 Wewoka-Wetumka zone, XXIII, 225
 Weymouth, A. Allen, and Barbat,
 William F., MSC, 32, Fig. 14 (in
 pocket)
 Weymouth, Thomas R., GAS, 1113
 Weyquosque formation, RMS, 242
 Whales, RMS, 439
 Wharton, Jay B., Jr., and Bates, Fred
 W., XXVIII, 981
 Anse la Butte dome, St. Martin
 Parish, Louisiana, XXVII, 1123
 Wharton County, Texas, geochemical
 log, discovery well, East Bernard
 field, XXIV, 1418
 What the oil company expects of the
 (What)
 geologist, VI, 516
 Wheat, J. H., XIX, 303
 Wheat pool, Loving County, Texas,
 XX, 780; XXVIII, 1607
 relation to Permian basin, XX, 781
 Wheatland, MSC, 101
 Wheatland formation, MSC, 101,
 XXVIII, 968
 Wheatley, G. Y., XXV, 194
 Wheaton formation, V, 369
 Wheeler, XIX, 610
 Wheeler, G. E., XV, 1217
 Wheeler, H. A., influence of faulting in
 Illinois fields, review, V, 107
 Wheeler, Harry Edgar, XXIV, 282
 Timothy Abbott Conrad, with partic-
 ular reference to his work in Ala-
 bama one hundred years ago, re-
 view, XX, 321
 Wheeler, J. B., XXVII, 990
 Wheeler, O. C., MSC, 79; XXV, 1793;
 XXVI, 800, 801, 808, 816, 817, 818,
 820, 828; XXIX, 1081, 1085, 1097,
 1098, 1099, 1100, 1109, 1130, 1137
 Wheeler, W. C., MEX, 207; RMS, 285
 Wheeler, W. C., and Clarke, F. W.,
 XXVIII, 1017
 Wheeler, Doyle, Milroy, Hanbury,
 Nellie and Cruce pools, redbeds in,
 GAS, 586
 Wheeler Canyon, PROB, 193
 Wheeler coal, XXVI, 1590
 Wheeler County, Texas, XXIII, 985,
 1033
 columnar section of Laycock pool,
 XXIII, 1037
 Custer formation in, XXI, 447, 448
 pre-Redbed columnar section of
 D'Spain pool, XXIII, 1036
 south-central, peneplanation in,
 XXIII, 986
 stratigraphy of, XXIII, 1035
 structural geology in, XXIII, 1033
 subsurface geologic map of, XXIII,
 1034
 Wheeler County fault, XXIII, 1033,
 1038
 Wheeler-Ellenburger pool, XXVIII,
 819
 Wheeler field, III, 257, 444; V, 173, 454;
 VI, 23
 Wheeler lime in Cushing field, Okla-
 homa, STR II, 397
 Wheeler nose, XXIII, 1038, 1049
 Wheeler pool, PROB, 776; GAS, 576
 Wheeler Ridge anticline, PROB, 740;
 X, 499
 Wheeler Ridge dome, XVI, 368
 Wheeler Ridge field, California, PROB,
 202, 229, 748; CAL, 199, 318; X,
 495
 Wheeler sand, III, 259, 266, 267; V,
 133; VI, 320
 Wheelock marl, XXIV, 1664
 Wheelless, W. M., SD, 774; IX, 35
 Whepley shale, MSC, 69, 188, 202, 204,
 215, 241, 276, 316, 323, 353
 Whepley shale faunule, Kettleman
 Hills, MSC, Fig. 14 (in pocket)
 Where should young graduates in
 petroleum geology acquire field ex-
 perience? Discussion, XXIV, 2047;
 XXV, 167, 1180
 Wherry, E. T., XI, 1293
 Wherry East pool, Kansas, STRAT,
 122, 132
 Wherry pool, Rice County, Kansas,
 STRAT, 118, 124; XXII, 667, 675
 accumulation of oil, STRAT, 127
 (Wherry)
 Sooy conglomerate productive in,
 XXIV, 1002
 Whirlpool formation, Pennsylvania,
 PROB, 457
 Whirlpool sandstone, Ontario, GAS, 63,
 73, 77, 86, 985
 productive of gas, XXII, 81
 Whisenant, J. Barney, and Trenchard,
 John, Government Wells oil field,
 Duval County, Texas, GC, 631;
 XIX, 1131
 Whitaker, Harvey, Hoffman field,
 Duval County, Texas, XXIV, 2126
 Whitaker fault, XXI, 228
 Whitcomb, Bruce, XIII, 1054
 White, XIII, 412; XXIV, 1463
 White and Washburn, X, 389
 White, C. A., GAS, 342; STRAT, 21;
 STR II, 545; V, 155; XIV, 1015;
 XXI, 750; XXIV, 171, 1728;
 XXVII, 254
 White, Dan J., Jr., XXV, 1920
 White, David, CD, 136; GAS, 260, 582;
 PTNM, 684, 689, 697; PROB, 25,
 44, 70, 71, 73, 76, 77, 81, 89, 704;
 SD, 27, 30; SBP, 3, 19, 261, 352; I,
 31; III, 99, 352; IV, 7, 41; V, 164,
 468, 543, 549, 570; VI, 43, 341;
 VII, 2, 56, 351, 352, 421, 470, 606,
 608, 610, 612, VIII, 232, 307, 319,
 698, 707, 717; IX, 857, 860; X,
 148, 821, 827, 828, 836, 941; XI,
 290, 455, 456, 458, 460, 488, 684,
 692, 977, 1145, 1221; XII, 766, 796,
 798, 800, 801, 804, 807, 810, 815;
 XIII, 161, 306, 310, 327, 348, 359,
 460, 461, 462, 464, 466, 594, 892,
 896, 994, 1415, 1422, 1427; XIV,
 452, 480, 609, 1251, 1252, 1279,
 1290, 1291, 1294, 1452; XV, 83,
 1006, 1034; XVI, 123, 784, 1030;
 XVII, 353, 367, 864, 972, 1229,
 1231, 1392; XVIII, 979, 986, 1007,
 1077; XIX, 855, 937, 943, 945, 985,
 995, 1468, 1545, 1741; XX, 18, 254,
 281, 625, 1201, 1203, 1356, 1478,
 XXI, 12, 14, 1242; XXII, 923,
 1153; XXIII, 1178; XXIV, 301,
 302, 309, 313, 316, 318, 321, 322,
 877; XXVI, 684, 689, 697; XXVII,
 1194, 1198, 1199, 1200, 1214, 1215,
 1222; XXIX, 139, 144, 1743
 acceptance of memorial to, XX, 632
 address at fourth annual banquet,
 III, 28
 age of Jackfork and Stanley forma-
 tions of Ouachita geosyncline,
 Arkansas and Oklahoma, as in-
 dicated by plants, XVIII, 1010
 appreciation of, XX, 625
 carbon-ratio theory of, XII, 796
 description of fossil plants found in
 some "mother rocks" of petroleum
 from northern Alaska, XIII, 823,
 841
 discussion of floating continents,
 CD, 187
 exchange of time for temperature in
 petroleum generation, discussion,
 XIV, 1227
 fossil plant evidence from Jackfork
 and Stanley formation, interpreted
 by, XVIII, 986
 fourteenth international geological
 congress, IX, 707
 memorial of, XIX, 925, 931
 memorial to, XX, 630, 632
 metamorphism of organic sediments
 and derived oils, XIX, 589

(White)

- objections to Wegener's hypothesis, CD, 187
- outstanding features of petroleum development in America, XIX, 469
- Permian of western America from paleobotanical standpoint, review, XI, 517
- problems in oil geology and their advancement through cooperative research, VI, 509
- radioactivity and oil field location, VII, 290
- reference to his Permo-Carboniferous climatic changes in South America, CD, 136
- review of geologic and technologic work of Soviet Council of petroleum industry, VII, 447
- Storror fellowships in geology and geography, XIV, 336
- theories of relation of oil and gas to carbonation of coals, VII, 421
- theory of origin of salt domes, IX, 857, 860
- theory of relation between carbon ratios and petroleum, VIII, 519
- White, David, and Sellards, E. H., XXIV, 315
- White, David, and Stadnichenko, Taisia, GAS, 937, 938
- White, David, and Thuesen, Reinhardt, XIV, 468; XXVII, 1195, 1197
- White, David, Adams, G. I., and Girty, G. H., XXIV, 305
- White, E. E., XIII, 1100; XIV, 583, 592
- courses of drill holes, discussion, XIII, 387
- White, E. E., and Maas, George, XIII, 1147
- White, G. H., XIII, 509
- White, G. H., and Hudson, F. S., XXVI, 1615
- thrust faulting and coarse clastics in Temblor Range, California, XXV, 1327
- White, Israel C., MEX, 32, 149, 155, 169, 193, 194, 209, 227; PROB, 11, 12, 14, 16, 20, 254, 310, 430; IV, 5, 317; V, 452; VII, 613, 617, 623; XI, 581, 595; XII, 359; XIII, 161, 426, XIV, 614, 628; XVII, 549; XIX, 474, 487, 490, 499, 501, 1727, 1733, 1739, 1743, 1746, 1750, 1756, XX, 387, 1216; XXI, 122, 311, 315; XXII, 104, 1093, 1094, 1095, 1097, 1098, 1099, 1109; XXV, 2109; XXVII, 929
- address at fourth annual meeting, III, 20
- another deep test in Pennsylvania, V, 418
- memorial of, XII, 339
- responsible for proof of anticlinal theory of oil occurrence, XXII, 1097
- and Fontaine, William M., XI, 586; XXIV, 313
- White, I. C., and Orton, Edward, VII, 607
- White, J. C., III, 155
- White, K. D., oil development in Colombia, South America, I, 156
- review, VI, 485
- White, K. D., and Washburne, C. W., XXVI, 807, 821, 826; XXIX, 1093, 1130
- White, Luther H., PROB, 762, 765,

(White)

- 767; STRAT, 448, STR II, 327, V, 119; XI, 944, 968, 970; XII, 177, XIII, 451, 1096; XIV, 1507, 1510, 1511, 1537, 1540, 1551, XV, 994, XVI, 650; XVII, 1120, XIX, 1418, XX, 94, 1118
- discussion of buried hills of Ozarks, XVI, 650
- White, Luther H., and Greene, Frank Cook, correlation of "Wilcox Sand" in Okmulgee district with the Osage, Oklahoma, V, 399
- White, M., Survey, Texas (well 399), SBP, 335-349, 410
- White, Maynard P., GAS, 581; MEX, 47, 76; XV, 817, XVIII, 1085; XX, 434, 442, 443; XXIV, 2043; XXV, 1234, 1665
- discussion, XX, 1494
- White, Mrs. Jeanne, XXVI, 204
- White, Norval, X, 747
- White, Robert T., XXIV, 1771, 1945; XXVII, 1364, XXVIII, 954
- Eocene Yokut sandstone north of Coalinga, California, XXIV, 1722
- memorial of Edgar Wayne Galliher, XXIX, 1680
- review, XXIV, 2186
- stratigraphic nomenclature, discussion, XXV, 2210
- White, Roger F., VII, 384; X, 748; XI, 375
- White, Stanley B., Davenport field, Lincoln County, Oklahoma, STRAT, 386
- White, T. E., XXVIII, 1006
- White, T. W., III, 312
- White, W. N., XX, 710; XXVII, 1081; XXIX, 254
- White and Baker pool, XXVII, 756
- White Buttes, XXVI, 357
- White Castle, Louisiana, GAS, 712
- White Cliff formation, XXI, 720
- in Iles dome, Colorado, STR II, 93
- White Cliffs, Arkansas, age and correlation of chalk at, with notes on subsurface correlations of northeast Texas, IX, 1152
- chalk along Little River at, XVIII, 1509
- White Cliffs of La Plata sandstone in Colorado, XXV, 1750
- White Creek field, XXIII, 865
- White Creek syncline, CAL, 235; XV, 1357
- White Creek Valley, SC, 53; XX, 1599
- White crystalline dolomite in Goldsmith field, XXIII, 1530
- oolitic zones in, XXIII, 1530
- White dome in St. George district, Utah, XXIII, 144
- White Horse formation, XV, 1089
- White lime, PROB, 350, 414, 415; GAS, 451
- at Hobbs field, XVI, 58, 69
- White limestone, MEX, 27, 28, 33, 34, 168
- White Medina (Sm) (Silurian), SBP, 351, 355
- White monochromatic X-rays, RMS, 622
- White Pine shale, CAL, 62
- White Point, McFaddin-O'Connor, Greta, Fox, Refugio, and Saxet fields, Texas, GC, 664; XVIII, 519
- White Point and East White Point area, Texas, physiography of, XXV, 1973
- White Point and East White Point

(White)

- fields, Texas, oil and gas productive areas of, XXV, 1970
- White Point and Saxet fields, Texas, blow-out craters of oil and gas wells in, GC, 213; XVII, 916
- drowned valley of Nueces River in area of, GC, 242; XVII, 950
- Violet-Viola fault-line scarp in, GC, 242; XVII, 950
- White Point field, Texas, GC, 665, 670; II, 35; XVII, 949; XVIII, 520, 525
- development of, GC, 665; XVIII, 520; XXV, 1972, 1973
- review, VI, 384
- White Point gas field, San Patricio County, Texas, XXV, 1969
- discovery of oil in, and history of field, XV, 205
- White Quail limestone, XXVI, 1385
- White Rim sandstone, POP, 67; XXV, 1499
- White River beds, XXVI, 357
- White River dome, Colorado, STR II, 111, 112; GAS, 367
- an anticline, STR II, 676
- White River formation, V, 207, 408; XXV, 142; XXVII, 1576, 1580
- Lance Creek field, Wyoming, STR II, 605
- White River group, XXVI, 1559
- White River Oligocene, CAL, 156, 158, 303, 304
- White sands, XXI, 850
- White sandstone, *Astrodapsis tumidus* in, MSC, Fig. 14 (in pocket)
- Whiteaves, J. E., XXI, 1607
- Whitehead, Robert Brooks, STR I, 383, 384; XVII, 838
- memorial of, XX, 1270
- Whitehead, Robert Brooks, and Fash, R. H., STR I, 373, 374, 382, 383, 384
- Whitehead, W. L., XXVIII, 924, 946; XXIX, 19
- Whitehead, W. L., and Jones, W. F., XIX, 775, 786, 788
- Cretaceous-Eocene unconformity of Venezuela, XIII, 617
- Whitehead, W. L., Bell, K. G., and Goodman, Clark, radioactivity of sedimentary rocks and associated petroleum, XXIV, 1529
- Whitehorse, PROB, 351
- in Kansas, even-bedded member of, XXIII, 1805
- in Kansas, upper shale member of, XXIII, 1806
- lateral changes within, XXI, 1560
- unconformity at base of, questionable, XXI, 1560
- upper, movement, XXVII, 507
- Whitehorse-Dog Creek contact, XXI, 1560
- Whitehorse fauna, XXV, 1683
- Whitehorse formation, XXI, 1542
- age of, XXIII, 1810
- northwestern Oklahoma, XV, 414
- Oklahoma, unconformity at base of, XXI, 1534; XXIII, 698
- probably Triassic, XXI, 1554
- Whitehorse formations in eastern Midland basin, XXIV, 55
- Whitehorse group, PTNM, 668; STRAT, 752; XXIII, 1678; XXIV, 8, 34, 98; XXV, 1681, 1683; XXVI, 383, 668, 703, 1637; XXVIII, 818
- Chalk Bluff formation equivalent to, XXV, 1713

- (Whitehorse)
correlation of, PTNM, 705, XXVI, 705
lossals of, PTNM, 708, XXVI, 708
in eastern Midland basin, XXIV, 59
in North Cowden field, Texas, XXV, 605
in Texas and Oklahoma, unconformity at base of, PTNM, 707; XXVI, 707
in Wasson field, XXVII, 489
in West Texas-New Mexico Permian basin, XXIV, 24, 44
Sand Belt, STRAT, 752, 759
section, XXVI, bet. 240 and 241
unconformable on San Andres group, XXIV, 24
Whitehorse group and Quartermaster group included in upper redbeds division of Permian, XXI, 1525
Whitehorse nomenclature and correlation, XXI, 423
Whitehorse sandstone, I, 103; II, 78, 114; III, 444; V, 627
at type locality, Whitehorse Springs, Woods County, Oklahoma, XXIII, 1807
changes in color of Rush Springs member of, XXV, 18
divisions, XXIII, 1803
Weatherford area, Oklahoma, XII, 707
Whitehorse sandstone, West Texas, XIII, 952
Whitehouse, F. W., XX, 1054, 1055, 1057; XXV, 397, 398
Whitehouse dome, Texas, XII, 537; XIII, 611
Whitehurst, John W., and Ponton, Gerald M., XXII, 1474, 1484
Spring Hill-Sarepta gas field, Webster and Bossier parishes, Louisiana, VII, 546
Whiterock Bluff, MSC, Fig. 14 (in pocket)
view showing *Valvulineria californica* reefy white sand, silt, and diatomite, XXV, opp. 225
Whiterock Bluff member, MSC, 163
Whiterock Bluff shale, type, MSC, 250
Whiterock thrust fault, SC, 83; XX, 1629; XXV, 261
Pliocene southwest of, XXV, 254
Whites Creek beds, type section of, XXV, 275
Whites Creek member, type, of Shoal River formation, list of fauna of, XXV, 275
Whiteside, Charles Edwin, memorial, XII, 785
Whiteside, Robert Massie, XVIII, 251; XX, 617; XXV, 1229
geologic interpretations from rotary well cuttings, XVI, 653
memorial of, XXI, 287
migration in Lucien oil field during Ordovician, XX, 617
Whitewater pool, GAS, 260
Whitewood formation, XXVI, 345
of northern Black Hills, conodonts found in shale and limestone members of, XX, 1334
Whitewood limestone, XXVI, 1566
Whitfield, R. P., XXI, 717
Whiting fossils to be photographed ensemble, XXIX, 1504
Whiting sand, VI, 466
Whitlash dome, PROB, 703; GAS, 271-276
Whitlash field, Montana, GAS, 3, 272; (Whitlash)
PROB, 712, XXIX, 1275
waters in, XXVI, 1371
Whitlatch, George, XXVI, 18
Whitlock, August, Survey, Texas (well 400), SBP, 335-349, 410
Whitmarsh, Agnocs, and Olson, E. C., foreign maps, review, XXVIII, 1545
Whitney, I, 143
Whitney, and Gabb, XXVI, 162, XXVII, 1364
Whitney, F. L., XV, 67, XVII, 526, 1357, XXII, 916; XXIII, 625; XXV, 1236; XXIX, 1462
Whitney, J. D., CAL, v, 132, 189, 198, 206, 277; X, 697; XII, 555, 971; XXIV, 1728; XXVII, 112, 250
Whitney, J. D., and Becker, G. F., XXVII, 122
Whitney, J. D., and Foster, J. W., XIX, 1114
Whitney, Paul B., X, 1230, 1239, 1249; XV, 1307; XXIV, 982
Whitney oil sand in Garber field, Oklahoma, STR I, 178
Whitney survey, SC, vii, XX, 1533
Whiton, Henry D., SD, 468
Whitsett and Lipen beds, GC, 487; XVII, 1310
Whitsett beds, XXIII, 163
Whitsett formation, eastern Texas, GC, 493; XVII, 1316
Edna gas field, XXV, 112
Raccoon Bend field, GAS, 720; GC, 678; XVII, 1461
section at type locality of, XVII, 1310
sections, GC, 487, 489; XVII, 1312
Texas, GC, 486; XVII, 1310
Whitsett sand, Raccoon Bend field, GC, 688, 692; XVII, 1472
Whitsett zone, Raccoon Bend field, Texas, XVII, 1475
Whitsett zones, GC, 488; XVII, 1311
Whitt group, XXIV, 88
Whittaker, E. J., XXV, 847
Whittemore, J. W., XVII, 625
Whittier, CAL, 228, 318
Whittier conglomerate, rocks most typical of, XXIV, 658
Whittier conglomerates, a series of Pliocene and Miocene conglomerate lenses in northwest part of Puente Hills, XXIV, 669
divisions of, XXIV, 653
of late Miocene and early Pliocene time, material of, similar to that of San Gabriel Mountains, XXIV, 669
Perris Block principal source of, XXIV, 665
photomicrographs of pebbles from, XXIV, 660
rock percentages in, XXIV, 663
sources of, XXIV, 664
southern California, petrology of, XXIV, 649
Whittier fault, CAL, 39; MSC, 166; PROB, 215, 748; XXIV, 652
Whittier fault fields, PROB, 751
Whittier fault zone, GAS, 198, 210, 212
Whittier field, Los Angeles County, California, GAS, 215; PROB, 214, 229
waters in, PROB, 984
Whittier-Fullerton field, V, 181; VI, 303
Whittier Hills, MSC, 135
Whorton, Chester D., XXIV, 1474
Why crudes differ in value, XXV, 1167
Whyman, L. O., VII, 174
Wichita and Arbuckle Mountain regions, Oklahoma, Viola limestone of, XVII, 1405
Simpson group of, XIV, 1493; XXV, 650
contact of Honey Creek and Reagan formations with igneous rocks in, XXIII, 1094
Wichita and Archer counties, Texas, developments of geologic significance in, XXIV, 1049
Wichita-Albany formation in Big Lake field, Texas, STR II, 505, 509
Wichita-Albany group, XXIII, 1677
in West Texas, XIII, 946
Seymour pool, STRAT, 760-762
Wichita-Albany limestones in Wilbarger County, Texas, STR I, 296
Wichita-Albany sands, XXVIII, 785
Wichita-Amarillo uplift, XXV, 1670
Wichita-Arbuckle uplift at Petrolia field, Texas, STR II, 550
Wichita County, Texas, XXIV, 89, 1047
development, XXVII, 778
developments in 1940, XXV, 1066
discovery of oil in Ellenburger formation, K. M. A. oil field, XXIV, 1494
Wichita-Criner Hills uplift, XXIII, 845
Wichita Falls district, Texas, PROB, 59, 577
oil production in, XXI, 1025
tests drilled in, XXI, 1026
Wichita formation, I, 94, 96, 104, 105; III, 81, 95, 169, 170; V, 155, 379, 419; VI, 88
in Petrolia field, Texas, STR II, 544, 552
Wichita geosyncline, sedimentary sequence in, XV, 1002
Wichita group, PTNM, 681; XXIV, 7, 42, 271; XXVI, 681
Hull-Silk pool, STRAT, 665
in Concho County, Texas, XXIII, 1578
Wichita group and Clear Fork group, correlation of upper part of, PTNM, 696; XXVI, 696
Wichita meeting of American Association of Petroleum Geologists, 1925, IX, 678
Wichita Mountain area, notes on pre-Permian Paleozoics of, VI, 413
Wichita Mountain uplift, Oklahoma, early Paleozoic stratigraphy of, XIV, 623
Wichita Mountain uplift trend, XXVII, 35
Wichita Mountains, Oklahoma, FOP, 88; PROB, 574, 611, SBP, 69; V, 35, 42, 330, 397, 569, 579, 628; VI, 22, 413; XIII, 425; XV, 999; XXI, 1017; XXIV, 1029; XXV, 6, 1520
areal geology of, XIV, 38
Carbonaceous and asphaltic material in lower Arbuckle limestones of, XXIII, 1093
duke rocks in, XXV, 289
general geology of, XXV, 287
granophyres in, XXV, 289
largely faulted block mountains, XXV, 8
origin, XIV, 41
Paleozoic sediments in, XXV, 289
pre-Cambrian in, XXV, 1624
pre-Cambrian zeolite-opal sediments in, XXV, 287

(Wichita)
sills of granophyres in, XXV, 289
west-central, geologic map of, showing location of Tepee Creek formation, XXV, opp. 290
Wichita Mountains area, map showing boundary of tectonic provinces in, XXV, 5
Wichita orogeny, XXIX, 144
Wichita paleoplain, XXVI, 380, 385
along Pecos River, XXVI, 384
Wichita region, Texas, Pennsylvanian rocks in, STR II, 545, 546
section of Pennsylvanian formations, STR II, 546
Wichita uplift, XIV, 37; XXVI, bet. 224 and 225, 231
geologic section through, XIV, 40
Wichita zone, XXVII, 760
Wichmann, Lorentz, XI, 173
Wichmann, R., XVI, 565
Wickenden, R. T. D., STRAT, 283; XXVI, 345
Wickenden, R. T. D., and Cushman, Joseph A., MSC, 12
Wicker bed, XXIX, 650
Wickett, Kenneth L., XXII, 1661, 1681
Wicomco County, Maryland, deep oil test at Salisbury, XXIX, 1196
Wiedenmayer, C., XXIV, 1567; XXIX, 527
Wiedey, Lionel W., MSC, 91; XIX, 521
Wiegand, XVIII, 728
Wiegner, Georg von, RMS, 455, 535, 540, 541, 551, 553
Wiegner's method of mechanical analyses, RMS, 552, 554
Wieland, G. R., XXVII, 1498, 1500
Wieland field, XXVII, 785; XXVIII, 849
gravity of oil in, XXVII, 785
Wier sand in eastern Kentucky, XI, 490
Wietze oil field, Germany, X, 413; XII, 475; XVI, 1146
Wietze sand, PROB, 828
Wiggam pool, V, 429
Wiggins and Hyde, XXIX, 745
Wiggins anticline, XXVIII, 29, 40, 53, 56, 61
Wiggins pool, Kansas, syncline, STR II, 158
Wigglesick, supposed theory of, VII, 427; X, 312
Wigner, E., and Polyani, M., XVII, 1255
Wijkstrom, Torgil, RMS, 540
Wilbarger County, Texas, XXI, 1019, 1023; XXIII, 853; XXIV, 1052; XXVI, 1047
development, XXVII, 781
developments in 1940, XXV, 1067
new pay at Rock Crossing, XXI, 525
relation of production to structure in, STR I, 293
Wilbarger dome, Texas, XVI, 579
Wilberns formation, III, 175, 189; XXV, 1627
Wilbert, Louis J., XXIX, 51
Wilbert, Louis J., Jr., and Wasem, Richard, XXIX, 51, 61, 62, 63
Wilbur gas zone at Long Beach field, California, GAS, 185
Wilbur oil zone in Long Beach field, California, STR II, 65
Wilburton field, GAS, 519
Wilburton fold, North, GAS, 589
Wilcox, best oil-producing formation in Morrison field, Oklahoma, STR I, 156
down dip, (Eocene) of coastal Texas and Louisiana, XXIV, 1891

(Wilcox)
in Mississippi, thickness of, XXVIII, 55
inappropriateness of name for Sabine group, GC, 389; XVII, 619
Wilcox, lower Claiborne, and Midway groups of Texas, Louisiana, Mississippi, and Alabama, correlation chart, XXIX, 47
Wilcox, oil potentialities, of, XXIV, 1918
or Claiborne fossils, XXIX, 910
origin of name, GC, 388; XVII, 618
section showing thickness of, and strong development of Carrizo sand, Atascosa, Live Oak, and Bee counties, Texas, XXIV, 1910
typical, electrical logs, XXIV, 704
undifferentiated, of northern Sabine uplift area, XXIX, 64
upper, formation, XXV, 2012
upper, sand, XXV, 2010
Wilcox and Claiborne time, downwarping into coastal geosyncline during-XXIV, 1909
Wilcox and Midway sediments of Sabine uplift, Louisiana and Texas, areal geology of, XXIX, 48
section showing stratigraphic changes in, across Sabine uplift, XXIX, 50
Wilcox and Midway surface sediments, Sabine uplift, Louisiana and Texas, structural axes indicated by, XXIX, 49
Wilcox beds in Cartersville-Salepta and Shongaloo fields, XXII, 1477
Wilcox clay, Texas, X, 45, 56
Wilcox deposits, electrical logging useful in interpretation of, XXIV, 1894
porosity and permeability of, XXIV, 1920
thickness of, caused by gradually subsiding area, XXIV, 1894
Wilcox development, XXIV, 1073
in South Texas in 1940, XXV, 1040
Wilcox discoveries in Texas, 1941, XXVI, 985
Wilcox dome, GAS, 370
carbon dioxide in, GAS, 1066
Wilcox Eocene production at Segno field, Polk County, and Cleveland field, Liberty County, Texas, XXII, 1274
Wilcox Eocene Tertiary in San Marcos quadrangle, Texas, XI, 831
Wilcox fauna in clastic facies of Lower Eocene in west Florida, XXVIII, 1699
Wilcox fields, XXVII, 733
Wilcox formation, GC, 765; SD, 249, 266, 286, 294, 299, 302, 304, 309, 316, 320, 333; XX, 76; XXII, 791, 819, 1508; XXIII, 298; XXVI, 995; XXVIII, 804; XXIX, 25, 37
a major gas reserve, XXIX, 783
Arkansas, VI, 351, 363
Bellevue field, Louisiana, STR II, 241
Catahoula Parish, Louisiana, XIV, 444
Clay Creek salt dome, Texas, XV, 49
East Texas, XII, 541, XIII, 1350
electrical logs of important wells showing features of, XXIV, 1901
Gulf Coast region, I, 35, 75; XXIX, 1321
Homer field, Louisiana, STR II, 198, 209
Irma field, Arkansas, STR I, 2, 4, 9

(Wilcox)
Jackson field, Mississippi, GAS, 883
Keechi dome, SD, 246; X, 38
Louisiana, II, 62; IV, 122; V, 304, 631; VI, 180, 194, 249; X, 233, 247, 249, 257, 264, 281
Louisiana salt domes, SD, 285, 301, 342
Luling field, Texas, STR I, 262, 273
Lytton Springs field, Texas, X, 956
Meda fault zone, Texas, STR I, 325
Mississippi, V, 490, 496
Monroe field, Louisiana, GAS, 748
Morrison field, Oklahoma, STR I, 152
northwestern Louisiana and East Texas, XV, 534, 540
Stephens field, Arkansas, STR II, 7
structural map of Natchitoches area contoured on top of, XXIX, 28
Texas, V, 383; VI, 59, 323, 331; X, 20, 26, 41, 50, 53
Texas salt domes, SD, 228, 234-236, 241, 246, 252, 253, 258, 259, 261, 264, 268; X, 20
(Tw) (Eocene), SBP, 294, 296-335, 337-349, 416
up dip extent of marine conditions of, XXIV, 1918
Urania field, Louisiana, STR I, 95, 99
wells penetrating, XXIV, 1898
Wilcox group, SD, 215, 219, 243; X, 215; XXIX, 60
Covington County, Mississippi, GC, 376; XIX, 1155
East Texas, STRAT, 608
Mirando and Pettus districts, XV, 759
south Arkansas, XXII, 980
Wilcox group belt from Benton County to Lauderdale County, Mississippi, XXVIII, 53
Wilcox inlier at Luling field, Texas, STR I, 262
Wilcox-Midway angular unconformity in northern Mexico, GC, 596; XIX, 1365
Wilcox oil at Eola, Louisiana, XXIV, 1082
intensified search for, in 1940, XXV, 1015
Wilcox Oil Company, XXII, 696
Wilcox oil field, typical, XXIV, 708
Wilcox oil production, XXII, 1573
Wilcox oil provinces from south Texas to Mississippi, XXIV, 1922
Wilcox pool, PROB, 708
Wilcox producer, typical Eola, graph of core analyses, showing physical characteristics of sand in, XXV, 1378
Wilcox producing sands, Little Creek field, XXVI, 1267
of Nero-Hemphill area, XXVI, 1270
Olla field, XXVI, 1272
porosities of, XXIV, 711
South Olla field, XXVI, 1273
Wilcox production at Ace, Polk County, Texas, XXIV, 1082
Wilcox sand, PROB, 293, 294, 298, 302, 314, 411, 412, 438, 764, 856; V, 118, 148, 290, 292, 324, 399, 421, 428, 486; XI, 1097; XXI, 1012; XXII, 1561; XXIII, 877; XXIV, 2142; XXV, 1379; XXVII, 733, 798, 920; XXVIII, 272, 273, 275; XXIX, 790
Arbuckle Mountains, XI, 972
Blackwell field, Oklahoma, STR I, 167

(Wilcox)

- Cromwell field, Oklahoma, STR II, 309
 Cushing field, Oklahoma, STR II, 398, 399, 402, 405
 Depew area, Oklahoma, STR II, 368, 374, 376
 East Tuskegee pool, STRAT, 448-450
 Eldorado field, Kansas, STR II, 162
 First, producing sand at Ramsey pool, XXIV, 2002
 Glenn pool, Oklahoma, STR I, 236
 gravity of oil from, XXIV, 1919
 in Okmulgee district, correlation of, with Osage, Oklahoma, V, 399
 initial production from, XXIV, 1919
 Morrison field, Oklahoma, XI, 1093
 Noble County, Oklahoma, XXI, 1013
 of Simpson group, XXV, 1640
 Oklahoma City field, XIV, 1521; XVI, 972, 994
 photomicrograph of, XXIV, 712
 Ponca, Blackwell, and South Blackwell fields, Oklahoma, STR I, 160, 164, 172
 porosity of, XXIV, 1919
 production, Tonkawa field, Oklahoma, X, 885
 productive at Ace field, Polk County, Texas, XXIV, 1089
 productive at Ville Platte field, Evangeline Parish, Louisiana, XXIV, 1090
 prolific oil producer in Jesse pool, XXII, 1564
 second, XXVI, 1066, 1067, 1068
 Seminole district, Oklahoma, STR II, 335
 Voshell field, XVII, 182
 wells productive in, XXIV, 1919
 Wilcox sand development, XXI, 1010
 Wilcox sand pools, PROB, 764
 Wilcox sand recoveries, Oklahoma City field, XXVIII, 240, 242, 244
 Wilcox sands, XXIV, 1029; XXV, 1365, XXVI, 1001
 Wilcox section, Ville Platte deep wells, XXIV, 1914
 Wilcox sediments, increase of depth of, to bottom of coastal geosyncline, XXIV, 1898
 Wilcox series, section from Franklin Parish to Pointe Coupee Parish, Louisiana, showing relation of, to younger Claiborne shales and sands Base of Vegua formation used as reference plane, XXIV, 1900
 Wilcox structure, regional sub-sea, map of south-central Louisiana showing relation of Eola to adjacent fields, and to, XXV, 1364
 Wilcox time, probable date of orogeny of Sierra Madre, MEX, 140
 Wilcox trend, XXVII, 730, XXIX, 783
 activity in 1943, XXVIII, 861
 development in 1940 in Louisiana, XXV, 1014
 geophysical exploration in, XXVI, 1005
 in South Texas, XXVII, 743
 wildcat tests in, XXV, 1031
 Wilcox water on north slope of Arbuckle Mountains, PROB, 858
 Wilcox wells, map of coastal Texas and Louisiana showing location of, sub-sea depths to top of Wilcox and 1,000-foot contour intervals based on this datum, XXIV, 1896

Wild Horse limestone, VI, 121

- Wildcat, criterion for defining, XXVIII, 703
 Wildcat and field developments in south Arkansas in 1942, XXVIII, 326
 Wildcat and geological drilling activity in California in 1938 compared with discoveries of oil, XXIII, 946
 Wildcat and semi-wildcat wells drilled below 1,500 feet in 1943, in Rocky Mountain region, XXVIII, 793
 drilled below 1,500 feet in 1944 in Rocky Mountain states, XXIX, 1601
 Wildcat activity in Kansas, 1938, XXIII, 795
 in Kansas in 1944, XXIX, 703
 1940, western, central, and northeastern Kansas, XXV, 1106
 Wildcat beds, CAL, 243, 318
 Wildcat completions in Missouri, 1940, XXV, 1112
 in Nebraska, 1940, XXV, 1111
 Wildcat drilling, XXIV, 1374
 for Oriskany gas in New York state, XXVII, 838
 in Alabama, 1942, XXVII, 994
 in Coastal Texas, results of, XXVII, 732
 in Florida, 1942, XXVII, 994
 in Illinois in 1944, XXIX, 690
 in Kansas, in 1941, XXVI, 1075
 in Louisiana, results of, XXVII, 735
 in Mississippi, 1942, XXVII, 994
 in 1935 and 1936, XXI, 1079; XXII, 1236
 in 1937, XXII, 645, 1233
 in 1937, further data on, XXII, 1231
 in 1938, XXIII, 789
 in 1938 in Oklahoma, XXIII, 825
 in 1939, XXIV, 953
 in 1940, XXV, 997, 1938
 in 1941, map, XXVI, 970
 in 1941, with comments on discovery rate, XXVI, 969
 in 1942, XXVII, 715
 in 1942 in California, Kansas, Mississippi, and Oklahoma, increase in, XXVII, 721
 in 1942 in Illinois, Louisiana, Michigan, and Texas, decreases in, XXVII, 721
 in 1943 in New York, increase in, XXVIII, 723
 resulting in fourteen new oil fields in California in 1943, XXVIII, 743
 Wildcat drilling and geological exploration in California, XXII, 717
 Wildcat drilling and proved oil reserves in area of eleven states, statistics on, XXVII, 728
 Wildcat drilling activity in California important, XXIII, 934
 Wildcat dry holes drilled in Oklahoma in 1938, XXIII, 833
 Wildcat land, estimation of probable value of, XX, 1005
 Wildcat map, Michigan, XXVI, 1098
 Wildcat series, MSC, 168
 Wildcat tests, important, north-central Texas, XXI, 1026
 in Texas Panhandle, XXI, 1031
 Wildcat well, basis for location of, XXVII, 719
 definition, XXVIII, 705
 in Pennington County, South Dakota, log of, XXIII, 1234
 selection of location for, XXIX, 638

(Wildcat)

- Union County, Iowa, log of, XXIV, 1495
 Wildcat wells, comparative record of methods of locating, XXVI, 1203
 drilled in Canada in 1944, XXIX, 661
 drilled in central Oklahoma during 1938, XXIII, 832
 drilled in Georgia in 1944, XXIX, 819
 drilled in north Louisiana, 1942, XXVIII, 554
 Illinois, distribution of, XXVII, 816
 importance of, XXI, 711
 in Kansas in 1943, XXVIII, 769
 method of location of, XXIII, 796
 Wildcat wells and tests drilled to Oriskany horizon in 1944, XXIX, 667
 Wildcat Trenton tests, XXVII, 817
 Wildcats, Alabama, XXIX, 818
 deep, in Missouri in 1939, XXIV, 1005
 drilled during recent years, XXVII, 724
 drilled in Alabama in 1943, XXVIII, 805
 drilled in Gulf Coastal Plain states in 1939, XXIV, 955
 drilled in Illinois in 1940, XXV, 1114
 drilled in Mississippi in 1943, XXVIII, 804
 drilled in 1937, basis for locating, XXII, 1234
 drilled in 1937 on basis of combined geological and geophysical evidence, XXII, 1235
 drilled in 1937 on basis of geology, XXII, 1235
 drilled in 1937, on basis of geophysics, XXII, 1235
 drilled in 1938 in United States, basis for locating, XXIII, 793
 drilled in 1939, basis for locating, XXIV, 957
 drilled in 1939, comparative statistics for all states, XXIV, 956
 drilled in 1940, basis for locating, XXV, 1001
 drilled in 1941, basis for locating, XXVI, 974
 drilled in 1942, basis for locating, XXVII, 722
 drilled in north-central Texas in 1938, XXIII, 857
 drilled in Rocky Mountain region in 1943, XXVIII, 799
 drilled in western Nebraska in 1943, XXVIII, 773
 drilled in western Nebraska in 1944, XXIX, 707
 dry, and deep tests, important, in Eastern Interior basin in 1943, XXVIII, 756
 important, drilling or completed in Oklahoma during early 1940, XXIV, 1024
 important, New Mexico, XXVII, 749
 important, West Texas, XXVII, 749
 important dry, and deep tests in Eastern Interior basin in 1943, XXVIII, 756
 in area of eleven states, statistics on, XXVII, 725
 in Oklahoma drilling at close of 1940, XXV, 1101
 map of Michigan showing, XXVII, 824-827
 number of oil wells and dry holes drilled as, in 1939, XXIV, 955
 oil wells, gas wells, and dry holes drilled as, in 1937, XXII, 1232

- (Wildcat)
 number of oil wells, gas wells, and dry holes drilled as, in 1938, in United States, XXIII, 792
 number of oil wells, gas wells, and dry holes drilled as, in 1942, XXVII, 720
 pre-Permian, XXVI, 1033
 statistics on, XXVI, 977
 Wildcats and dry holes, important, completed in Arkansas and north Louisiana in 1944, XXIX, 809
 Wildcatting, early, XXI, 708
 in Kansas, XXVII, 807
 in Kansas in 1939, XXIV, 996
 in Nebraska in 1940, XXV, 1109
 incentives for, XXIII, 794
 reasons for decline in success of, XXVII, 727
 Wildcatting and discovery of reserves, 1937-1941, XXVI, 980
 Wilde, XIX, 612
 Wilde, Coleman, and Moore, T. W., XXII, 1238
 Wilde, F. L., XIV, 283
 Wilde, H. D., GAS, 735; PROB, 240; XVII, 981, 1002, 1460
 why crudes differ in value, XXV, 1167
 Wilde, H. D., Jr., XVII, 1135, 1364; XXIV, 2164
 Wilde, H. D., Jr., and Lahee, F. H., simple principles of efficient oil-field development, XVII, 981
 Wilde, H. D., Jr., and Moore, T. V., XVIII, 1081; XXIV, 2164
 factors governing estimation of recoverable oil reserves in sand fields, discussion, XVIII, 1081
 Wilder, Newell M., STRAT, 166
 practical repressuring, XXII, 189
 Wilderspin, A., SD, 228
 Wildhorse Mountain formation, XXII, 878, 879
 Wildhorse Mountain sandstone, weathering phenomena of, XXII, 881
 Wildt, R., XIX, 901
 Willes limestone, XXIV, 88
 Wiley Canyon field, PROB, 192, 756
 Wiley cyclothem, XXVI, 1589
 Wilgus, W. L., XXI, 322
 Wilgus, W. L., and Burpee, G. E., XX, 1089
 Wilhelm, Arthur K., memorial of Lloyd Irvin Yeager, XXII, 1127
 Wilhelm, C. J., and Devine, John M., GAS, 443, 451, 452, 456, 457, 1069, 1070, 1074
 Wilhelm, O., XXVII, 1122
 classification of petroleum reservoirs, XXIX, 1537
 Wilhelm, V. H., XV, 830
 Wilhelm, V. H., and Case, J. B., GAS, 188
 Wilhelmshaven, Germany, RMS, 195-200, 322
 Wilkes field, Arkansas, XXIX, 806
 Wilkinson, John, Survey, Texas (well 333), SBP, 292-335, 409
 Willamette Valley, GAS, 240; XXIX, 1378
 Willard, Bradford, SBP, 356; XIX, 914, 1546, 1549; XXI, 311, 315; XXII, 1108, 1109; XXV, 161
 age of Devonian of southwestern Pennsylvania, discussion, XIX, 1546
 Willard, Bradford, and Cleaves, Arthur B., XXI, 311, 315
 Willard, Bradford, Swartz, Frank M., and Cleaves, Arthur B., STRAT, 538
 Willard overthrust, XXVII, 428
 Willett, R. W., air photography and geology, review, XXVIII, 1652
 Willey, Arthur, XXIV, 1168, 1177
 Williams, XVI, 1263; XX, 910
 Williams, B. F., and Lowry, R. L., Jr., XVII, 513
 Williams, Chrs, GAS, 511
 Williams, Delbert Waldo, correlation of producing sands in southeastern Kansas and northeastern Oklahoma, V, 293
 oil and gas in Marion, Chase, Dickinson, Morris, and Geary counties, Kansas, V, 507
 Williams, Dr., XVII, 1305
 Williams, F. T., and McCoy, E., XXV, 844
 Williams, George O., X, 1021
 Williams, H. S., XXVIII, 1626
 Williams, Howell, CAL, vii, 20, 107, 142, 261; XVI, 361; XXVII, 299; XXIX, 981
 Williams, Howell, and Greenly, Edward, methods in geological surveying, review, XV, 91
 Williams, I. B., Brandenthaler, R. R., and Walker, Morgan, GAS, 1021
 Williams, Ira Abraham, memorial of, XVIII, 967
 Williams, J. S., PTNM, 539; XV, 1101; XXI, 13; XXIV, 289, 297, 312, 313, 323, 328; XXV, 401; XXVI, 539
 Williams, J. S., and Imlay, Ralph W., late Paleozoic age of Morehouse formation of northeastern Louisiana, XXVI, 1672
 Williams, J. S., Dane, C. H., and Rothrock, H. E., XX, 1355
 Williams, J. Stewart, XXIII, 1249; XXIX, 1145, 1149, 1153
 Park City beds on southwest flank of Uinta Mountains, Utah, XXIII, 82
 Williams, J. Stewart, and Yoltan, James S., Brazier (Mississippian) and lower Wells (Pennsylvanian) section at Dry Lake, Logan Quadrangle, Utah, XXIX, 1143
 Williams, James Steele, XXIII, 1673; XXIV, 281; XXIX, 152
 pre-Congress Permian conference in the U.S.S.R., discussion, XXII, 771
 Williams, James Steele, and Baker, A. A., XXV, 438
 Permian in parts of Rocky Mountain and Colorado Plateau regions, XXIV, 617
 Williams, L., XXVI, 1714
 Williams, M. Y., GAS, 64, 67
 discussion of conversion of fatty and waxy substances into petroleum hydrocarbons, XVII, 1267
 Williams, M. Y., and Dyer, W. S., GAS, 27, 260; STRAT, 273; XV, 1137, 1182, 1187, 1198, 1201, 1212, 1229, 1238, 1244, 1261
 Williams, Neil, GC, 150, XVII, 1501
 Williams, Philip, XXIX, 221
 Willis, Robin, XXIV, 43
 Williams, Stewart, XXIV, 625
 Williams, T. B., XV, 1161
 Williams, W., and Page, H. J., XVIII, 362, 364
 Williams, W. A., VII, 619
 Williams, W. M., XV, 598
 Williams, California, outcrop section C, SBP, 167-194, 411
 Williams Canyon limestone in Front Range in Colorado, XVII, 387
 Williams County, North Dakota, XXVII, 1583
 Williams field, GAS, 565, 566
 Williams Fork formation, XXII, 1028
 Williams formation, XXVI, 173
 Williams gas field, XXI, 1410
 Williams pool, XXIX, 763
 Williams Subdivision fault, XXVI, 1447
 Williamsburg gas field, GAS, 946
 Williamson, E. D., RMS, 285
 Williamson, E. D., and Johnston, John, XVIII, 1235
 Williamson, E. D., Johnston, John, and Merwin, H. E., XXII, 1368, 1375
 Williamson, J. H., IV, 54
 Williamson, J. W., in a Persian oil field, review, XII, 562
 Williamson County, Texas (well 396), SBP, 292-335, 410
 Willing, E. S., Jr., XXIII, 1446
 Willis, Bailey, CAL, 49, 50, 51; PROB, 534, 736, 752; I, 33, 108; VI, 228; X, 119, 297, 667; XI, 640, 1140; XII, 843; XIII, 229, 434; XV, 398, 399, 550; XVI, 789, 1030, XIX, 298, 1807, 1809, 1814, XX, 883, 890, 892, 893, 929, 932, 938; XXI, 113, 114; XXII, 1218, 1222; XXIII, 478, 1713; XXV, 409, 411, 419, 1228; XXVII, 1198, 1262; XXVIII, 1417; XXIX, 1651, 1652, 1801
 continental drift, CD, 76; discussion by van der Gracht, CD, 199, 225
 discussion, XXI, 113
 folding or shearing, which? XI, 31
 Willis, Bailey, and Blackwelder, Eliot, X, 1091, 1093
 Willis, Bailey, and Church, C. C., memorial of Joseph Alexander Taff, XXVIII, 1236
 Willis, Bailey, and Willis, Robin, XV, 398
 geologic structures, reviews, XIII, 1573, XVIII, 1549
 Willis, Bailey, and Wood, H. O., CAL, 276
 Willis, C. G., SC, 126, 129; XX, 1672, 1675
 Willis, C. G., and Ferguson, R. N., PROB, 749; XI, 424; XIII, 640; XX, 1672; XXVI, 397
 dynamics of oil-field structure in southern California, VIII, 576
 Willis, Robin, CAL, 255; GAS, 41; XIII, 994, 1219; XIV, 977
 preliminary correlation of Texas and New Mexico Permian, XIII, 997
 structural development and oil accumulation in Texas Permian, XIII, 1033
 Willis, Robin, and Ballantyne, R. S., Jr., drilling-time logs and their uses, XXVI, 1279
 Willis, Robin, and Gould, Charles N., XIII, 924; XVII, 123, 146, 148
 Willis, S. M., XXIII, 220
 Willis, W. F., IX, 952
 Willis and Beaumont slopes, profile from San Diego, Duval County, Texas, eastward to Gulf of Mexico, XXIX, 1700
 profile from west-central Medina County southeastward to Gulf of Mexico, showing, XXIX, 1699
 Willis deltaic belt, XXIX, 1312

- Willis ferruginous sand, GC, 444, XIX, 663
- Willis formation, coastal Texas and Louisiana, GC, 433, 436, 441; XIX, 652, 655, 660
- faulting in, XXII, 104
- Gulf Coastal Plain, XXIII, 187
- Montgomery County, Texas, sections, GC, 447; XIX, 666
- Willis gravelly sand, GC, 442; XIX, 662
- Willis gravels, coastal Texas, GC, 466, 468, 469, XIX, 685, 687, 688
- Willis lenticular beds, XXVIII, 62
- Willis period of entrenchment and alluviation, XXIX, 1716
- Willis sand, XXIX, 1702
- coastal Texas, GC, 466-469, XIX, 685-688
- Willis structure in coastal Texas and Louisiana, GC, 459; XIX, 678
- Williston, S. H., XXIX, 1256
- Williston, S. H., Tough, F. B., and Savage, T. E., VII, 351
- Williston, S. H., and Nichols, C. R., review, XII, 445
- Williston, S. W., I, 21, 23, 26; II, 71; IX, 250; X, 148; XI, 633; XIV, 1295
- Williston, S. V., and Case, E. C., X, 835
- Williston basin, FOP, 77; PROB, 705; XXV, 1509; XXVI, 1559, 1567; XXVII, 1288, 1583
- Amsden sedimentation in, XXVII, 1303
- eastern Wyoming, and western Iowa, correlation of formations in, XXVI, 1583
- sections of Big Snowy group and Amsden formation, XXVII, 1294, 1295, 1296
- Williston basin wildcat test, Oliver County, North Dakota, XXVII, 1618
- Willoughby, David P., XXVI, 165
- Willoughby, H. L., XV, 202
- Willoughby, M. Frances, XXIX, 1721
- Willow Creek, character of water, XXIV, 1226
- Willow Lake oil field, XXVI, 1263
- Willow Slough, Texas, XXII, 740
- Willow Springs area, Gregg County, XXIII, 891
- Willow Springs field, XXV, 1087; XXVI, 1055
- production in, XXVII, 788
- Willows, trapping of sediments by, RMS, 162
- Willows gas field, XXIII, 943
- Wills, XXIII, 1551
- Wills, Frank, GAS, 1114
- Wills, Neil H., PTNM, 595, 596, 597; XVI, 53; XXIV, 10, 61; XXV, 1728; XXVI, 81, 85, 595, 596, 597
- Wills Point age of Tanlajás formation, MEX, 100, 101
- Wills Point clay, VI, 331
- Wills Point formation, XXVII, 621
- Willshaw flats, XXV, 1153
- Willson, Kenneth, and Durward, Robert, memorial of Melvin J. Collins, XX, 841
- Willson, K. M., and Ley, Henry A., gas fields in northeast Texas embayment, GAS, 651
- Willstaetter, Richard, and Stoll, Arthur, XIV, 1459
- Wilm, D., RMS, 625
- Wilmarth, M. Grace, GAS, 279; XIV, (Wilmarth)
- 1076; XV, 700, XVIII, 1479; XXV, 2110; XXVII, 419, 1060
- Wilmington fault, XXII, 1057
- Wilmington oil field, Los Angeles County, California, XXI, 977; XXII, 709, 1048; XXIII, 941; XXVI, 1135
- analyses of crude oils at, XXII, 1078
- curves showing production in barrels and number of wells, XXII, 1075-1077
- development of, XXII, 1052
- extension, XXII, 711
- fossils of, XXII, 1057
- location and discovery, XXII, 1049
- production at, XXII, 1078
- production from Repetto (Lower Pliocene) formation at, XXII, 1049
- sections, XXII, 1058-1062, 1064-1071
- subsurface structure contours drawn on top of Ranger zone, XXII, 1050-1051
- (wells 50, 51), SBP, 87-153, 403
- Wilmington-Signal Hill area, section, XXII, 1054-1055
- Wilmington structure, XXI, 978
- Wilmot sand, XXIII, 852
- Wilsner, J. L., XX, 856
- Wilshire Oil Company, GAS, 201
- Wilson, XVII, 828, XX, 890
- Wilson, A. N., XXI, Pl. C, opp. 1086
- Wilson, C. C., XXIII, 1243
- Los Bajos fault of south Trinidad, B. W. I., XXIV, 2102
- Wilson, Charles W., XX, 1346, 1347, 1355; XXIII, 1446, 1847
- Wilson, Charles W., and Newell, N. D., XXI, 1409, XXIV, 82; XXIX, 153
- Wilson, Charles W., Jr., STRAT, 445; XX, 312; XXIII, 1488; XXV, 823
- age and correlation of Pennsylvanian surface formations, and of oil and gas sands of Muskogee County, Oklahoma, XIX, 503
- geology of Muskogee-Forum district, Muskogee and McIntosh counties, Oklahoma, review, XXII, 224
- geology of Nye-Bowler lineament, Stillwater and Carbon counties, Montana, XX, 1161
- revision of stratigraphy of Dry Creek and Golden structures, Carbon County, Montana, XXII, 106
- section of Paleozoic and Mesozoic rocks measured at Cinnabar Mountain, Park County, Montana, and at Mount Everts, Yellowstone National Park, Wyoming, XVIII, 368
- Upper Paleozoic development of Nashville dome, Tennessee, XX, 1071
- Wilson, Charles W., Jr., and Born, Kendall E., structure of central Tennessee, XXVII, 1039
- Wilson, Charles W., Jr., and Spain, E. L., Jr., age of Mississippian Ridgely shale of central Tennessee, XX, 805
- Wilson, Clyde H., Jakosky, J. J., and Dreyer, R. M., geophysical investigations in Tri-State zinc and lead mining district, XXVII, 86
- Wilson, E. B., XXIX, 1417
- Navarro Crossing field, Houston County, Texas, XXII, 1600
- Wilson, E. D., XXII, 537
- Wilson, George A., rôle of petroleum geologist in development of law of oil and gas, XXII, 1080
- Wilson, H. A., PROB, 243; XV, 614; XX, 291
- Wilson, H. D. B., XXVI, 165, 176
- Wilson, Harry H., memorial of, XIII, 1238
- Wilson, Ivan F., XXVII, 166, 184
- Wilson, John, Briggs, Henry, and Owen, A. L. S., PROB, 998
- Wilson, John H., PROB, 74; STRAT, 24; XIII, 850, 1254
- Brunton compass attachment for measurement of horizontal magnetic intensity, XV, 1391
- capacity of pipe, XI, 1231
- lithologic character of shale as an index of metamorphism, X, 625
- Wilson, Joseph M., Cedar Point field, Chambers County, Texas, XXII, 1601
- Concho Bluffs of Crane, Ector, and Winkler counties, Texas, XIII, 1069
- South Cotton Lake field, Chambers County, Texas, XXV, 1898
- Wilson, K. R., XXVIII, 723, XXIX, 667
- Wilson, R. M., developments in south Arkansas and north Louisiana in 1944, XXIX, 803
- proposed new definition of linear units, XXII, 1616
- Wilson, Robert E., petroleum and the war, XXV, 1264
- Wilson, Robert R., MSC, 48, 49
- Wilson, Robert S., XXVIII, 1677
- Wilson, Roy, XXI, 1559
- Wilson, Roy A., bearing of geologic features in South Dakota upon oil possibilities, VII, 507
- Wilson, Roy A., and Ward, Freeman, possibilities of oil in western Dewey County, South Dakota, review, VII, 303
- Wilson, T. Y., and Ruedemann, Rudolph, XXI, 27
- Wilson, Thomas C., sedimentation in barred basins and source rocks of oil, discussion, XXI, 1350
- Wilson, V. T., GAS, 221
- Wilson, Walter B., GAS, 1080, 1082, 1084; PROB, 324, 325, 326, 430; XI, 659; XII, 213, 765; XV, 1450; XVI, 887; XX, 618, 795; XXI, 1379; XXIX, 1542, 1745, 1748
- classification of oil reservoirs, XXVI, 1291
- discussion of accumulation of oil in Granite Ridge pools, XV, 1450
- discussion of oil pool of open reservoir type, XX, 795
- evidence of oil and gas migration at Crescent pool, XX, 618
- geology of Glenn pool of Oklahoma, STR I, 230; XI, 1055
- memorial of George Charlton Matson, XXIV, 606
- proposed classification of oil and gas reservoirs, PROB, 433
- report of resolutions committee for 1944, XXIX, 597
- reviews, XII, 1173; XX, 829
- Wilson Creek dome, Rio Blanco and Moffat counties, Colorado, XXII, 680; XXVII, 449
- geologic map, XXV, 1155
- map of, XXII, 681
- Wilson Creek field, Colorado, FOP, 37;

(Wilson)

- XXIII, 906; XXIV, 1110; XXV, 1150, 1153, 1158, 1469; XXVIII, 791
 gravity of oil at, XXV, 1153
 Wilson Creek structure, XXIII, 907
 Wilson field, Texas, XXVIII, 862
 Wilson pool, Cowley County, Kansas, XXIII, 799
 Wilson sand, Centralia-Sandoval area, Illinois, STR II, 128
 Wilson structure in northeastern Moore County, Texas, XXIII, 1029, 1048
 Wiman, Carl, XXV, 2126
 Wimberly pool, XXVI, 1045; XXVIII, 837
 Wimbish, Forrest E., STRAT, 165; XXIII, 1753, 1773
 Winchell, XX, 807
 Winchell, Alexander N., PROB, 6, 8, 12, 13; STRAT, 239, V, 71; XIV, 610; XIX, 1180; XXI, 1285, 1288, 1292, 1293, 1296; XXIV, 500, 1952; XXV, 725, 727, 732; XXVII, 572
 Winchell, N. H., XXI, 717; XXIV, 749
 Winchell, N. H., and Ulrich, E. O., XIX, 1114
 Winchell and Ulrich's correlations of Lower Silurian in Upper Mississippi Valley, XIX, 1112
 Winchell formation, XXIV, 88
 Winchell member, Cross Cut-Blake district, STRAT, 549, 551
 Winchester, Dean Eddy, GAS, 434, 1065; PROB, 725; III, 361; IV, 63, 203; V, 468; VI, 340, VII, 606, 663; VIII, 664, 666; IX, 258; XIII, 1380
 memorial of, XXI, 135
 natural gas in Colorado, northern New Mexico, and Utah, GAS, 363
 oil and gas resources of New Mexico, review, XVII, 567
 oil shale of Rocky Mountain region, review, VII, 454
 reviews, VII, 83; VIII, 529; XI, 1337
 Winkler, William H., XIX, 1536
 Wind, RMS, 14, 17, 202, 214, 215, 583 as cause of currents, RMS, 105, 108 as cause of surface slopes, RMS, 121
 effect on beaches, RMS, 213
 effect on calcareous deposits, RMS, 290
 effect on circulation in basins, RMS, 97
 effect on currents, RMS, 78, 102, 117-120, 124, 237, 278
 effect on density, RMS, 59
 effect on drift currents, RMS, 50
 effect on ocean sediments, RMS, 382
 effect on ocean water, RMS, 58
 effect on sand, RMS, 13
 effect on sea level in North Sea, RMS, 326
 effect on sorting, RMS, 34
 effect on tidal muds, RMS, 202
 effect on turbulence, RMS, 77
 effect on upwelling, RMS, 122, 125, 127
 effect on ventilation, RMS, 363
 rounding of particles by, RMS, 33, 41, 42, 242
 transport, transverse, RMS, 125
 Wind abrasion, RMS, 44
 Wind action on sediments, RMS, 496-502
 Wind-blown sands, RMS, 41
 Wind deposits, RMS, 496-502
 Wind-driven currents, RMS, 125

Wind gradient, RMS, 113

- Wind River, Wyoming, outcrop section d, SBP, 243-255, 411
 Wind River and Bighorn basins and their marginal structures, tectonic map of, with cross sections, XXIII, 1442-1443
 Wind River and Lost Cabin vertebrate fossils in Wasatch beds, XXV, 2043
 Wind River Basin, Wyoming, FOP, 52; PROB, 680, 929, 930; XXIII, 1441, XXV, 1484, XXVII, 431
 analyses of waters in, XXIV, 1323
 character of waters, XXIV, 1240, 1259, 1289, 1295
 Dakota group waters in, XXIV, 1258
 diagrams showing history of Cenozoic sedimentation in, XXV, 140
 Embarras waters in, XXIV, 1288
 Frontier waters in, XXIV, 1238
 references on oil prospects in, FOP, 53; XXV, 1485
 structure section, FOP, 55; XXV, 1487
 Tensleep waters in, XXIV, 1292, 1294
 Wind River Basin border area, XXIII, 1460
 Wind River Basin region, map, FOP, 54; XXV, 1486
 Wind River Canyon, Wyoming, columnar section of, XXIII, 481
 early geologic investigations of, XXIII, 1444
 geology of, XXIII, 476
 structure of, XXIII, 487, 1468-1469, 1482-1483
 view of east side of, showing normal fault at Boysen Dam, XXIII, 485
 view of Paleozoic section and top of pre-Cambrian, exposed in west wall of, XXIII, 1448
 view of west side of, showing reverse fault, XXIII, 485
 view showing north portal of, and dip slopes along north flank of Owl Creek-Bridge uplift, XXIII, 1440
 Wind River Canyon area, Wyoming, faults and flexures, XXIII, 1456-1457
 geologic map of, XXIII, 1458-1459
 horsts between south front thrusts and Boysen fault in, XXIII, 1473
 post-Laramide deformation in, XXIII, 1486
 pre-Cambrian in, XXIII, 1446
 sections interpreting structural geology in, XXIII, 1461
 significance of tectonic features of, XXIII, 1486
 stratigraphic sections in, XXIII, 1447, 1452-1455
 structural geology of, XXIII, 1439
 tectonic map of, XXIII, 1456-1457
 Wind River formation, XXIII, 1451, 1486, XXV, 139
 contact of, with faulted zone, XXIII, 1485
 Lance Creek field, Wyoming, escarpment, STR II, 605
 Wind River Mountains, Wyoming, Cambrian fossils in, XXV, 125
 Chugwater group in, XXV, 133
 columnar section of formations exposed in and near, XXV, 126
 Cretaceous plants in, XXV, 138
 Devonian in, XXV, 129
 Devonian fossils in, XXV, 130
 Eocene in, XXV, 139

(Wind)

- Eocene mammalian fossils in, XXV, 141
 faulting at, XXV, 148
 from Hudson Dome to Elkhorn, cross section of, to show relationships of Tertiary sediments to older rocks, XXV, 145
 geology of, XXV, 120, 146
 Jurassic in, XXV, 136, 137
 map showing areal geology of, XXV, 121
 Mississippian in, XXV, 130
 Oligocene in, XXV, 142
 Ordovician in, XXV, 128, 129
 Pennsylvanian in, XXV, 131, 132
 Permian in, XXIV, 629; XXV, 132
 petroleum possibilities in, XXV, 150
 physiography of, XXV, 144
 Pleistocene and Recent in, XXV, 143
 post-Oligocene in, XXV, 142
 pre-Cambrian in, XXV, 125
 profile showing relationship of dip slope to bed rock, XXV, 145
 stratigraphy in, XXV, 125
 structure in, XXV, 147
 Sundance formation in, XXI, 735
 Tertiary in, XXV, 139
 Trassic in, XXV, 133, 135
 Wind River Mountains uplift, XXVII, 429
 Wind River Range an asymmetrical anticline, XXV, 147
 Wind River region, formation names in, XXV, 124
 Wind transportation of sediments, RMS, 270
 Wind turbulence as affecting evaporation, RMS, 88
 Windfall sand, Bradford field, Pennsylvania and New York, STR II, 424
 Windhausen, Anselmo, XVI, 567
 Gulf of San Juan, review, VIII, 684
 occurrence of oil at Comodoro Rivadavia, Argentina, Patagonia, review, IX, 181
 Windhausen, Anselmo, and Beder, XX, 1232
 Winding Stair shear plane, XV, 1019
 Windlass for bottom samplers, RMS, 635
 Windom limestone, Kansas, X, 555
 Winfield, Kansas (well 262), SBP, 255-285, 407
 Winfield formation, XXIII, 1060
 Winfield gas field, Montcalm County, Michigan, XXIV, 984
 Winfield limestone, I, 114; II, 74; IV, 89; VI, 427
 Wingate formation, VI, 205, 217, 244
 Wingate sandstone, XXVII, 470
 Winger pool, XXVIII, 835
 Wingfield, F. L., XXVIII, 1170, 1172
 Winham, W. P., X, 495
 Winkler, V. D., XXVIII, 1529
 Winkler, Crane, and Ector counties, Texas, Concho Bluffs of, XIII, 1069
 Winkler and Ward counties, Texas, and Lea County, New Mexico, "Sand Belt" area of, STRAT, 750
 Winkler County, Texas, crystalline rock in deep well in, XXIX, 222
 Ellenburger production extended into, XXVIII, 817
 south-north cross section from Pecos County through, to Roosevelt County, New Mexico, XXIV, 29
 Winkler County structure, XIII, 1038
 Winkler field, GAS, 451-453

- Winkler technique in experimenting on hydrocarbon-oxidizing bacteria, XXVII, 1176
- Winn, R. V., XXIV, 1452
- Winn, W. E., XVII, 981, 1002
discussion of Venezuelan oil-field waters, XV, 907
- Winn Parish, Louisiana, gas in, XXVIII, 277
- Winnfield anticline, SD, 10, 12, 17; IX, 840
- Winnfield dome, Louisiana, PROB, 651; SD, 222, 225, 328-334, X, 276-283
cap rock of, SD, 332
- Winnfield Oil Co., SD, 274, 275, 336
- Winnfield Quarry, SD, 274
- Winning and Cardabia series at type localities in Northwest Basin, Australia, XX, 1053
- Winnipeg sandstone, XXVI, 343
- Winnowing, RMS, 82, 165, 167, 171-173, 280, 286, 312, 336, 354
- Winnboro field, gravity of oil at, XXIX, 770
- Winona beds, XXVIII, 56
- Winslow, I, 23
- Winslow, Arthur, XVIII, 1320; XIX, 1063
- Winslow formation, III, 262, 268, 269, 273; V, 283
in northwest Arkansas, XIV, 137
- Winston, Mattie, RMS, 179
- Winter, Niles B., and Donnelly, Alden S., XXIX, 725
developments in West Texas and southeastern New Mexico in 1943, XXVIII, 806
- Winterburn, Read, XXIII, 1856
- Winterer, Edward Virgil, memorial of, XXVIII, 694
- Winterfield field, XXVI, 1108; XXVII, 833
- Wintermann, David, and Smiser, Jerome S., XIX, 1028
character and possible origin of producing rock in Hilbig oil field, Bastrop County, Texas, XIX, 206
- Winters, John XI, 1329
- Winters, California, outcrop section D, SBP, 167-194, 411
- Winterset limestone, V, 548
- Winton, W. M., X, 615; XXIX, 176
- Winzler, Al, STRAT, 104
- Wirabianz, and Sachanoff, A., XV, 620
- Wirth, C. K., STRAT, 239
- Wisconsin, RMS, 234, 525
negligible oil possibilities of, VII, 653
unconformities, VII, 656
- Wisconsin arch, XVI, 148
- Wisconsin drift, XXVI, 357
- Wisconsin highlands, XXVIII, 113
- Wisconsin ice, RMS, 233
- Wisconsin oil reserves, VI, 44
- Wisconsin securities law, V, 29
- Wisconsin stage, CAL, 268
- Wisconsin uplands, XXI, 773
- Wise, Chester L., XXIV, 672
- Wise, John, GAS, 119
- Wise County, Texas, XXIV, 89; XXVI, 1047
development, XXVII, 776
developments during 1940, XXV, 1076
- Wise field, Isabella County, Michigan, XXIV, 983; XXV, 1132
- Wiseman, J. D. H., RMS, 399, 400, 401
- Wisner or Akron field, Tuscola County, Michigan, XXIV, 983, 1961
- Wissler, Stanley G., Gas, 119; MSC, 67, 98; SBP, 7, 94, 98, 100; XIX, 174; XXV, 1234
Miocene zones of, (Tma, Tmb, Tmc, Tmd, Tmf), SBP, 91, 92, 94-167, 416
- Wissler, Stanley G., and Dreyer, F. E., XXVII, 1346
- Wissler, Stanley G., and Galloway, J. J., MSC, 25, 223, 235, 260, 343, Fig 14 (in pocket)
- Wissmann, H. von, XXII, 1218, 1219
- Withdrawals from Hugoton field, XXIII, 1062
- Withers, F. S., and Miller, A. M., GAS, 933
- Withers, T. H., XXVII, 262
- Withers field, Wharton County, Texas, XXV, 1010
- Witherspoon-McKie pool, Texas, STR I, 318
- Wittman, RMS, 18
- Wittmer, XXVIII, 533
- Wittmer-Phillips, Fancher 1 (well 417), SBP, 349-379, 411
- Wohlford, C. J., V, 175; VI, 5; XI, 1073
- Wolansky, Dora, *untersuchungen über die Sedimentationsverhältnisse des Schwarzenmeeres*, review, XVIII, 550
- Wolcott, C. D., VII, 612
- Wolcott, Philip P., fossils from metamorphic rocks of Coast Range of Venezuela, XXVII, 1632
- Woldstedt, P., XX, 868
- Wolf, Albert G., SD, 691, 717, 720, 732; XIII, 177, 383; XX, 167
Big Hill salt dome, Matagorda County, Texas, SD, 691; IX, 711
hauerite in salt-dome cap rock, X, 531
- Wolf, Albert G., and Hanna, Marcus A., aragonite in Texas and Louisiana salt-dome cap rocks, XXII, 217
gold, silver, and other elements in salt-dome cap rocks, XXV, 750
Texas and Louisiana salt-dome cap-rock minerals, GC, 119; XVIII, 212
- Wolf, Theodor, XI, 1254; XIV, 281, 282; XVII, 212
- Wolf Creek conglomerate in Bradford field, Pennsylvania and New York, STR II, 413
- Wolf Creek Oil Company (well 242), SBP, 255-285, 407
- Wolf Creek sandstone in Ohio, GAS, 900
- Wolf Summit anticline, PROB, 494
- Wolfanger, L. A., XVII, 489, 502, 506, 507
- Wolfcamp and Leonard series in Guadalupe Mountains region, sections, PTNM, 558; XXVI, 558
- Wolfcamp beds, base of Permian in western Texas, at base of, XXIV, 282
- Wolfcamp beds and underlying rocks in Mid-Continent, unconformity between, XXIV, 282
- Wolfcamp epoch, extension of Permian seas during, XXVI, 226
- Wolfcamp equivalent, fossil plants of, PTNM, 684; XXVI, 684
- Wolfcamp fauna, XXIII, 1675; XXIV, 340
in central Texas, Oklahoma, and Kansas, XXIII, 1697
- Wolfcamp faunas, XXIII, 1699
- Wolfcamp formation, V, 548; XXIV, 270
of Glass Mountains, XXI, 848
- (Wolfcamp)
unconformable on Pennsylvanian formations in Glass Mountains, XXIV, 279
- Wolfcamp fusulinids, XXIV, 185
- Wolfcamp-Leonard disconformity, XXIII, 1708
- Wolfcamp series, PTNM, 556, 629; XXIV, 41, 340, XXV, 80, 1681, 1682, 1685, 1686, XXVI, 248, 556, 629
base of Permian, XXVI, 221
correlated with type Permian area in Russia, PTNM, 548; XXVI, 548
correlation of, PTNM, 673; XXIII, 1677; XXVI, 673
in American standard section of Permian inclusion of, XXIV, 353
in Delaware basin area, PTNM, 563; XXVI, 563
in Glass Mountains, PTNM, 646; XXVI, 646
in north-central Texas, XXIV, 94
in west-central Texas, section, XXVI, 228
map of West Texas region showing paleogeology of surface underlying, PTNM, 678; XXVI, 678
of Glass and Hueco mountains, PTNM, 681; XXVI, 681
of Glass Mountains correlated with Hueco limestone of Sierra Diablo and Hueco Mountains, PTNM, 649; XXVI, 649
of Permian in Glass Mountains, XXIII, 1674
- Wolfcamp time in West Texas region, structure at beginning of, PTNM, 716; XXVI, 716
map showing paleogeography of, PTNM, 735; XXVI, 735
paleogeography of, XXVI, bet. 224 and 225
sedimentation during, in West Texas region, PTNM, 734; XXVI, 734
- Wolfe City, Pecan Gap, and Annona formations in East Texas, correlation of, XXVIII, 522
- Wolfe City formation, XXVIII, 524
- Wolfe City sand in East Texas, XII, 42, 542
- Wolfe Creek Maxon oil pool, XXIX, 683
- Wolff, A. G., IX, 538
- Wolff, Albert S., XIX, 1634
- Wolff, F. von, MEX, 145
- Wolff, Moritz, XIV, 564
- Wolff, W., XVIII, 69, 733
- Wolff apparatus for orienting cores, XIV, 564
- Womans pocket anticline, PROB, 715
- Womble or Stringtown shale in Mid-Continent, XXV, 1638
- Womble shale in Black Knob Ridge, XXI, 5
- Wood, A., and Campbell, N. R., XXI, 1199
- Wood, A. H., Survey, Texas (well 308), SBP, 292-335, 408
- Wood, Ethel M. R., and Elles, Gertrude L., XXVI, 858; XXVIII, 873
- Wood, F. C., XXIII, 1094
- Wood, Fred E., XIII, 117; XIX, 880; XXI, 1379
- Wood, H. O., XVII, 695
- Wood, H. O., and Buwalda, J. P., XXV, 211
- Wood, Horace E., XXV, 2043, 2044
- Wood, R. D., STRAT, 565
heavy minerals, Hardin field, STRAT,

(Wood)

- 586
Wood, Virgil O., surface structure map, STRAT, 388
work in Davenport field, STRAT, 387
Wood County, Texas, XXVIII, 851
Hawkins field, XXV, 898
Merigale field, XXIX, 1779
tests in, during 1939, XXIV, 1068 (well 361), SBP, 292-335, 409
Wood County fault, PROB, 527
Woodbine, MEX, 17, 48
East Texas, isosalinity lines and structural contours for, XIX, 320
section showing stratigraphic relations of, to Grayson and Main Street formations along outcrop in Cooke and Grayson counties, Texas, XXIX, 182
unconformity at base of, XXIX, 183
Woodbine basin, PROB, 276, 295, 315
Woodbine cores, analyses of, for presence of salt water, XVIII, 265
Woodbine Cretaceous oils, PROB, 140
Woodbine fault-line fields, XXVII, 786; XXVIII, 847
Woodbine field, Texas, XXIX, 762
Woodbine formation, GAS, 660, 679; PROB, 275, 276, 295, 296, 332, 403, 416, 417, 420-422, 779; XXII, 1509; XXV, 1085; XXVI, 1050, 1053; XXVII, 782, 784, 785
at Elkhart, Texas, XXII, 728
East Texas oil field, GAS, 680
Irma field, Arkansas, STR I, 7
Mexico-Groesbeck district, Texas, STR I, 309, 332; GAS, 667, 671, 678, 679
Mexico-Groesbeck district, Texas, production data for pay sands within, STR I, 361
Monroe field, GAS, 752
northeast Texas, GAS, 662, 665, 667, 668, 674-676
Pleasant Grove field, XXVII, 787
productive of gas and oil in East Texas fields, XXIII, 891-893; XXIV, 1064
Texas, X, 41
Tyler basin, PROB, 779
Woodbine fossils, XXIX, 183
Woodbine group, XXIX, 183
Woodbine lithology, XXIX, 186
Woodbine main pay zone, top of, Mexia field, Texas, STR I, 336
Woodbine map, STRAT, 607
Woodbine-Nacatoch folds at Pine Island field, Louisiana, STR II, 176
Woodbine oil, Bellevue field, Louisiana, analysis, STR II, 249
gravity, STR I, 369
source of, in Mexia fault zone, Texas, STR I, 380
Woodbine oils, PROB, 137
Woodbine pay sand, structure contour map of top of, VII, 28
Woodbine reservoir in East Texas field, differential pressures in, XXIV, 115
Woodbine sand, PROB, 60, 302, 330, 333, 416, 578, 579, 669, 893, 901; XXI, 1066; XXII, 1630; XXIII, 895; XXVI, 1052; XXIX, 791
Arkansas, VI, 197, 350, 363, 474, 477
Bellevue field, Louisiana, STR II, 237, 249
Boggy Creek salt dome, Texas, XII, 613, XVI, 593
Burke pool, Texas, STR I, 318
Caddo field, Louisiana, porosity, STR II, 193, 195

(Woodbine)

- Currie field, Texas, STR I, 312, 315, 341
East Texas, XII, 543
Homer field, Louisiana, STR II, 208 (Kw) (Cretaceous), SBP, 294, 296-335, 415
Louisiana, I, 153; II, 62, IV, 125, V, 305, 492, VI, 181, 247
Mexia fault zone, Texas, STR I, 348
Nigger Creek field, Texas, STR I, 412
North and South Groesbeck fields, Texas, STR I, 339
North Currie field, Texas, STR I, 343
northeastern Texas, XXVII, 895
Pine Island field, Louisiana, STR II, 170, 171
Powell field, Texas, STR I, 346
productive at Hawkins field, XXV, 1084
productive in northeast Texas, XXV, 1698
Richland field, Texas, STR I, 348
Stephens field, Arkansas, STR II, 5
Texas, III, 96, 97; V, 7-9, 20, 21, 419, 626; VI, 329; X, 41, 49
Texas, fossils, X, 617
Texas, interpreted as a regressive phenomenon, X, 613
Texas, oil fields of, PROB, 329
Texas and Arkansas, XI, 2
Texas salt domes, SD, 215, 217, 249, 257, 267; X, 7
Wortham field, Texas, STR I, 350
Woodbine sand and Eagle Ford shale, areal variation of organic content of, in East Texas Basin, SBP, 302
Woodbine sand basin, relation to Sabine uplift, XVI, 888
Woodbine sand fault-line fields in Texas, significance of unit recoveries from, XXVIII, 235
Woodbine sand fields, PROB, 60, 404
Woodbine sand waters, PROB, 423
East Texas, isosalinity contours of, XXVIII, 1636
East Texas, salt diffusion in, XXVIII, 1635
west of Mexia fault zone, distribution of salt in, XXVIII, 1639
Woodbine strata in Van field, Texas, oil from, XXI, 811
Woodbine waters, from fault fields of Texas, composition of, STR I, 376
salinity of, GC, 273; XIX, 321
solid content of upper, in Mexia fault zone, Texas, STR I, 374
Woodford, Alfred O., CAL, viii, 3, 80, 84, 102, 103, 126, 166, 168, 170, 184, 194, 238, 293; MSC, 114; RMS, 456; SC, 114, 115, 120, 123; X, 130; XI, 362; XII, 750, 751, 1024; XIII, 493; XVIII, 788, 794; XX, 148, 153, 1660, 1661, 1666, 1669; XXIII, 1090; XXVII, 122
review, XXIII, 1577
Woodford, Alfred O., and Bailey T. L., CAL, 171; SC, 120; XX, 1666; XXVII, 124
Woodford, Alfred O., and Clark, Bruce L., XIV, 413; XXIV, 1936
Woodford, Alfred O., and Harriss, T. F., CAL, 42, 64, 95, 203; XXIV, 665
Woodford, Alfred O., Buddenhagen, H. J., Hill, Mason L., and Hudson, Frank S., type locality of a fault, XIV, 797
Woodford chert, SBP, 260; V, 34, 151, 427; VI, 6, 16

(Woodford)

- Oklahoma, X, 139
Woodford formation, GAS, 578, 593
Woodford shale, XXII, 1566; XXIII, 228, 233; XXV, 1650; XXVII, 802, XXIX, 194, 1343
in Bowlegs field, Oklahoma, STR II, 355, 357
Woodhull field, Steuben County, New York, XXII, 257; XXVII, 837; XXVIII, 723; XXIX, 667, 668
Woodhurst limestone, V, 259
Woodhurst member of Lodgepole limestone in Little Belt Mountains, XXVI, 316, 317
Woodhurst residues, XXVI, 329
Woodlawn gas-distillate area, XXIII, 879
Woodrign, XXVI, 1649, 1651
Woodring, J. R., Roundy, P. V., and Farnsworth, H. R., GAS, 146, PROB, 747
Woodring, Judy, SBP, 6
Woodring, W. P., CAL, 130, 141, 156, 195, 217, 228, 238; MSC, 5, 33, 71, 103, 133, 152, 175; SC, 50, XIII, 620; XIV, 283; XVII, 1012; XVIII, 495, 1348, 1572; XIX, 775, 780, 1199; XX, 126, 153, 219, 220, 868, 871, 1596; XXI, 133; XXIII, 252, 1561, 1853; XXIV, 741, 1597; XXV, 194, 198, 251; XXVI, 165, 184; XXVII, 6; XXVIII, 1359; XXIX, 929
marine Eocene deposits on east slope of Venezuelan Andes, XI, 992
review, XVIII, 380
Woodring, W. P., and Roundy, P. V., GAS, 146
Woodring, W. P., and Stewart, Ralph, GAS, 133
Woodring, W. P., Bramlette, M. N., and Kleinpell, R. M., MSC, 77, 200, 206, 207, 209, 211, 212, 218, 221-223, 225, 230, 231, 237, 238, 244, 245, 247-249, 255-257, 259, 261-263, 266-268, 270-273, 276-279, 281-286, 288, 289, 294, 295, 297-300, 303, 304, 307-310, 312-314, 317, 319, 320, 324, 326-328, 330-332, 334, 335, 337-342, 344, 347, 348, 350, 354, Fig. 14 (in pocket), SC, 120; XX, 1666
Miocene stratigraphy and paleontology of Palos Verdes Hills, California, XX, 125
Woodring, W. P., Bramlette, M. N., and Lohman, K. E., stratigraphy and paleontology of Santa Maria district, California, XXVII, 1335
Woodring, W. P., Stewart, Ralph, and Richards, R. W., XXVII, 1260
Woodruff, Elmer Grant, PROB, 260, 334; SD, 223, 263; III, 312; IV, 318; VI, 213; VII, 388; IX, 276, 1294; X, 55; XI, 791; XII, 821; XIII, 157, 409, 1421, 1422, 1441, 1442, 1443; XXI, 1242
discussion on salt domes, I, 79
science of petroleum geology, V, 446
Woodruff sand, XXIV, 1027
Woodruff zone, XXVIII, 45
Woods, XII, 11, 24
Woods, E. Hazen, XXIV, 5, 14
abstract, XXII, 1702
south-north cross section from Pecos County through Winkler County, Texas, to Roosevelt County, New Mexico, XXIV, 29
Woods, J. S., STRAT, 601

- Woods, R. D., XVII, 527; XXIV, 435
 Woods, S. H., XVI, 959
 Woods Hole, RMS, 84, 417, 421, 655
 Woods Hole coring tube, RMS, 652
 Woods Hole Oceanographic Institution, RMS, 652, 655, 662
 Woods Hole region, foraminifera of, MSC, 12
 Woodside anticline, Utah, GAS, 381, 383
 Utah, carbon dioxide in, GAS, 1066
 Woodside dome, XXVII, 467
 Woodside field, XXVII, 450
 Woodside formation of Wasatch Mountains, XVIII, 1668
 Woodside gas, carbon dioxide, nitrogen, and helium in, XXI, 1258
 Woodside shale, XXIII, 84, 96
 Phosphoria formation, and Weber formation in Uinta Mountains, sections of, XXIII, 97
 Woodside structure, helium in, GAS, 1057
 Woodson County, Kansas, metamorphic rocks of, V, 64
 Woodstock greensand and marl member correlated with upper part of Claiborne, XXIX, 81
 Woodville field, Michigan, XXVIII, 765, XXIX, 700
 Woodward, A. Smith, XXIII, 1228; XXIV, 1611, 1613; XXV, 2060; XXVIII, 1001
 Woodward, Herbert P., XI, 82, XII, 150, 157; XIX, 702
 Woodward, Herbert P., and Price, Paul H., XXV, 810
 geology and war, XXVI, 1832
 résumé of Devonian system of West Virginia, XXIV, 1983
 Woodward, Smith, XXI, 122
 Woodward, S. P., MSC, 99
 Woodward, T. P., XII, 1109
 Woodward field, Oklahoma, II, 56
 Woodward formation, II, 74, 114, XXI, 429
 Woodworth, RMS, 242
 Woodworth, Dorothea, XXV, 194
 Woodworth, G. B., XIX, 1728
 Woodworth, J. B., III, 235; XVIII, 992; XIX, 1732
 Woodworth, R. W., XXIV, 2143
 Wooley, William, XXIX, 51
 Wooley's Bluff clays, GC, 480; XVII, 1303
 Woollard, George P., XXIX, 83, 92, 93, 893, 895, 896, 950
 Woolman, Lewis, XXIX, 889, 891, 899, 900, 904, 905
 Woolman Collection at Academy of Natural Sciences, Philadelphia, XXIX, 899
 Woolnough, Walter George, GC, 571; PROB, 76, 89; RMS, 96; XVII, 489, 506, 507, 510; XXI, 351, 1350, 1579; XXIII, 1184, 1191, 1192, 1193; XXV, 394; XXVI, 44, 46; XXVIII, 1015; XXIX, 13
 geological extrapolation and pseudo-abysal sediments, XXVI, 765
 honorary member of A.A.P.G., XXV, 1954
 natural gas in Australia and New Guinea, XVIII, 226
 pseudo-tectonic structures, XVII, 1098
 report on aerial survey operations during 1932, review, XVIII, 380
 report on tour of inspection of oil fields of United States of America (Woolnough)
 and Argentina and oil prospects in Australia, review, XVI, 108
 review, XV, 715
 sedimentation in barred basins, and source rocks of oil, XXI, 1101
 simplification of the John L. Rich dip construction, XIX, 903
 Woolnough, Walter George, and Somerville, J., XX, 1033
 Woolsey, E. V., VIII, 776
 Woolsey, L. H., VII, 606
 Woolsey, Vernon E., IX, 632, 635
 Woolsey, Vernon E., and Mackay, Donald K., XVI, 754
 Woornamel sandstone, XXV, 380
 Worcester, Philip G., textbook of geomorphology, review, XXIII, 1577
 Word beds, XXIV, 272
 Word faunas, XXIII, 1698
 Word formation, PTNM, 654; XXIII, 1676; XXIV, 341, XXVI, 654
 at Sullivan Peak, XXIII, 1700
 cephalopods in, XXIX, 1773
 correlated with Blaine, Dog Creek, and San Andres strata of New Mexico, XXIX, 1775
 correlation of middle and upper parts, PTNM, 660; XXVI, 660
 correlative criteria of, XXIX, 1771
 fossils in, XXIX, 1766
 lower, XXIII, 1699
 of Glass Mountains correlated with Blaine of Texas and San Andres of New Mexico, XXIII, 1699
 of Glass Mountains, San Andres group equivalent to, XXV, 83
 of Texas, XXII, 1018
 Permian fusulnids in, XXIX, 1772
 problem of correlation of lower part of, PTNM, 659; XXVI, 659
 section, XXIX, 1767
 section at Sullivan Peak, XXIII, 1699
 upper, XXIII, 1699
 Word fossils, XXIV, 183
 Word geologic section, type, in Glass Mountains of Brewster County, Texas, XXIX, 1766
 Word-Leonard relationships, XXIX, 1776
 Work done in ocean, RMS, 59, 109
 Workman, L. E., XX, 1087, 1089; XXII, 1529; XXIII, 817, 1353, 1359, 1564; XXV, 691; XXVI, 1701; XXVIII, 1519; XXIX, 1654
 subsurface geology of Chester series in Illinois, XXIV, 209
 Workman Hill conglomerate, XXIV, 653
 petrologic description of, XXIV, 653
 rock percentages in, XXIV, 655
 Works Progress Administration, RMS, 136
 Worland and Pawnee limestones, interval between, XXV, 58
 Worland limestone, XXV, 29, 38, 40, 55, 64
 of Greene a member of Altamont limestone, XXV, 71
 World, map showing petroliferous areas, XXVIII, 1500
 World affairs, minerals in, XXVIII, 565
 World annual production rates, 1890-1943, XXVIII, 1492
 World cumulative production by years, XXVIII, 1494
 World Engineering Congress, XIV, 325
 World oil production in 1939, XXV, 354
 World Petroleum Congress, proceed-
 ings review, XVIII, 822
 second, Paris, June, 1937, XX, 1521; XXI, 1232
 World petroleum reserves and petroleum statistics, XXVIII, 1485
 World production of natural gasoline, GAS, 1122
 World's reserves, January 1, 1944, XXVIII, 1492
 Worm, XXV, 640
 Worm jaws, XXV, 1244
 Worm tubes, MSC, 106; RMS, 287; XXIV, 152, 154
 Worms, RMS, 241
 faecal pellets of, RMS, 518
 malanid, RMS, 289
 Serpula, RMS, 288
 Worsham field, XXVII, 772
 Wortham-Steed field, XXVII, 777
 Wortham structure, XXV, 1073
 Wortham, Texas (well 389), SBP, 292-335, 410
 Wortham and Lake Richland faults, IX, 172
 Wortham district, Texas, production, STR I, 361
 Wortham fault, Texas, map, STR I, 322
 Wortham field, Texas, STR I, 319-323, 350; PROB, 404, 779, 999
 Wortham field recovery a result of close spacing, XXVIII, 248
 Worthen, A. H., XXIII, 600, 1375; XXVIII, 1523
 Worthen, A. J., XXII, 267
 Worthen Petroleum Company, Cerf 1 (well 382), SBP, 292-335, 409
 Wotman, J. L., XVII, 456, 461
 Wosk, L. David, XXIII, 496
 Wrath, W. F., RMS, 245, 255, 258, 260, 281
 Wrather, William Embry, MEX, x; PROB, 330; SBP, 2; I, 6; III, 158, 243; IV, 319; VI, 43; VII, 517, 623, VIII, 547, XI, 633; XIII, 157, 947, 950, 952; XXV, 84; XXVIII, 921, 1539
 American Association of Petroleum Geologists, eleventh annual meeting, Dallas, Texas, 1926, X, 538
 an appreciation, XXVIII, 444
 dedication of Problems of Petroleum Geology to Sidney Powers, PROB, v
 editorial on regional meetings, VI, 348
 memorial of Ralph Daniel Reed, XXIV, 1152
 memorial of Robert Thomas Hill, XXV, 2221
 memorial of Rollin D. Salisbury, VI, 563
 memorial of Sidney Powers, XVII, 325
 Mexia pool, Mexia, Texas, V, 419
 Miranda Oil Company well, Zapata County, Texas, V, 625
 notes on stratigraphy of Permian of Pecos Valley in southeastern New Mexico, I, 101
 notes on Texas Permian, I, 93
 relations of petroleum accumulation to structure, foreword, PROB, 429
 report of president for 1922, VII, 308
 report of progress of research committees, XI, 644
 research announcement, XI, 433
 supposed igneous rock from Wichita County, Texas, V, 512
 Vinton field, Louisiana, V, 339

- Wray, D. A., XXIV, 286
 Wray field, Colorado, FOP, 60; XXV, 1492
 Wray pool, Texas, XXIII, 854
 Wreford limestone, II, 78; V, 422
 Wright, A. C., XXIX, 1417
 Merigale field, Wood County, Texas, XXIX, 1779
 Wright, Albert, Jr., and Sweet, P. W. K., Jurassic as source of oil in western Cuba, VIII, 516
 Wright, C. E., XXV, 725, 731
 Wright, Chilton A., RMS, 11; XXV, 106
 Wright, F. E., XXI, 341, 343, 344
 Wright, Frank J., older Appalachians of the south, review, XVI, 267
 Wright, Fred S., XXIV, 134
 Wright, G. F., XX, 906
 Wright, Harry Favill, XVI, 904
 discussion of reservoir pressures, XVI, 904
 memorial of, XXVIII, 1063
 review, XVII, 99
 Wright, J. G., VIII, 769
 Wright, James, XXV, 2127
 Wright, Park, II, 98, 111
 Wright, Randall, XIX, 881
 Wright, Randall, Jamin effect in oil production, XVII, 1251
 discussion, XVIII, 547
 Wright, Randall, magnetic iron sulphide of Pliocene of Ventura Basin, California, XXI, 627
 Red Fork Shoestring sand pool, Pawnee, Creek, and Tulsa counties, northeastern Oklahoma, STRAT, 473
 Wright, W., XI, 405
 Wright, W. J., XII, 161, XVIII, 305, 308
 geology of Moncton map area, review, VII, 302
 oil shales of maritime provinces, Canada, review, VII, 302
 Wright sand productive in Edna gas field, XXV, 115
 Wrighter, Charles N., XXIX, 1265
 Wroblewski, Adam, XI, 694
 Eotvos torsion balance, IX, 807
 memorial of Hans von Hofer, VIII, 534
 review, X, 98
 review of *Revue de Géologie*, X, 98
 Wu, C. C., PROB, 32
 Wu, C. C., and Trask, Parker D., PROB, 338, 374, 451
 does petroleum form in sediments at time of deposition? XIV, 1451
 Wu, C. C., Trask, Parker D., and Hammar, Harald E., PROB, 450
 origin and environment of source sediments of petroleum, review, XVII, 199
 Wuensch, XIV, 562
 Wurm glacial period, RMS, 411
 Wüst, G., RMS, 88, 94, 104, 115, 377, 403, 404
 "Wustenquarz," RMS, 382, 392, 500-502
 number, RMS, 500-502
 Wutai system, XXVIII, 1420
 Wyandotte section of Osage, XXIII, 329
 Wyatt field, gravity of oil in, XXV, 1051
 Wyckoff, R. D., XIX, 890, 1060, 1235; XXI, 1169; XXII, 1242, 1247, 1282; XXIII, 1858
 geophysics looks forward, XXVIII, (Wychoff)
 909
 Wyckoff, R. D., and Botset, H. G., XXII, 1241
 Wyckoff, R. D., and Muskat, M., XXIV, 2164
 Wyckoff, R. D., Botset, H. G., Muskat, M., and Reed, D. W., GAS, 1084; PROB, 808
 measurement of permeability of porous media, XVIII, 161
 Wyckoff, R. W. G., RMS, 623, 624
 Wyer, Samuel S., GAS, 1104, 1113; XVIII, 1457
 Wyllie, B. K. N., XVII, 1104, 1105, XIX, 809; XX, 898, 899, 906
 Wynn field, XXVIII, 837
 Wynn limestone, XXIV, 88
 Wynn, A. B., XVIII, 294
 Wyoming, PROB, 62, 98, 158, 159, 161-167, 169, 170, 172, 275, 338, 343, 349, 350, 408, 409, 680, 689, 931, 992, 999, 1003; RMS, 456, 461
 abnormally high temperatures in oil fields of, PROB, 1008
 ammonites from Sundance in, XXI, 718
 analysis of miscellaneous water sands in, XXIV, 1310
 analysis of surface waters in, XXIV, 1224, 1225
 anticlines between Hiawatha gas field and Baggs, XIX, 537
 Bell Springs dome, STR II, 665
 bibliography on Como Bluff anticline, XXVIII, 1215
 Big Horn Basin in, FOP, 50; XXV, 1482
 Big Horn County, GAS, 278
 Big Sand Draw field, Fremont County, XII, 1137
 Billy Creek gas field, Johnson County, GAS, 297
 Black Hills region, oil possibilities, X, 800
 black oil development, X, 446
 Buck Springs structure, STR II, 665; X, 115
 Bunker Hill dome, STR II, 653
 Cambrian in, XXIII, 480, 481, 1447; XXV, 1157, 1731
 Cambrian in Wind River Mountains, XXV, 125
 Carboniferous in, VIII, 515
 central and southeastern, Phosphoria and Dinwoody tongues in lower Chugwater of, XVIII, 1655
 Chugwater-Sundance contact in Big-horn district of, XI, 747
 Cody shale in, XXV, 2027
 Wyoming, Colorado, and northwestern New Mexico, oil and gas fields in, PROB, 719
 Wyoming, Colorado shale, VII, 488
 combined geologic and oil-and-gas map of, X, 812
 Como Bluff anticline, Carbon and Albany counties, XXVIII, 1196
 correlation of Sundance formation across, XXI, 719
 Cretaceous in, VIII, 515; XXI, 995; XXIII, 481, 483, 915, 1447; XXV, 1734; XXVII, 855
 Cretaceous in Como Bluff anticline, XXVIII, 1204
 Cretaceous sediments on east flank of Wind River Mountains, XXV, 137
 deeper producing zones in old fields in, XXVII, 856
 development in, XXI, 991, 993
 (Wyoming)
 developments in 1937, XXII, 680, 688
 developments in 1938, XXIII, 921
 developments in 1943, XXVIII, 791
 Devonian in, XXV, 1733, 2027
 Devonian in Wind River Mountains, XXV, 129
 discoveries and extensions in 1938, XXIII, 908, 917
 discoveries in 1939, XXIV, 1101
 discovery of oil at Big Medicine Bow anticline, Carbon County, XIX, 1238
 Douglas oil field, STRAT, 883
 eastern, western Iowa, and Williston basin, correlation of formations in, XXVI, 1583
 Eocene in, FOP, 50; VII, 138; XXIII, 481, 483, 1447; XXIV, 1220, XXV, 1152, 1482, 2027, 2042
 Eocene in Wind River Mountains, XXV, 139
 exploration for evaporite salts in Green River basin, XXV, 1799
 exploration in 1938, XXIII, 926
 extensions in Elk Basin field in 1943, XXVIII, 798
 extensions in 1938, XXIII, 909
 extensions to old fields, XXII, 684; XXVII, 858
 Ferris dome, STR II, 656
 Frontier-Niobrara contact in Laramie Basin, XX, 1189
 gas fields discovered in 1937, XXII, 684
 gas fields of Lost Soldier district, Carbon and Sweetwater counties, GAS, 305
 General Petroleum structure, STR II, 660
 geologic map and structure section of southern part of La Barge Ridge, Lincoln County, XXV, 1738
 geologic structure map of Lance Creek oil field, Niobrara County, XXV, 1156
 geology of Baxter Basin gas fields, Sweetwater County, GAS, 323
 geology of Freezeout Mountain-Bald Mountain area, Carbon County, XXV, 883
 geology of southern part of La Barge region, Lincoln County, XXV, 1729
 geology of Wind River Canyon, XXIII, 476
 geology of Wind River Mountains, XXV, 120
 Grass Creek dome, STR II, 623
 gravity of oil in Madison limestone, PROB, 160
 Green River basin, VIII, 302
 Green River formation, VIII, 663; IX, 249
 Heart Mountain and South Fork thrusts, Park County, XXV, 2021
 helium and nitrogen in, GAS, 1059
 important dry holes, XXIV, 1110
 index map, XXI, 716
 Jurassic in, FOP, 52; VIII, 515; XXI, 717, 718, 719, 720; XXIII, 481, 483, 927, 1447; XXIV, 1220; XXV, 1484, 2035; XXVII, 855; XXVIII, 1196
 Jurassic in Wind River Mountains, XXV, 136
 Lance Creek oil and gas field, STR II, 604; XXI, 992, 993
 Lance Creek oil and gas field, review, VI, 385
 Little Lost Soldier dome, STR II, 647

(Wyoming)

- Little Lost Soldier dome, faults, X, 120
 Lost Soldier district, GAS, 305
 Lost Soldier district, geology, VII, 136
 Lost Soldier district, oil and gas field of, review, IX, 363
 Lost Soldier district, structure, VII, 142
 Lower Cretaceous in, VII, 138, 488; XXIV, 1101, XXV, 1150
 Mahoney dome, STR II, 654
 map of Osage oil field, Weston County, XXVII, 462
 Medicine Bow anticline, Carbon County, XXVII, 448
 Middle Ferris dome, STR II, 659
 Middle Jurassic in, XXIX, 1019
 Minnelusa formation of Beulah district, northwestern Black Hills, XV, 183
 Minnelusa sandstone productive in Lance Creek field, XXIV, 1101
 Mississippian in, XXII, 683; XXIII, 481, 1447, XXIV, 1220; XXV, 1734, 2027
 Mississippian in Wind River Mountains, XXV, 130
 Montana shale, VII, 488
 Mowry shale, PROB, 57
 Muddy sand productive on Horne Valley anticline, Carbon County, XXIV, 1104
 Mule Creek field, VI, 385
 Nebraska, and New Mexico, parts of, and eastern Colorado, map showing general features of, FOP, 62; XXV, 1494
 new drilling depth record in, XXV, 1158
 new fields discovered in 1944, XXIX, 1596
 new producing zones, sands, and formations in, 1943, XXVIII, 796
 new producing zones found in 1944, XXIX, 1598
 nomenclature of Jurassic formations in, XXI, 720
 notes on oil fields of, IV, 37
 O'Brien Springs anticline, STR II, 660
 occurrence of black oil in, X, 443
 occurrence of oil and gas in, VIII, 515
 oil and gas fields and main structural features of, XXIV, 1103; XXVII, 447
 oil and gas fields of, SBP, 406; XXIV, 1216; XXVII, 459, 461
 oil and gas fields of Lost Soldier district, STR II, 636
 oil and gas fields of Lost Soldier-Ferris district, review, IX, 363
 oil and gas sands of, porosity, VIII, 739
 oil accumulation, V, 49, 408
 oil-bearing horizons of, V, 186
 oil-field waters, IX, 235
 oil-field waters of, and their relation to geological formations, XXIV, 1214
 oil fields of Rawlins-Lost Soldier district, VII, 131, 145
 oil producing counties in, XXI, 993
 oil reserves, VI, 44
 oil reserves in Teapot Dome, VIII, 101
 oil shales, IV, 195
 oil strikes in Hanna Basin and Red Desert, VII, 575

(Wyoming)

- oil-well waters of, PROB, 911
 Oligocene in Wind River Mountains, XXV, 142
 Ordovician in, XXIII, 481, 927, 1447, XXV, 1733
 Ordovician in Wind River Mountains, XXV, 128
 Osage oil field, Weston County, STRAT, 847
 Paleocene in, XXIII, 1447
 paleogeography and lithogenesis of marine Jurassic of, XXI, 759
 pay zones of Jurassic in, XXII, 686
 pay zones of Pennsylvanian in, XXII, 686
 Pennsylvanian in, XXI, 991, XXIII, 481, 921, 1447; XXIV, 1101, 1220; XXV, 1150, 1152, 1157, XXVII, 473
 Pennsylvanian in Wind River Mountains, XXV, 131
 Permian in, XXI, 991; XXIII, 481, 1447; XXIV, 1220
 Permian in Wind River Mountains, XXV, 132
 Permian and Triassic in, XXVII, 856
 Permian sections from Malta, Idaho, to Rattlesnake Hills, XXIV, 630
 Permian-Triassic rocks in Como Bluff anticline, XXVIII, 1201
 Pleistocene and Recent in Wind River Mountains, XXV, 143
 pre-Cambrian in, XXIII, 927, 1447
 post-Oligocene in Wind River Mountains, XXV, 142
 pre-Jurassic crude oil, PROB, 144
 preliminary report on water conditions in First Wall Creek sand, Salt Creek oil field, VIII, 492
 production in Sweetwater, Carbon, Albany, Natrona, and Niobrara counties, XXI, 764
 Quaternary in, XXV, 1735
 Rawlins-Lost Soldier district, VII, 131
 recompletions in 1938, XXIII, 913
 Red Springs anticline, Hot Springs County, XXVII, 450
 references on oil prospects in, FOP, 58; XXV, 1490
 relationship of sulphur content to gravity in pre-Jurassic oils of, XXVII, 1312
 relative age of major and minor folding and oil accumulation in, V, 49
 representative graphic well logs, XXIV, 1218
 Rock River field, STR II, 614
 Salt Creek field, STR II, 589; XXI, 1256
 section of Paleozoic and Mesozoic rocks measured at Mount Everts, Yellowstone National Park, and at Cinnabar Mountain, Park County, Montana, XVIII, 368
 Shoshone anticline, Park County, XXVII, 449
 source material from Embar formation in Tensleep fields of, XXI, 1252
 southeastern, fauna of so-called Dakota formation of north-central Colorado, and its equivalent in, review, VII, 306
 southwest, and northwest Colorado, geology of Hiawatha gas fields, GAS, 341
 southwest, and northwest Colorado, geology of Vermillion Creek gas area, XIV, 1013

(Wyoming)

- southwestern, map showing possible southward extent of Heart Mountain thrust, XXV, 2029
 southwestern, notes on oil shales of, IV, 195
 stratigraphic section for Wind River Canyon area, XXIII, 1447
 stratigraphic section of Como Bluff area, XXVIII, 1200
 stratigraphic trap at Osage field in Weston County, XXI, 1245
 stratigraphy of Sundance formation and related Jurassic rocks in, and their petroleum aspects, XXI, 715
 structural basins of, PROB, 927
 structural geology of Wind River Canyon area, XXIII, 1439
 structure, IV, 253
 structure and accumulation, V, 49, 408
 structure map of Lance Creek field, Niobrara County, XXIV, 1109
 Sundance fauna from Jurassic of, XXI, 719
 Sundance sand productive in Lance Creek field, XXIV, 1108
 surface types of oil and gas fields in, XXVII, 440
 surface waters of, XXIV, 1222
 Tensleep waters of, PROB, 941
 Tertiary in, XXV, 1731, 1734, 2039, 2044
 Tertiary in Wind River Mountains, XXV, 139
 thrust faults, X, 106
 Triassic in, VIII, 515; XXIII, 481, 483, 1447; XXIV, 1220; XXV, 2027; XXVII, 470
 Triassic in Como Bluff anticline, XXVIII, 1203
 Triassic in Wind River Mountains, XXV, 133
 typical Cretaceous waters of, PROB, 941
 typical Sundance waters of, PROB, 941
 unfaulted anticlines and domes in, XXVII, 436
 Upper Cretaceous in, STRAT, 849; VII, 138, 488; XXIV, 1220; XXV, 1151, 2027
 Upper Jurassic in, XXIV, 1101; XXVIII, 1215
 Upper Jurassic in Como Bluff anticline, XXVIII, 1203
 Upton-Thornton field, VI, 385
 vertical variation of properties in Pilot Butte field, SBP, 242
 water analyses in oil production and some analyses from Poison Spider, IX, 927
 waters from miscellaneous formations in, XXIV, 1312
 wells in, SBP, 406
 Wertz dome, X, 120; XXIV, 1101
 western, correlation of sections from, to north-central Colorado, XXI, 755
 wildcats, 1942, XXVII, 860
 Wind River Basin, FOP, 52; XXV, 1484
 Wyoming and Colorado, Eocene in, XXVII, 470
 Green River Basin, FOP, 53; XXV, 1485
 Hiawatha dome, STR II, 111
 location of wells and outcrop sections SBP, 192
 Upper Jurassic in, FOP, 58; XXV, 1490

- Wyoming and Montana, character of producing sandstones and limestones of, XVI, 864, discussion, XVII, 268
- Chugwater formation, X, 304
- deep drilling in, XV, 553
- Elk Basin oil and gas field, STR II, 577
- frontier sands in important producing fields of, PROB, 934
- gas fields of Big Horn Basin structural province, GAS, 277
- Powder River Basin, FOP, 50; XXV, 1482
- references on oil prospects in, FOP, 50; XXV, 1482
- structural research work in Bear-tooth-Bighorn region, XVII, 680
- Wyoming and South Dakota, stratigraphy, VII, 510
- Wyoming and Utah, nomenclature of Triassic and Jurassic formations in, XXI, 722
- Wyoming black oil fields, PROB, 163
- Wyoming core data, XXV, 863
- Wyoming dinosaur deposits, XXVIII, 1215
- Wyoming discoveries in 1942, XXVII, 855; in 1943, XXVIII, 796, 855
- Wyoming fields, analysis of Embar formation waters in, XXIV, 1284
- analysis of Madison limestone waters in, XXIV, 1304
- analysis of Sundance formation waters in, XXIV, 1272
- analysis of Tensleep sandstone waters in, XXIV, 1296
- Frontier formation productive of petroleum and natural gas in, XXII, 1027
- gravity of oil in, XXIV, 1101
- operations in 1942, XXVII, 854
- pipe lines from, XXV, 1157
- producing zones in, XXVII, 440-446
- representative Dakota group waters in, XXIV, 1256, 1258, 1262, 1264, 1270
- representative Embar waters in, XXIV, 1288
- representative Frontier waters in, XXIV, 1238, 1242, 1244, 1246, 1248
- representative Madison waters in, XXIV, 1306
- representative Sundance waters in, XXIV, 1276
- representative Tensleep waters in, XXIV, 1292, 1294, 1300
- Wyoming Jurassic rocks, age of, compared to European type section, XXI, 754
- Wyoming oil fields, faulting in, VII, 95
- productive sandstones, VII, 491
- Sundance in, XXI, 765
- Wyoming oils, PROB, 143, 151, 155
- Wyoming outcrop samples (section a-j), SBP, 243-255, 411
- Wyoming production from Tensleep sandstone, XXI, 1247
- Wyoming redbeds, X, 304
- Wyoming samples (See also Rocky Mountain samples), SBP, 194-243, 406-407
- (wells 200-231), SBP, 194-243, 406-407. (See also Rocky Mountain samples)
- Wyoming sections, SBP, 527
- correlation between western and eastern, XXI, 754
- Wyoming-Southern Oil Company, XXII, 683
- Wyoming well-treating data, XXV, 862
- Wyopo formation, XXV, 136
- Wysox, Pennsylvania (well 414), SBP, 340-379, 410
- X
- X-ray, RMS, 485
- X-ray analyses, XXV, 857
- X-ray crystal analysis, application of, to a problem of petroleum geology, XXI, 1333
- X-ray diffraction, chemical analysis by, XXV, 856
- X-ray diffraction patterns, XXI, 1338, XXV, 857
- types of, XXI, 1339
- X-ray gas field, GAS, 636, 637
- X-ray line, RMS, 460
- X-ray methods, RMS, 381, 603
- application of, to investigation of recent sediments, RMS, 616
- applications of, references on, RMS, 628
- X-ray patterns of well cuttings, XXVI, 51
- X-ray source, RMS, 621
- X-ray spectrum photograph, RMS, 617
- X-ray structure of crystals, RMS, 460
- X-ray studies, RMS, 381, 456, 465-468, 505, 515
- limitations of methods in, RMS, 627
- of Atlantic, RMS, 381
- of glauconite, RMS, 513-515
- of source beds, SBP, 402
- preparation of samples for, RMS, 621
- Xenotime, RMS, 602
- Xicontenatl, Mex, 39, 46, 62, 78, 91
- Xilitla, Mex, 24, 36, 60, Fig 12 (in pocket)
- Xilitla beds, MEX, 47
- Ximinez, Juan, Survey, Texas (wells 344, 346), SBP, 292-335, 409
- Xylene distribution map, Bernstein field, XXVII, 1610
- Xyloid coals, PROB, 82
- Xylol, use of, in X-ray studies, RMS, 622
- Xylotile, RMS, 468
- Y
- Yabe, Hisakatsu, Paleozoic formations of Japanese Islands, review, XXV, 767
- Yabe, Hisakatsu and Hanzana, S., MSC, 13
- Yacimientos Petroliferos Fiscales, XXVIII, 1455
- Yager, C. E., GAS, 609
- Yagi, Tsugio, RMS, 289, 503, 504, 505, 509, 510, 511, 518, 521, 522
- Yakataga district, Alaska, references on, FOP, 11; XXV, 1443
- Yakataga field, structure in, FOP, 10; XXV, 1442
- Yake and Sanford-Merchant pools, XXIII, 1022
- Yakima Valley, gas in, XXIX, 1412
- Yale field, V, 120, 131, 137
- Yale-Maramec pool, PROB, 401
- Yale pool, PROB, 411
- Yamada, N., XI, 187
- Yamaguti, B., XI, 187
- Yamaguti, B. and Kano, Y., GAS, 1061
- Yancey, H. F., XXVII, 1218
- Yangtze Kiang River, RMS, 225
- Yankeetown chert, XXIV, 826
- Yarmouth interglacial stage, CAL, 268
- Yarwood, W. S., GAS, 20, STRAT, 273, 297, 298, 299, 310, 339; XV, 1132
- stratigraphy of Red Coulee oil field, ALTA, 33; XV, 1161
- stratigraphy of Spring Coulee well, ALTA, 137; XV, 1265
- Yates, R. G., XXVIII, 500
- Yates, relation of top of, to top of Tansill, XXV, 1724
- Yates air area, usual casing pattern in, XXV, 1885
- Yates anticline, XIII, 1515
- Yates area, Pecos County, Texas, detailed cross section from, into southeastern New Mexico, XV, 1087
- Cretaceous in, XXIV, 141
- Permian in, XXIV, 135
- present structure, XXIV, 139
- present surface structure due to solution rather than folding, XXIV, 142
- structural development, XXIV, 134, 135
- structure sections, XXIV, 137, 139
- Triassic and upper Permian redbeds in, XXIV, 140
- Yates Center field, V, 64
- Yates dome, Texas, PROB, 414; XXIV, 138
- possibly a continuation of Fort Stockton high, STR II, 499
- solution syncline over, XXIV, 142
- Yates field, Texas, STR II, 480; PROB, 413, 606, 607; GAS, 449-451
- electrical survey in, XIV, 1160
- stratigraphy in, XXIV, 134
- subsurface stratigraphy of, STR II, 484-492
- (well 303), SBP, 285-292, 390, 408
- Yates formation, XXVII, 755
- Yates gas, Podbielniak analysis, XXV, 1891
- Yates oil field, Pecos County, Texas, shadowgraphic treatment of map of, XXV, bet. 2166 and 2167
- Yates oil pool, Pecos County, Texas, PROB, 322, 341, 351, 362, 369; 881; XIII, 1509
- development in, XIII, 1527-1543
- discovery of, XI, 635
- origin of oil and its reservoir in, XIV, 705
- Yates sand, XXIV, 48, 61; XXV, 605, 1713; XXVI, 1019, 1036, 1038, 1637; XXVII, 489, 754, 767
- in Goldsmith field, XXIII, 1530
- of Whitehorse group in West Texas-New Mexico Permian basin, XXIV, 25
- productive from Pecos County, Texas, to southern Lea County, New Mexico, XXIV, 49
- productive in Payton pool, XXVI, 1635
- productive in Sealy pool, XXV, 1048
- structure-contour map of top of, XXVII, 500
- Yates sand gas problem, high-pressure, East Wesson field, Yoakum County, West Texas, XXV, 1880, 2070
- Yates sand group, Sand Belt, STRAT, 752, 759
- Yates sand zone, XV, 1088
- Yates sandstone, XXIX, 744
- Yates structure, XXVII, 500
- Yazoo clay, XXVIII, 59
- Yazoo County, Mississippi, production of oil, Pickens field, 1940, XXV,

- (Yazoo)
1019
production of oil, Tinsley field, 1940, XXV, 1019
Yazoo-Red Bluff contact, XXVIII, 1320
Yeager, Lloyd Ivvin, memorial of, XXII, 1127
Yeager clay, XXV, 2005
south Texas, XV, 470; discussion, XV, 967
Yeager pool, PROB, 411
Yeast cells, PROB, 41
Yegua, paleogeographic map for, Gulf Coastal Plain, XXIII, 160
unconformable on Crockett formation, XXIII, 157
Yegua beds, XXVIII, 56
Yegua foraminifera in south Texas, GC, 592; XIX, 1361
Yegua formation, GC, 592, 604, 765; PROB, 403; SD, 333; I, 35, 73; II, 34; III, 313; V, 383, 625; XIX, 1361, 1373; XX, 76; XXI, 1429; XXIV, 2142; XXV, 2015; XXVI, 263
Conroe field, GC, 798; XX, 745
Covington County, Mississippi, GC, 375; XIX, 1154
fossils of, XXVI, 264
Gulf Coast region, XXIX, 1321
Hardin field, STRAT, 566, 567
Harris County, Texas, XXIII, 156
Laredo district, Texas, STR I, 392
Louisiana, GC, 396, X, 237, 281; XVII, 627
Mirando and Pettus districts, XV, 760
productive at Fairbanks field, Texas, XXIII, 687
Texas Gulf Coast, XXIII, 1609
(Ty) (Eocene), SBP, 337, 338-349, 416
Urania field, Louisiana, STR I, 93
Yegua heaving-shale zone, XXIII, 216
Yegua-Jackson trend, South Texas, XXVII, 744
discoveries along, in 1943, XXVIII, 862
Yegua oyster bed in Zapata County, Texas, GC, 605; XIX, 1374
Yegua production, Esperson dome, XXVIII, 855
from Gulf Coast domes, GC, 16; XXVIII, 515
Yegua sand, XXIII, 877; XXIX, 789
in Driscoll pool, GC, 630; XVII, 826
productive at Esperson field, Liberty county, Texas, XXIV, 1089
Yegua structure at Esperson dome, GC, 875
Yellow series, XXVIII, 1460, 1466
Yellowhouse field, XXIX, 746
Yellowstone-Big Horn region, XXII, 306
Yellowstone National Park, Wyoming, V, 188
correlation of sections from, to Spearfish, South Dakota, XXI, 753
drilling for geophysical data in, XV, 469
section of Paleozoic and Mesozoic rocks measured at Mount Everts, and at Cinnabar Mountain, Park County, Montana, XVIII, 368
Yellowstone National Park area, marine Jurassic in, XXI, 720
Yellowstone Valley-Big Horn Basin structural field conference, 1937, XXII, 306
Yellville limestone, V, 147
Yenangyat field, Burma, XI, 568
Yenangyaung dome, Burma, XI, 569
Yenchang formation, XXV, 2059
Yenshan disturbance, XXVIII, 1424
Yermoloff, Nicholas, X, 133
Yeso-Clear Fork group, XXVI, 1017, 1027
in Wasson field, XXVII, 497
Yeso formation, PTNM, 688; V, 548, 605, 608; VI, 224; XXIII, 1677; XXVI, 688
productive in Sand Hills pool, XXIV, 23
unconformable on Abo formation in Central Basin platform, XXIV, 22
Yeso member of Chupadera in New Mexico, XXI, 849
Yeso sediments near Cornudas Mountains, XXI, 854
Yield-tracts across fulcrum zone of juvenile earth, XXVIII, 1507
Ynez Island, CAL, 165, 166
Yoakum and Gaines counties, Texas, geology of Wasson field, XXVII, 479
Yoakum County, West Texas, high-pressure Yates sand gas problem, east Wasson field, XXV, 1880, 2070
Yoakum dolomite, XXVII, 490, 493
type section in Bennett field, XXIV, 25
Yoakum dolomite member of Whitehorse group, XXIV, 24
Yoast field, Bastrop County, Texas, magnetism and geology of, XIV, 1191, XVI, 751
Yokut sandstone, XXIV, 1745
Eocene, north of Coalinga, California, XXIV, 1722
section at type locality of, XXIV, 1744
Yoldia zone, MSC, 176
of Choctawhatchee formation, XXV, 264
Yolo County, California, outcrop section C. D. SBP, 167-194, 411
(well 4), SBP, 130-153, 403
Yolo formation, XXVII, 285; XXIX, 993
Yolton, James S. and Williams, J. Stewart, Brazer (Mississippian) and lower Wells (Pennsylvanian) section at Dry Lake, Logan Quadrangle, Utah, XXIX, 1143
Yondo Concession, production of, XXIX, 1139
Yorba field, California, XXII, 708
Yorba Linda field, XXVII, 872
Yordanoff, Wanda, XXVII, 1060
York-James peninsula, lower, review, XVII, 748
Yorktown field, XXVII, 743
Yosemite, CAL, 18, 251, 255, 258, 268, 318
Yosemite Valley, SC, 71; XX, 1617
Yost-Jasper field, XXVIII, 173
Young, Addison, XX, 780
Young, Addison, David, Max. and Wahlstrom, E. A., Goldsmith field, Ector County, Texas, XXIII, 1525
Young, C. A., SBP, 8
Young, C. M., XIX, 800
Young, G. A., XI, 24, 25
Young, H. W., XVI, 89
Young, James, XIX, 486
Young, Karl Etienne, STRAT, 209
memorial by Henry V. Howe, XX, 1150
Young, L. E., XIX, 831
Young, W. H., Jr., SBP, 356
Young, W. R., XXVI, 1826
Young County, Texas, XXI, 1022; XXIII, 853; XXIV, 89, XXVI, 1048
development, XXVII, 775
developments during 1940, XXV, 1069
southern, structural map of Datum: Bunker limestone, Cisco series, XXIV, 112
subsurface geology of Sewell-Eddleman area, XXVI, 204
Young crude oils heavy and asphaltic, PROB, 138
Young horizon, XXI, 1069
Young limestone lentil, XXII, 970
Young Man's Butte, XXVII, 1580
Youngs, L. J., IX, 276
Youngs Bayou fault, XXIX, 34
Young's modulus of Amherst sandstone, variation in, XIX, 15, 16
Youngstown pool, V, 290
Youngstown sand, V, 404
Yount-Lee Oil Company, GAS, 718, 728; GC, 911; XIX, 1309; XX, 562; XXI, 477; XXVII, 1125
Youthful profile on continental shelf, RMS, 239
Yovanovitch, B., SD, 141; XVI, 445
Yucatan, Peninsula of, XX, 1298
Yukon and Northwest Territories, Canol geological investigations in Mackenzie River area, XXIX, 1669
Yukon Basin, CAL, 75
Yukon field, Oklahoma, II, 56
Yukon Oil Company, XXIII, 907
Yuma, CAL, 23
Arizona, RMS, 11
Yumuri limestone, II, 143
Yurma-Zigaiga anticline, XXI, 1458
Yussen de Campana, J. C., XXVIII, 1456, 1459, 1462, 1463
Yuster, S. T., and Waldo, Allen W., method of impregnating porous materials to facilitate pore studies, XXI, 259
- Z
- Zaba, J., review, XXVII, 1556
Zaca Creek, XXVII, 869
Zacamixtle, MEX, I, 41, 114, 118, 138, 151, 204, 205, Fig. 32 (in pocket)
double dyke at, MEX, opp. 142, 150
Zacamixtle field, Cretaceous in, GAS, 999
Zacamixtle pool, MEX, 215; V, 85, 506; VI, 111
salt water in, MEX, 5
Zacatecas, Albian in Fresnillo district, XXVIII, 1140
Aptian or lower Albian in, XXVIII, 1140
La Caja formation, section, XXVII, 1491
northern, Cretaceous section in Camacho-Opal area of, XXVIII, 1156
northern, Mazapil-Conceptión del Oro-Melchor Ocampo area of, XXVIII, 1153
Zalesky, and Tchirkova, XXIX, 133
Zalesky, M. D., XIII, 843; XV, 163; XXIV, 322
Zalozecki, R., PROB, 44, 261
Zanser, Zacharias, XXV, 1211
Zapata, Texas (well 405), SBP, 292-349, 410
Zapata County field, V, 626

- Zapata Creek, CAL., 240
 Zapffe, Carl, XVII, 510
 Zarritos field, XXIII, 963
 Zavoico, Basil B., XXIII, 493, 502, 509
 discovery of oil in Oural-Volga
 Permian basin, Perm province,
 Russia, XIII, 859
 foreign oil developments in 1938,
 XXIII, 949
 new major oil fields of Apsheron
 Peninsula (U.S.S.R.), XVII, 1136
 Oklahoma City pool, Oklahoma,
 XIII, 1387
 reviews, XIII, 396, 525; XIV, 246,
 331; XV, 87; XIX, 120, 1826
 Russian oil fields in 1936, XXI, 1074
 Russian oil fields in 1937, XXII, 758
 Zayante, MSC, 133
 Zechstein, Germany, IX, 418, 424;
 XXI, 833
 Zechstein salt, Germany, SD, 142, 144,
 187, 189; IX, 418, 1247, 1249,
 XXI, 1273
 Zechstein salt series, plastic flowage of,
 GC, 41; XVII, 1046
 Zechstein Sea, RMS, 331
 Zealand, RMS, 160
 Zehnder, L., VIII, 731
 Zeidler, R., XIX, 1741; XXIV, 1755
 Zeisman dome, Madison water in,
 XXIV, 1307
 Zeiss camera, use for taking photo-
 graphs of foraminifera, XX, 437
 Zeitfuchs, E. H., XXI, 584
 Zekkel, J. D., XXII, 774
 Zelinsky, and Steinkopf, W., XX, 290
 Zelinsky, N. D., XV, 619
 Zemorra Creek, MSC, 45, 85, 103-106,
 108, 111, 197, 198, 304, 322;
 XXVII, 1365
 checklist of foraminifera, XXVII,
 1378
 Chico Martinez Creek, and Carneros
 Spring, comparative sections,
 XXVII, 1366
 geologic map, XXVII, 1374
 section, XXVII, 1366
 Temblor faunules from, MSC, Fig. 14
 (in pocket)
 upper Temblor Media shale faunules
 from, MSC, Fig. 14 (in pocket)
 Zemorra Creek-Chico Martinez Creek,
 MSC, Fig. 6 (in pocket)
 section, MSC, 67
 Zemorra Creek section, MSC, 107, 108
 Zemorrian, MSC, 78, 109, 114, 120, 153,
 158, 160, 163, 172, 183, Figs. 4, 5, 6,
 and 14 (in pocket)
 lower, MSC, 184-199, 203-205, 208-
 211, 213-215, 217-226, 228, 229,
 233, 237, 239-246, 249, 251-253,
 256-261, 266, 276, 279, 286, 291-
 296, 302, 306, 307, 311, 316-322,
 324, 328-330, 332-338, 341-344,
 346, 349, 350, 353-356
 lower, foraminifera from, MSC, Pl. I,
 II, III, IV, V
 upper, MSC, 111, 113, 184-189, 191-
 195, 197-199, 202, 204, 205, 208-
 211, 213, 215-217, 219, 220, 222-
 224, 226-228, 232, 233, 239, 240,
 242-244, 247-249, 252, 256, 257,
 259-261, 275, 276, 283, 288, 289,
 292, 296, 302-307, 311, 316, 317,
 322, 323, 326, 329, 332-334, 342-
 346, 349, 353-354, 356
 Vaqueros facies of, MSC, 180
 Zemorrian and Saucelian, foraminifera
 from, MSC, Pl. VI
 Zemorrian fauna, MSC, 178
 Zemorrian faunules, MSC, 109, 136
 Zemorrian foraminifera, MSC, 110, 161,
 177; XXVI, 1615
 Zemorrian relationships, chronological
 significance of, MSC, 178
 Zemorrian-like foraminifera, MSC, 179
 Zemorrian foraminiferal sections, MSC,
 153
 Zemorrian-Saucesian discordance, MSC,
 114
 Zemorrian stage, MSC, 103, 105, 106,
 108, 110, 111, 113, 115, 160, 161,
 172, 181, XXVII, 1365
 fauna of, MSC, 109
 foraminiferal faunas of, MSC, 152
 in Latin America, MSC, 179
 section of Temblor and upper Tejon
 formations as exposed at type
 locality of, MSC, 105
 thickness of, MSC, 109
 type area of, MSC, 104
 Zemorrian transgression, MSC, 180
 Zemorrian zone of Klempell (Tlm)
 (Miocene), SBP, 92, 95, 130-153,
 168-194, 415
 Zenith Gas System, Inc., GAS, 478
 Zenith pool, Stafford County, Kansas,
 STRAT, 139; XXII, 672; XXIII,
 806; XXIV, 1002
 accumulation of oil, STRAT, 161
 analyses of oil and water, STRAT,
 164
 Zeolite-opal rock, description, XXV,
 291
 mineralogical character, XXV, 292
 paragenesis of, XXV, 294
 Zeolite-opal rocks in North Fork of
 Red River, field relationships and
 age of, XXV, 295
 in Wichita Mountains, XXV, 290
 Zeolite-opal sediments, pre-Cam-
 brian, in Wichita Mountains,
 Oklahoma, XXV, 287
 Zeolites, RMS, 461, 602
 hydration of, XXI, 1488
 Zeta moments of sedimentary data,
 RMS, 578
 Zeta potential, RMS, 535
 Zeta scales, RMS, 566, 580
 relation of, to Atterberg grade limits,
 RMS, 567
 relation of, to Phi scale and to
 diameters, RMS, 579, 581
 Zettlitz, Czechoslovakia, RMS, 471
 Ziegenhain, W. T., GAS, 1117
 Ziegler, Victor, PROB, 435; RMS, 42;
 V, 195; X, 110; XVI, 774; XXV,
 1872
 Zizalga ridge, XXI, 1459
 Zilair region of Urals, XXI, 1446
 Zilmerdak and Zizalga faults, XXI,
 1455, 1458
 Zilmerdak sandstones, XXI, 1455
 Zilpha beds, XXVIII, 56
 Zimmerly, Stuart R., SBP, 2; XIV,
 1227; XVII, 1231
 Zimmerly, Stuart R., and Maier, C. G.,
 PROB, 269; XIII, 304, 309, 340,
 349, 360, 364; XV, 83; XVII, 1232;
 XIX, 603
 Zimmerman, C. C., abstracts, XII, 102,
 1123
 Zimmerman, John, Jr., Tumey sand-
 stone, Tertiary, Fresno County,
 California, XXVIII, 953
 Zimmermann, LX, 327
 Zimmermann, E., 46, 208
 Zinc, RMS, 149, 435
 in sea water, RMS, 143
 (Zinc)
 precipitation of, RMS, 423
 Zinc and lead deposits of northern
 Arkansas, review, XX, 322
 Zinc and lead mining district, Tri-
 State, geophysical investigations
 in, XXVII, 86
 Zingg, Th., RMS, 564; XXVI, 1709
 Zircon, RMS, 37, 212, 382, 392, 498,
 499, 593, 602, 603, 608, 609; XXII,
 556; XXIV, 641, XXVII, 175;
 XXVIII, 88
 Zuconiferous sandstone, RMS, 215
 Zuser, G. J., XVI, 784
 Zisman, W. A., XXVIII, 117
 Zittel, XXVI, 1190, 1195
 ZoBell, Claude E., RMS, 260; XX, 258,
 262; XXI, 628, XXII, 1307, 1328,
 1354; XXVII, 1077, 1184, 1186,
 1189; XXVIII, 926
 distinguished lecture, 1943, XXVIII,
 170
 occurrence and activity of bacteria
 in marine sediments, RMS, 416
 ZoBell, Claude E., and Anderson, D. Q.,
 XXVII, 1177
 vertical distribution of bacteria in
 marine sediments, XX, 258
 ZoBell, Claude E., and Conn, J. E.,
 XXVII, 1186
 ZoBell, Claude E., and Feltham, C. B.,
 XX, 261; XXVII, 1177
 ZoBell, Claude E., and Grant, C. W.,
 XXVII, 1178
 ZoBell, Claude E., Grant, Carroll W.,
 and Haas, Herbert F., marine
 microorganisms which oxidize pe-
 troleum hydrocarbons, XXVII,
 1175
 ZoBell, Claude E., and Smith, W. W.,
 XXII, 1331, 1401
 Zonal paleontology, foraminifera in,
 XXIV, 2049
 Zonation of Eocene and Oligocene
 beds, MEX, 121
 Zone, MSC, 10, XXIII, 1074
 definition, MSC, 95; XXIV, 1728
 of maximum velocity in streams,
 RMS, 18
 of *Pseudofusulina andersoni*, XXIV,
 261
 of *Pseudofusulina luteigini*, XXIV,
 261
 significance, MSC, 89, 93, 96
 Zone and stage, differentiation, MSC, 94
 Zones containing reserves in south
 Texas, XXIV, 1077
 in Alberta shale (Benton group) in
 foothills of southwestern Alberta,
 XVIII, 1387
 of earth, CD, 16
 of fracture, reservoirs in, XXIX, 1562
 of *Pseudofusulina mollers* and *Schwagerina princeps*, XXIV, 261
 of shale and sand at Refugio field,
 XXII, 1195
 Zoogene or reef bottoms, XXIV, 1168
 Zones, paleontological, of correlation in
 Gulf Coast, XXII, 989
 Zones and Stages, MSC, 99
 Zoning of minerals, RMS, 604, 608
 Zontecomatlan, MEX, 89, 91, 103, 149
 Zonule, MSC, 10
 definition, MSC, 97
 significance, MSC, 90
 Zooplankton, RMS, 439, 442, 443
 Zorritos district, Peru, XII, 36
 Zorritos field, V, 588, 592, 599
 Zotof, X, 1161
 Zuber, Rudolf, PROB, 38; XV, 2, 28,

- (Zuber)
37; XVIII, 781; XXI, 1182;
XXVIII, 1456
- Zuber, Stanislav, *communication sur l'application pratique de la theorie paléogéographique des gisements pétroliers*, review, XIV, 953
- paleogeography of oil-bearing deposits in Ponto-Caspian countries, XVIII, 777
- Ponto-Caspian and Mediterranean types of oil deposits, XVIII, 760
- vers la recherche de nouveaux champs pétroliers*, review, XVI, 948
- Zuckerman sandstone, XXV, 1668
- Zuider Zee, RMS, 160
- Zuha depression, XXIX, 1125
- Zuloaga, Guillermo, XXII, 1102; XXIV, 1562, 1568
- Zuloaga and La Gloria formations, correlations of, XXVII, 1483
- Zuloaga limestone, XXVII, 1416, 1479
- distribution, XXVII, 1480
- origin of, XXVII, 1484
- thick-bedded, XXVII, 1482
- Zumpango del Rio, MEX, 61, 97
- Turonian and Coniacian near, XXVIII, 1123
- Zumpango del Río area of Guerrero, Cretaceous in, XXVIII, 1123
- Zurich Townsite pool, XXVIII, 772
- Zuschlag, Th., and Lundberg, H., XVI, 1265
- Zweifel, Henry, XXVI, 204
- Zwierzycki, J., XXII, 7, 30
- Zwolle oil field, Sabine Parish, Louisiana, classification of, as limestone reservoir, XV, 1293
- engineering studies and results of acid treatment of wells, review, XIX, 127

UNIVERSAL
LIBRARY



140 035

UNIVERSAL
LIBRARY